



A MITEL
PRODUCT
GUIDE

CloudLink Integration with MiVoice MX-ONE

Deployment Guide

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About this Document

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This chapter contains the following sections:

- [Purpose of this Document](#)
- [Related Documentation](#)
- [Terminology](#)

This document contains information about how to install, deploy, integrate, and govern call processing behaviors for CloudLink using the existing MiVoice MX-ONE solution.

This document will serve as an introductory guide to readers seeking a high-level perspective of how to deploy and integrate CloudLink with the MiVoice MX-ONE solution. The document is intended for planners, and engineers. Basic knowledge of telephony (especially ISDN and IP technology) and cloud technology is required to understand the content presented in this document.

MX-ONE can be integrated with Mitel CloudLink to provide a better unified communications experience for an end-user via feature-rich cloud-based capabilities.

1.1 Purpose of this Document

This document describes the deployment and integration of the CloudLink with MiVoice MX-ONE, to enable users to develop and use mobile or web-based applications using published REST APIs.

This document also provides the minimum system requirements for deploying and integrating the CloudLink with MiVoice MX-ONE.

1.2 Related Documentation

The following are relevant reference documents available on the documentation site on mitel.com:

- [MiVoice MX-ONE Product Documentation](#)
- [Mitel Administration](#)
- [CloudLink Gateway](#)
- [CloudLink Platform](#)
- [CloudLink Security Documentation](#)
- [MiTeam Meetings](#)

1.3 Terminology

AD: Active Directory

API: Application Programming Interface

CL: CloudLink

CLGW: CloudLink Gateway

DB: Database

GUI: Graphical User Interface

GW: Gateway

PM: Provisioning Manager

This chapter contains the following sections:

- [CloudLink Platform](#)
- [CloudLink Gateway](#)
- [CloudLink Applications](#)

The solution comprising MiVoice MX-ONE and CloudLink comprises the following MiVoice MX-ONE and CloudLink components.

- MX-ONE components:
 - Service Node
 - Media Server
 - Media Gateway Unit (connection to PSTN)
 - Service Node Manager
 - Provisioning Manager
- CloudLink components:
 - CloudLink Platform
 - CloudLink Gateway
 - CloudLink Applications

2.1 CloudLink Platform

The CloudLink Platform is an open development platform for application developers, partners, and customers. It provides tools for building tailored applications that call for no prior development knowledge. This is hosted by Mitel on Amazon Web Services (AWS).

2.2 CloudLink Gateway

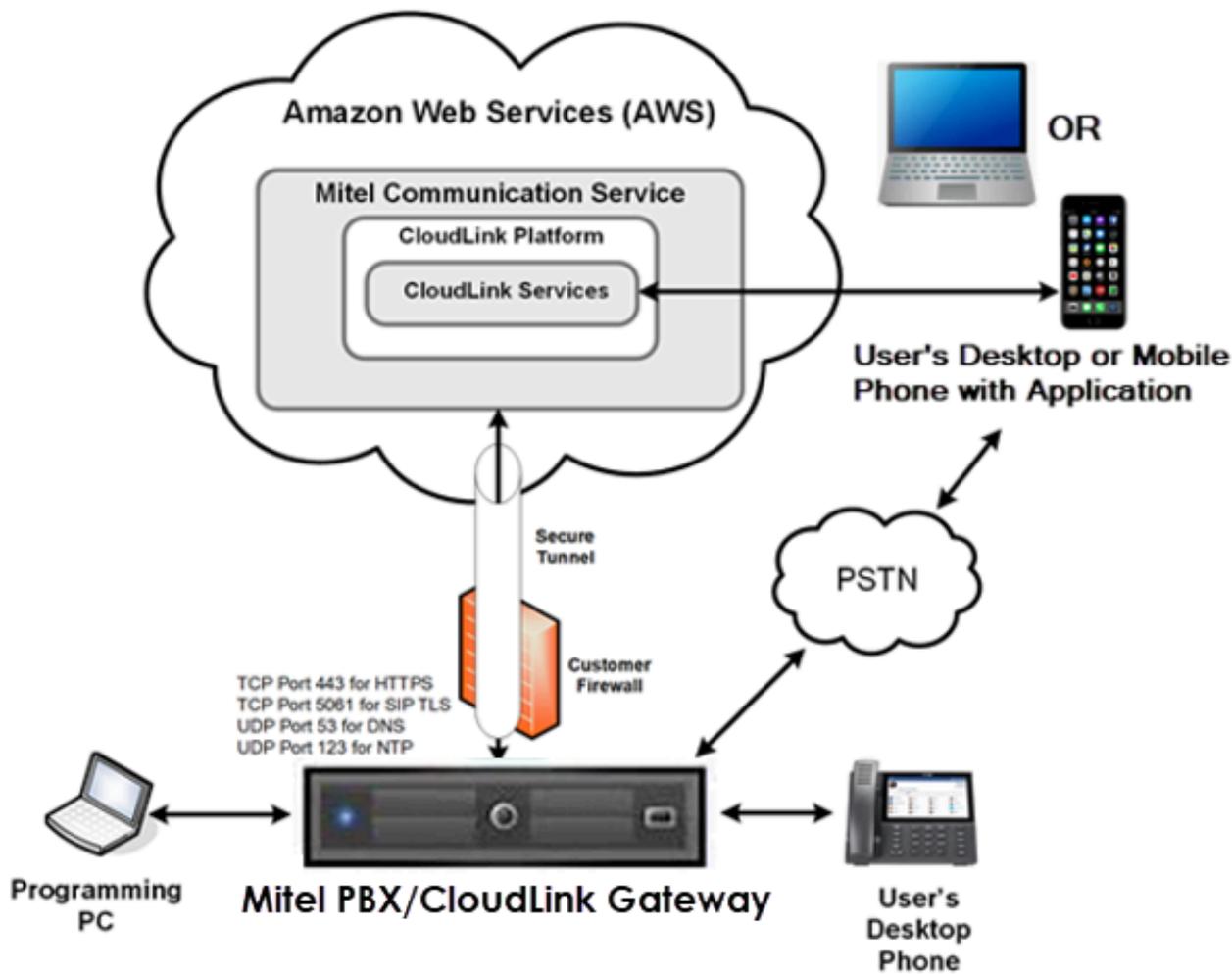
The CloudLink Gateway connects PBXs to the CloudLink Platform and CloudLink Applications. The gateway enables the connection between the PBX and the endpoints by supporting the signaling protocols from different PBXs. Effectively, only one Signaling and Messaging Protocol is used between the CloudLink Gateway and the CloudLink Platform infrastructure that runs on Amazon Web Services (AWS).

2.3 CloudLink Applications

CloudLink Applications leverage Mitel Application Programming Interfaces (APIs) and microservices so that next generation apps can be continuously and rapidly deployed, management is simplified, and real-time communication that meets customer needs is delivered.

Mitel is exploring the possibilities offered by CloudLink Application to support third-party applications under the [Mitel Developer program](#).

These applications make business communications simple, fast, and more effective by connecting users back to their office, their coworkers, and back to their Phone Systems by using the necessary Mid-Call Functionalities of standard office Desktop Phones to enable the direct, immediate communication needed by Businesses.



Environment

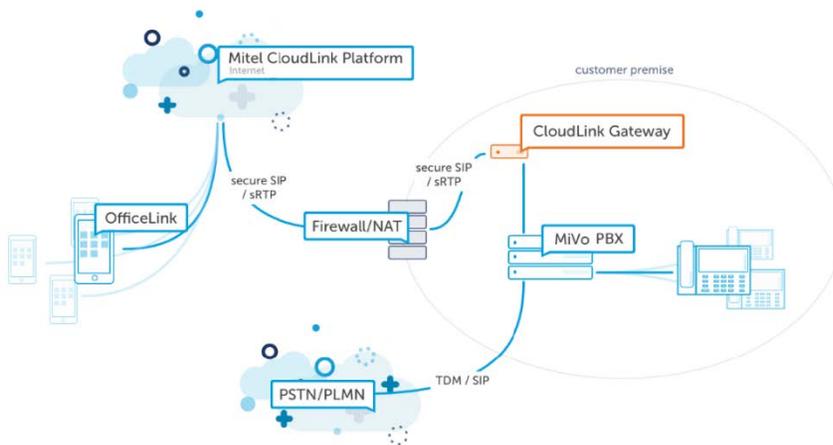
3

This chapter contains the following sections:

- [Integration](#)
- [System Requirements](#)

In the Mitel CloudLink environment, the CloudLink Gateway enables the connection between MiVoice MX-ONE and the CloudLink Platform.

For information on the CloudLink overall solution, where the MiVO PBX represents MX-ONE, refer to the [Network View](#).

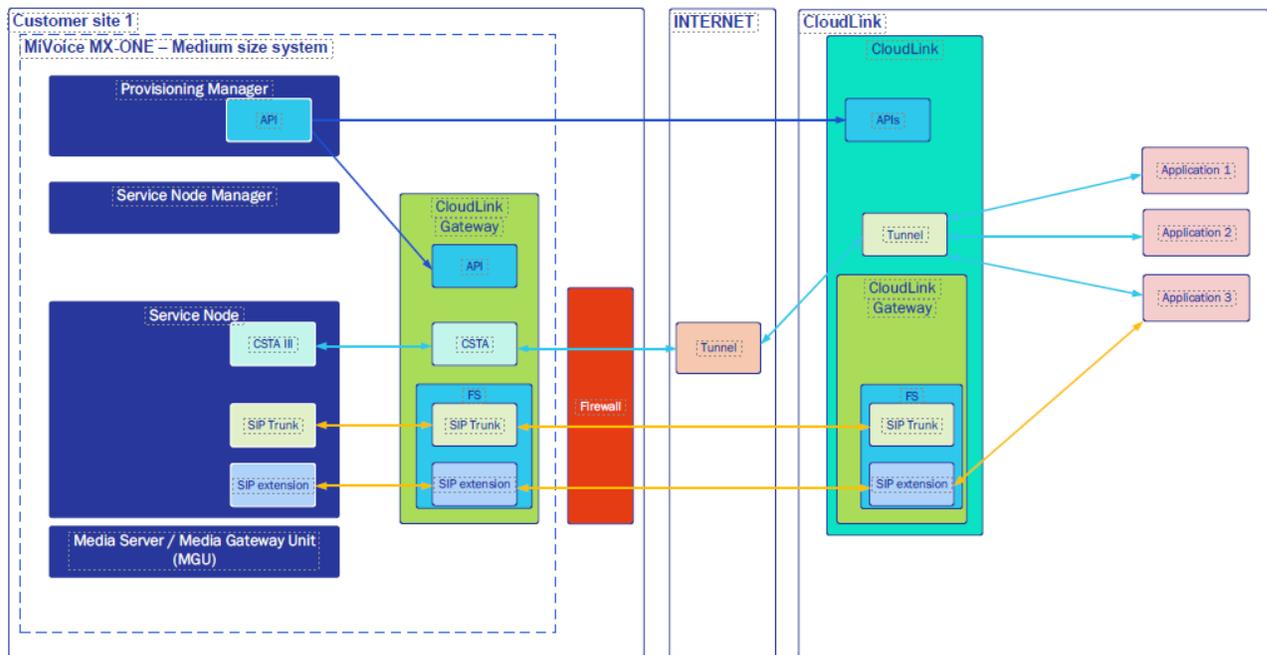


The solution between MX-ONE and CloudLink has the following key system functions:

- API – Application Programming Interface
 - API defines the way that the systems will interact with each other.
- CSTA – Computer Supported Telecommunications Applications
 - It provides third-party call control. It is an interface that external computer applications can use to remotely control a phone.
- SIP – Session Initiation Protocol and Media Handling
 - SIP extension is used to provide a valid PBX extension to a softclient.
 - Media Handling provides media capability to the CloudLink.

3.1 Integration

The following figure illustrates the high-level solution overview of the integration between MiVoice MX-ONE and CloudLink.



3.1.1 API – Application Programming Interface

CloudLink provides APIs that can be used to interact with CloudLink Services.

The CloudLink ecosystem has different APIs for different CloudLink components, such as different CloudLink APIs for Authentication, Admin, Administration, and so on. The CloudLink Gateway also contains an API that is used to add, change, delete and view users, SIP extensions (softclients), and the SIP trunk in CloudLink Gateway.

The MX-ONE Provisioning Manager uses CloudLink APIs to add, change, delete and view information in CloudLink.

Depending on the service used in the solution, the Provisioning Manager will use one or more APIs to perform each task. The API calls are implemented in the Provisioning Manager software and it is transparent for the system Administration.

3.1.2 CSTA – Computer Supported Telecommunications Applications

CloudLink Gateway contains a CSTA server that is used to interact with the different Mitel Call Managers. CSTA III XML is used with MX-ONE.

The CSTA component in CloudLink Gateway supports the following:

- Monitoring: StartMonitor, StopMonitor, SnapshotDevice.
- Call control: MakeCall, ClearCall, ConsultationCall, AlternateCall, TransferCall, ConferenceCall, SingleStepTransfer, HoldCall, RetrieveCall.
- Call events: service initiated, delivered, established, held, retrieved, diverted, transferred, conferenced.
- Other functions: DND, MWI, Call Forward, Presence.

- Support for forking (multiple Terminals with same DN).

3.1.3 SIP – Session Initiation Protocol and Media Handling

CloudLink Gateway contains a SIP PBX used to interact with the different Mitel Call Managers.

The SIP PBX component on the CloudLink Gateway LAN side supports the following:

- SIP TCP, SIP UDP
- RTP and SRTP (media)

3.2 System Requirements

The solution between MiVoice MX-ONE and CloudLink requires licenses, access to services, and applications. The following sections list the minimum requirements for the basic solution.

3.2.1 MX-ONE Requirements

This section describes the prerequisites for a MiVoice MX-ONE with CloudLink that includes MiVoice MX-ONE Gateway and MiCollab.

1. MX-ONE Licenses:

- SIP extensions
- SIP trunk (*optional*)
- CSTA
- Provisioning Manager

2. SWA License: An active SWA license subscription is required to have access to configure CloudLink in MX-ONE. The PM/SNM can read the SWA status by typing the `license_status` command.

Note:

SWA license is time-limited and has an expiry date. An alarm is sent 30 days before the expiry date and the SWA subscription must be renewed before the expiry date.

3. For CloudLink configuration, the minimum MX-ONE Provisioning Manager (PM) version must be **7.6 or higher**. For information on CloudLink configuration, see [Provisioning Manager User Task](#) on page 37.
4. The solution supported currently is a deployment that includes MiVoice MX-ONE, MiVoice MX-ONE Gateway paired with a CloudLink Gateway, MiCollab, and the CloudLink Platform.
5. The solution is supported only for a single MiVoice MX-ONE.
6. A single CloudLink Gateway is supported. There is no CTI resiliency.
7. MiCollab is not required to be part of the solution, but is expected to be present most of the time based on the fact that MiCollab will still be the primary UC application.

8. The CloudLink is primarily an enabler for development of third-party CTI applications on the CloudLink Platform. CloudLink APIs will include:
 - Call, Answer, Clear/Release, Hold/Retrieve, Consultation Hold and Transfer
 - Call History
 - Basic Voice Mail (currently there is no support for Visual Voice Mail), Message Waiting Indicator, and click to call voice mail (to retrieve messages) support is for EMEM, NuPoint Messaging, and MiCollab Advanced Messaging (MiCAM) but technical support covers all voicemail applications on MiVoice MX-ONE whether these are Mitel applications or not.
9. CloudLink Integration supports a maximum of 5000 users and 5000 devices in MX-ONE 7.5. For more information, see the Engineering guidelines documentation. With the expected enhancements being implemented in Mitel PBX/ CloudLink solutions, technicians must always check the Mitel Documentation Center and Release Notes for updates.
10. A user to be successfully imported from MiVoice MX-ONE into CloudLink the user must have specified:
 - Email Address
 - Extension Number
 - First or Last Name
 - Softphone Client

3.2.2 CloudLink Requirements

- Partner ID – the Mitel partner needs to have access to CloudLink Services via Mitel MiAccess to be able to set up the solution.
- Administrator account to be used by Provisioning Manager.
- CloudLink licenses for the specific services, such as MiTeam Meetings licenses.

3.2.3 Network Requirements

This section provides details of network connections required between CloudLink Gateway and MX-ONE. You must ensure that the ports on MX-ONE are reserved for operational use for the CloudLink Gateway and that the connections are routed properly through the corporate network.

For more information on the network connection required between CloudLink Gateway with MiVoice MX-ONE, see the following sections in [CloudLink Gateway User Guide](#):

- [Configuration Prerequisites](#)
- [Network View](#)
- [Connections Between the CloudLink GW and PBX/Call Server > MiVoice MX-ONE Considerations](#)

Introduction to Mitel Administration

4

This chapter contains the following sections:

- [Access to Mitel Administration](#)
- [Create a CloudLink Customer Account](#)
- [Create and Add CloudLink Users to Customer Account](#)

Also see the [Mitel Administration User Guide \(mitel.com\)](#).

The Mitel Administration portal allows you to perform the following actions:

Partner Level:

- Create and manage end-customers in the CloudLink Platform.
- Create Administrator accounts for each customer.

Administrator Level:

- Associate a CloudLink Gateway with a customer.
- Configure the CloudLink Gateway.
- View and manage CloudLink users declared by MiVoice MX-ONE.

After creating a customer on the CloudLink Platform, the customer is listed in the partner dashboard.

4.1 Access to Mitel Administration

As a Mitel Partner, you can log in to the [Mitel MiAccess Portal](#) either via Mitel MiAccess Portal or through the URL <https://accounts.mitel.io>.

4.2 Create a CloudLink Customer Account

For information about creating a CloudLink Customer account, see the section Managing Accounts in [Mitel Administration User Guide \(mitel.com\)](#).

4.3 Create and Add CloudLink Users to Customer Account

For information about creating a CloudLink user account, see the section Managing Users in [Mitel Administration User Guide \(mitel.com\)](#).

Note:

A Mitel Partner can add users to customer accounts. The customer's Administrator account can add users to that account.

After a Mitel Partner or an Administrator adds a user to a customer account, the Mitel Administration sends a verification email to the user. The user needs to verify the email address. For more details, see the section [Create Customer Accounts and Add Users](#) in [Mitel Administration User Guide \(mitel.com\)](#).

Note:

A Mitel Partner must add a user with Administrator role in the customer account as the Account ID and PM Administrator user created is used to setup a CloudLink subsystem in Provisioning Manager.

4.3.1 Provisioning Manager Administrator User

A user with Administrator privileges is required to authenticate Provisioning Manager towards CloudLink API.

To create an Administrator in CloudLink:

1. Navigate to **User Management > Users**.
2. In the **New User** window that opens, enter the relevant user details and turn on the **Account Admin** radio button.
3. Click **Create** to add the Administrator user to the account.

 **New User**
Enter user details below

Name *

First Name * Last Name *

Email *

 ▾

Account Admin

*required

i Note:

The Administrator account needs to have a valid email address. CloudLink will validate the address and send a Welcome Email to the user.

4.3.2 Validation of the Administrator User

The Administrator user must complete the account setup by following the instructions sent via the Welcome Email.

i Note:

This validation must be done before the user can use any CloudLink service. For more information, refer to the [Managing Users](#).

Mair

From: "no-reply@mitel.io" <no-reply@mitel.io>
To: [REDACTED]@mitel-test.com
Subject: Welcome to Mitel
Date: [REDACTED]

[Download Raw Email](#) [Show Full Headers](#)

HTML Text



Welcome [REDACTED]

Welcome to Mitel, someone at your work just added you to our platform.
Let's get you up and running!

Note: This link will expire in 4 days, and can only be used one time.

[Finish building your account](#)

4 days to complete the setup

Account Number

Account Number: [REDACTED]

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Integrating CloudLink Gateway with Mitel Administration

5

After you create a customer account in the Mitel Administration, you can begin the deployment of the CloudLink Gateway to associate the Gateway with the customer account, configure and connect a PBX, and to deploy a CloudLink application for all the users. For more information, see [Integrating CloudLink Gateway with Mitel Administration](#)

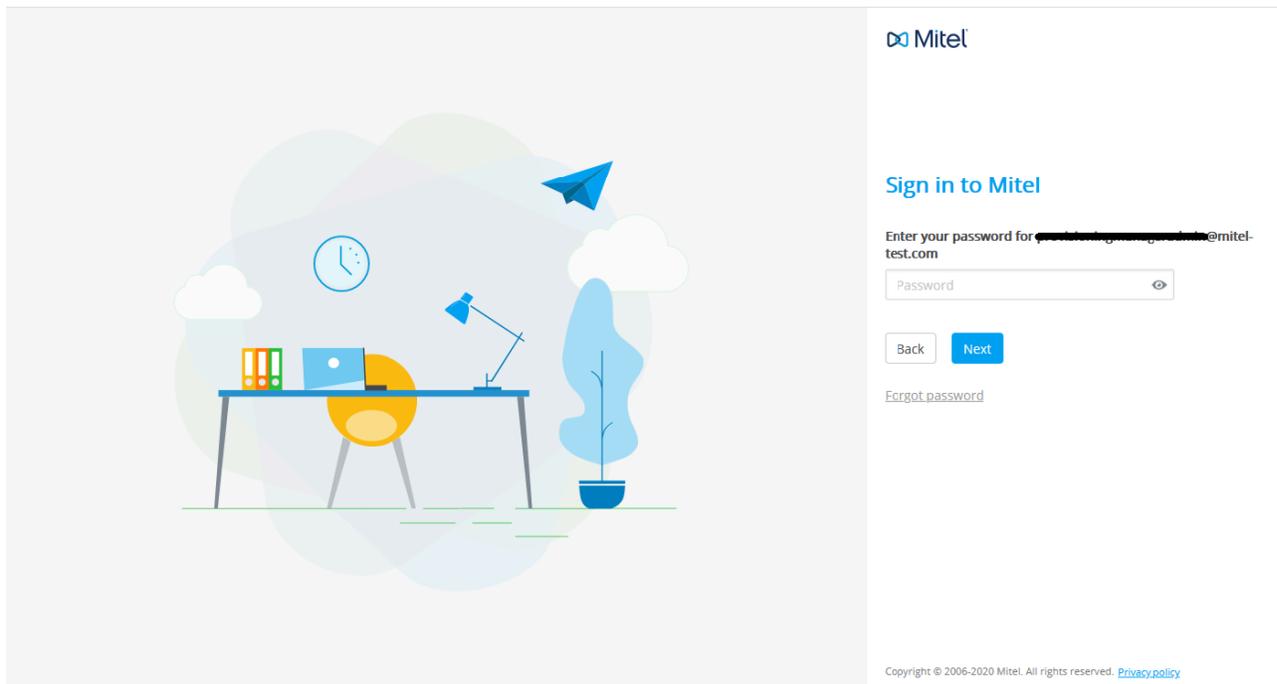
As part of the CloudLink, a CloudLink Gateway in the customer premises is required. It is using services that require CSTA and SIP.

If CloudLink Gateway services will be used as part of the customer solution, install the CloudLink Gateway.

For more information to install CloudLink Gateway, see the section “Install and Access the CloudLink Gateway” in [CloudLink Gateway User Guide \(mitel.com\)](#)

As soon the gateway is up and running, access the gateway using `https:<CloudLink Gateway IP Address>` and do the following:

1. Use your credentials to login.



2. From the **Integrations** section of the **Account Information** page, click **Add Gateway**.



3. Enter all the mandatory Customer information and click **Next**.

4. Enter all the required Gateway information and click **Next**. If the CloudLink Gateway is using a dynamic IP address (DHCP), change it to a static IP address.

- To change the IP address, select **Static** and add the required information.

Note:

Keep the DNS Servers provided by default and add an internal DNS, if required.

The screenshot displays the CloudLink Gateway portal interface. At the top, there is a navigation bar with 'Gateway Portal' and a user profile 'PM Admin PA'. A notification banner at the top center reads 'Successfully updated customer'. Below the navigation bar is a progress indicator with steps: Customer, Gateway (active), PBX, Connect, Deployment, Advanced, and Overview. The main content area is divided into two sections: 'Gateway Information' and 'Appliance Ethernet Configuration'. The 'Gateway Information' section includes fields for Site Name*, Address, Town*, Country* (a dropdown menu), and Postal / Zip Code*. The 'Appliance Ethernet Configuration' section shows 'Port 1' with 'DHCP' selected over 'Static', and a 'Current IP' field. A '*required' label is present below the Current IP field. At the bottom right of the form are 'Back' and 'Next' buttons.

When the CloudLink Gateway shows successfully updated site, you must setup MX-ONE and then go to the next step. For more information, see the section [MX-ONE System Setup](#) on page 22.

5. In the **PBX** page, enter the information as described below:

- a. **PBX Type** - Make sure the model PBX (MiVoice MX-ONE) utilized by your CloudLink account is selected.
- b. **PBX Name** - Enter any name (used as the **PBX ID** for your CloudLink applications).
- c. **IP Address** - Enter the IP address of the MiVoice MX-ONE PBX.
- d. **Port**- Enter the port number if different than the default port number selected for the CSTA service.
- e. Click **Next**.

Gateway Portal | [redacted]

PM Admin PA

Customer Gateway PBX Connect Deployment Advanced Overview

Configure PBX [Prerequisite checklist](#)

PBX Type* ⓘ

PBX Name* ⓘ

IP Address* ⓘ

Port* ⓘ

*required Back Next

If the setup is correct, the following screen is displayed. Click **Connect**.

Gateway Portal | PM_test_onboarding

Successfully created PBX Link

PM Admin PA

Customer Gateway PBX Connect Deployment Advanced Overview

Start PBX Connection

Verify and start your connection to the PBX

Connect

6. The following screen shows that the CloudLink Gateway was successfully setup.

Gateway Portal | PM_test_onboarding | Successfully completed customer sync

PM Admin PA

Customer Gateway PBX Connect Deployment Advanced Overview

PBX Connected

Connection successful

Number of users: 0
Number of phantoms: 0

PBX Sync Schedule (in minutes)

Sync Now ↻

Cancel Next

Installing the CloudLink Gateway Certificate into MiVoice MX-ONE Provisioning Manager

6

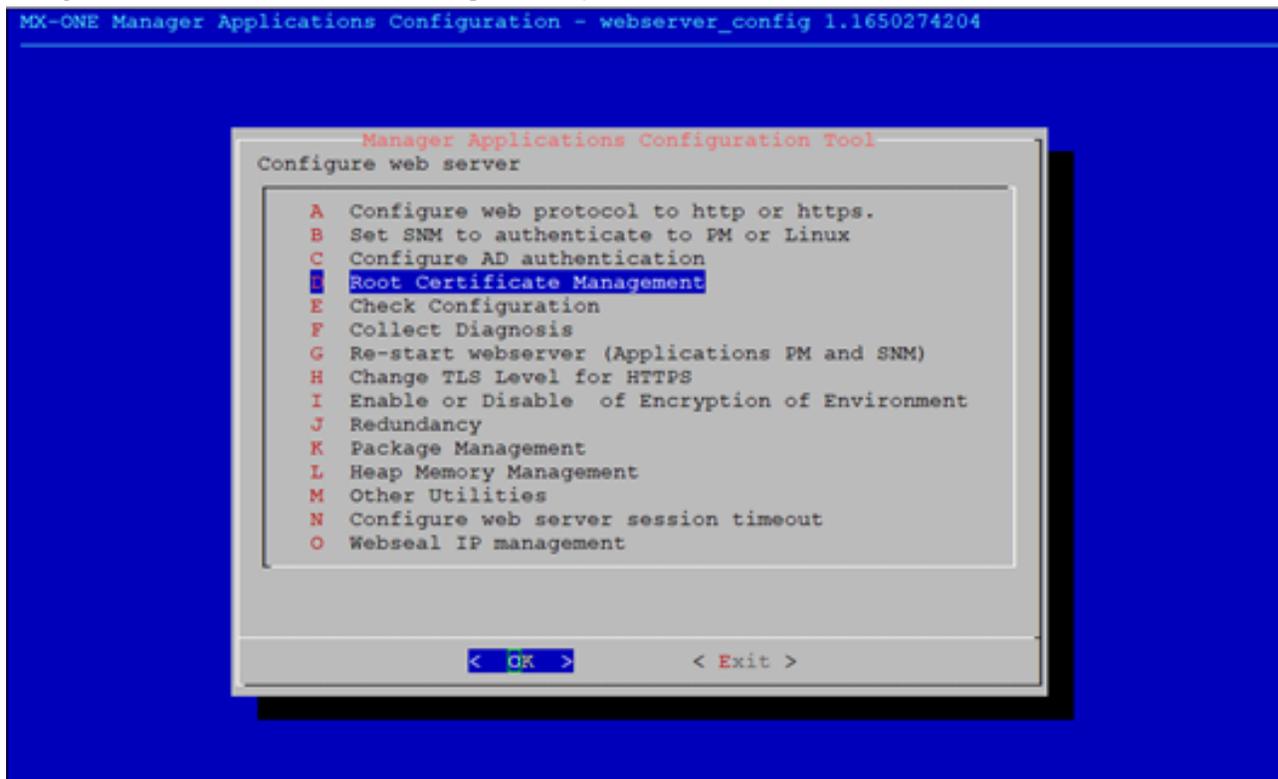
The CloudLink Server/ CloudLink Gateway communicates via an API with Provisioning Manager. For this, the CLGW certificate has to be installed on PM server.

Also, it is mandatory to install the certificate before setting up CL/CLGW subsystem from the PM interface.

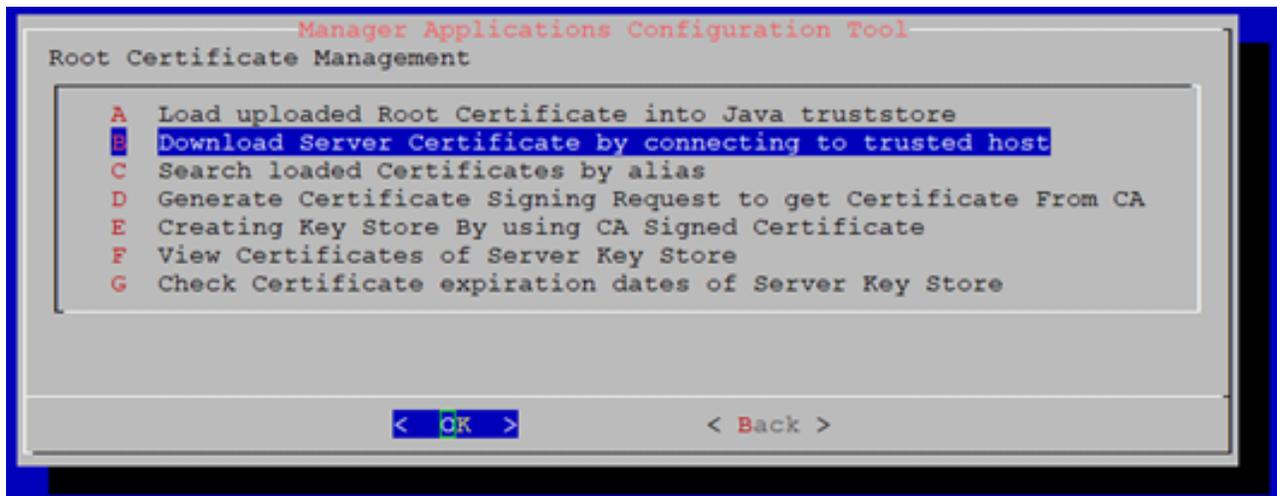
The following procedure explains the process to establish the certificate using the **webserver_config** (or **mxone_maintenance**) tool on the command prompt.

To configure the certificate to allow PM to trust CloudLink perform the following tasks:

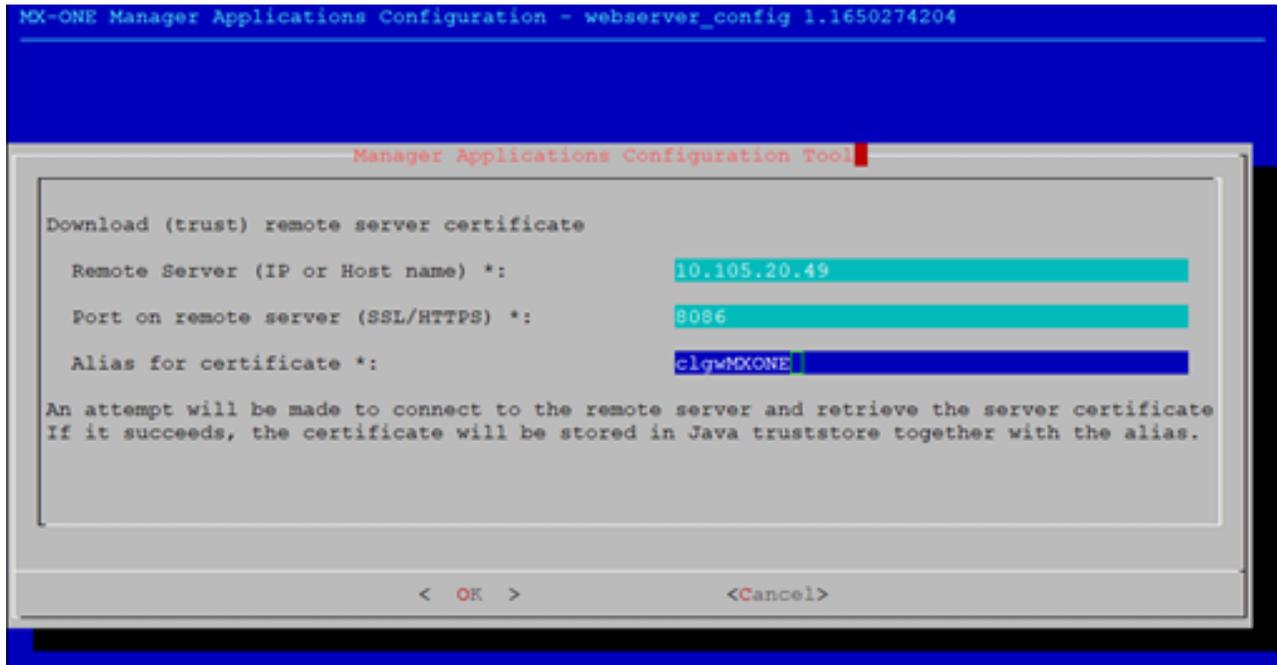
1. Open up an SSH connection (using Putty or a similar app) to the PM server.
2. Login using a suitable username and password (such as **mxone_admin**) and launch the webserver configuration tool using the command **sudo -H webserver_config**.
3. Navigate to the **Root Certificate Management** option.



4. Choose the option **Download Server Certificate by connecting to trusted host**.



- Enter the IP address of the CloudLink Gateway, the remote server port (8086 by default) and a descriptive text string as the certificate alias.



MX-ONE will attempt to connect to CLGW and download the certificate. After successful connection, a command-line based message is displayed asking to trust the certificate. Type Yes and then press enter to close the dialog.

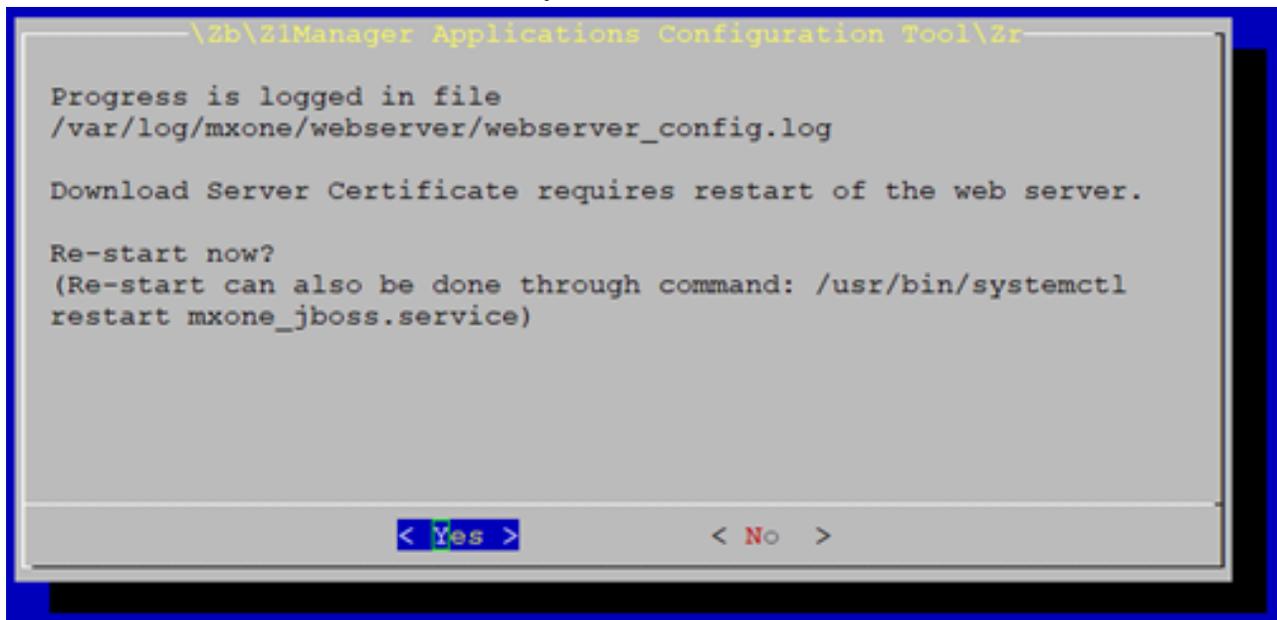
```

Owner: EMAILADDRESS=georg.dudas@mitel.com, CN=Micloud Link, OU=Vaihingen, O=Mitel, L=Stuttgart, ST=
BW, C=DE
Issuer: EMAILADDRESS=georg.dudas@mitel.com, CN=Micloud Link, OU=Vaihingen, O=Mitel, L=Stuttgart, ST
=BW, C=DE
Serial number: c1091b4b0d8373ba
Valid from: 7/13/17 11:02 AM until: 11/27/44 10:02 AM
Certificate fingerprints:
    MD5:  2C:33:43:58:9A:46:70:C7:3B:2E:EB:CE:55:C5:D6:A3
    SHA1: 7D:74:45:08:48:5E:D9:3C:F0:49:9E:EE:5F:26:C2:09:74:17:4C:3A
    SHA256: 16:FC:FB:8F:2B:2F:86:AB:CD:A9:C4:A9:18:1E:A6:14:79:91:38:D8:26:ED:C2:BE:AE:C7:01:B
4:B8:B4:25:AF
Signature algorithm name: SHA1withRSA
Version: 1
Trust this certificate? [no]: yes
Certificate was added to keystore

Press enter key to continue ...

```

6. After the certificate has been installed, restart jboss service.



MX-ONE System Setup

7

This chapter contains the following sections:

- [Creating a CloudLink Gateway Subsystem in Provisioning Manager](#)
- [Configure CloudLink Gateway Network Trunk via Provisioning Manager](#)
- [Service Node Manager](#)

7.1 Creating a CloudLink Gateway Subsystem in Provisioning Manager

After the security certificate has been imported into Provisioning Manager, it is possible to link the MX-ONE to CloudLink via a subsystem.

To create a subsystem in Provisioning Manager, do the following:

The screenshot shows the 'Subsystem - Add' form in the Mitel Provisioning Manager interface. The form is titled 'Subsystem - Add' and has 'Apply' and 'Cancel' buttons at the top left. The form fields are as follows:

- Subsystem Type: CloudLink Server (dropdown)
- Subsystem Name: (text input)
- CloudLink API URL: (text input)
- CloudLink Account ID: (text input)
- User ID in Subsystem: (text input)
- Password in Subsystem: (text input)
- Confirm Password in Subsystem: (text input)
- Location: Location01 (dropdown) with an 'Edit...' button
- CloudLink Gateway URL: (text input) with a dropdown menu showing 'MX7-S4-SN1'

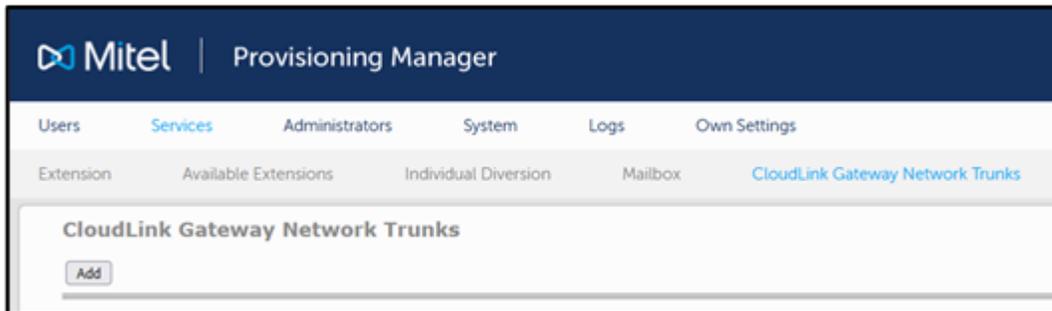
A help window is open on the right side of the form, titled 'Subsystem'. The help text reads: 'MiVoice MX-ONE comprises a number of components, such as CMG, MiCollab Advanced Messaging, MMC, MiCollab Server, SIP DECT Manager and MiVoice MX-ONE. By adding the servers on which the components run as subsystems in Provisioning Manager, user accounts and services related to the subsystems can be managed using Provisioning Manager as a single point of entry. Several subsystems can be installed on the same server, including the server on which Provisioning Manager run. When adding a subsystem, Provisioning Manager is provided with user credentials that are valid for logging on to the subsystem. These credentials are used, in the background, by Provisioning Manager.'

1. Navigate to **System > Subsystem** and click **Add** to add a new subsystem.

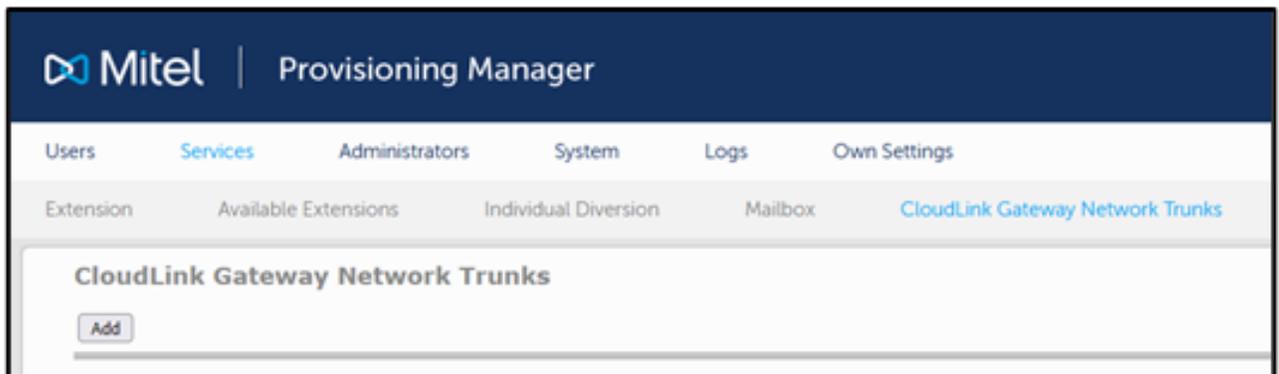
2. Create a CloudLink server subsystem by using the following steps:
 - a. In the **Subsystem Type** field, select CloudLink Server from the drop-down list.
 - b. In the **Subsystem Name** field, enter the name of the subsystem. For example, CloudLink.
 - c. In the **CloudLink API URL** field, enter the CloudLink subsystem URL address. For example, `https://authentication.api.mitel.io/2017-09-01/token`
 - d. In the **CloudLink account ID** field, enter the ID of your CloudLink account.
 - e. In the **User ID in Subsystem** field, enter the user ID of the Administrator user of your CloudLink account.
 - f. In the **Password in Subsystem** field, enter the password of the Administrator user of your CloudLink account.
 - g. In the **Confirm Password in Subsystem** field, re-enter the password as entered in the **Password in Subsystem** field.
 - h. In the **Location** field, select the subsystem's location from the drop-down list.
 - i. In the **CloudLink Gateway URL** field, enter the CloudLink Gateway subsystem URL address and select the MX-ONE Service Node to which you want to add the subsystem.
3. Click **Apply** to add the CloudLink Server Subsystem to the Provisioning Manager.

7.2 Configure CloudLink Gateway Network Trunk via Provisioning Manager

1. Login to the Provisioning Manager as a **Service Provider** admin user.
2. Navigate to the **Services > CloudLink Gateway Network Trunks**.

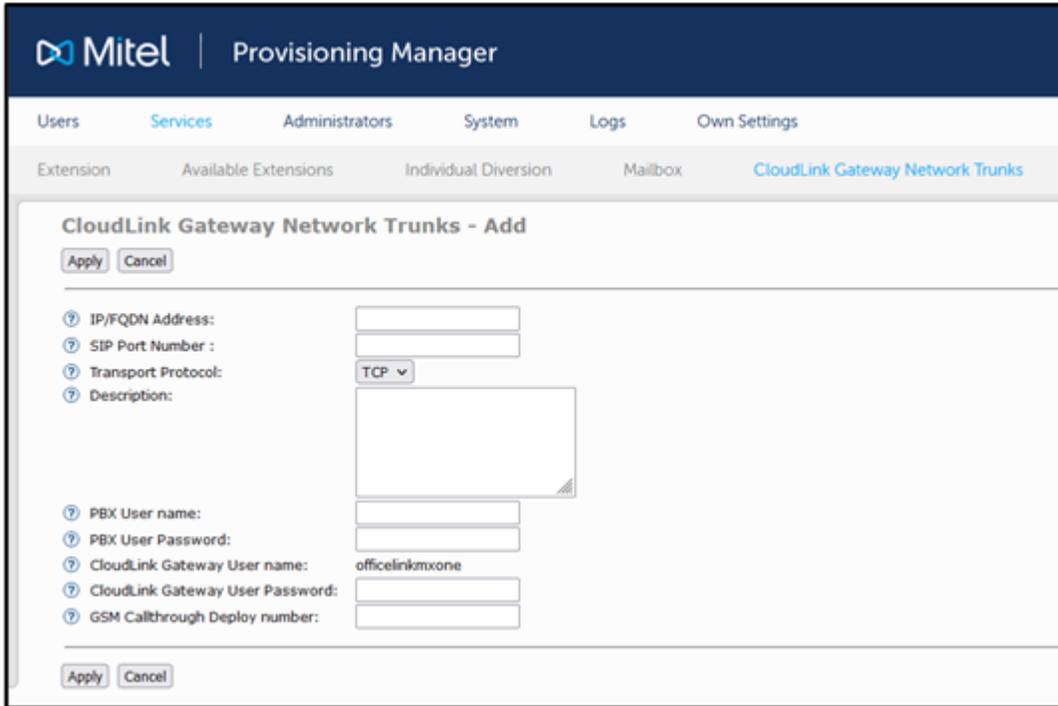


3. Click **Add**.



4. Configure the following information on the wizard:

- IP/FQDN of the CloudLink Gateway
- SIP Port Number (5060 or 5061 depending on protocol)
- Transport Protocol, TCP is the default used by CloudLink Gateway
- Description
- PBX user name and password, an MX-ONE user account used to authenticate SIP messages
- CloudLink Gateway user name and password. The default CloudLink Gateway user name is **officelinkmxone**.
- GSM Callthrough Deploy Number, this allows mobile calls via the PBX to be routed through the CloudLink Gateway.



The screenshot displays the Mitel Provisioning Manager interface. The top navigation bar includes 'Users', 'Services', 'Administrators', 'System', 'Logs', and 'Own Settings'. Below this, a secondary navigation bar shows 'Extension', 'Available Extensions', 'Individual Diversion', 'Mailbox', and 'CloudLink Gateway Network Trunks'. The main content area is titled 'CloudLink Gateway Network Trunks - Add' and contains the following configuration fields:

- IP/FQDN Address:
- SIP Port Number:
- Transport Protocol:
- Description:
- PBX User name:
- PBX User Password:
- CloudLink Gateway User name:
- CloudLink Gateway User Password:
- GSM Callthrough Deploy number:

Buttons for 'Apply' and 'Cancel' are located at the top left and bottom left of the form area.

The screenshot shows the Mitel Provisioning Manager interface. The top navigation bar includes 'Users', 'Services', 'Administrators', 'System', 'Logs', and 'Own Settings'. Below this, a secondary navigation bar lists 'Extension', 'Available Extensions', 'Individual Diversion', 'Mailbox', and 'CloudLink Gateway Network Trunks'. The main content area is titled 'CloudLink Gateway Network Trunks - Add' and contains the following form fields:

- IP/FQDN Address:
- SIP Port Number:
- Transport Protocol:
- Description:
- PBX User name:
- PBX User Password:
- CloudLink Gateway User name:
- CloudLink Gateway User Password:
- GSM Callthrough Deploy number:

There are 'Apply' and 'Cancel' buttons at the top and bottom of the form area.

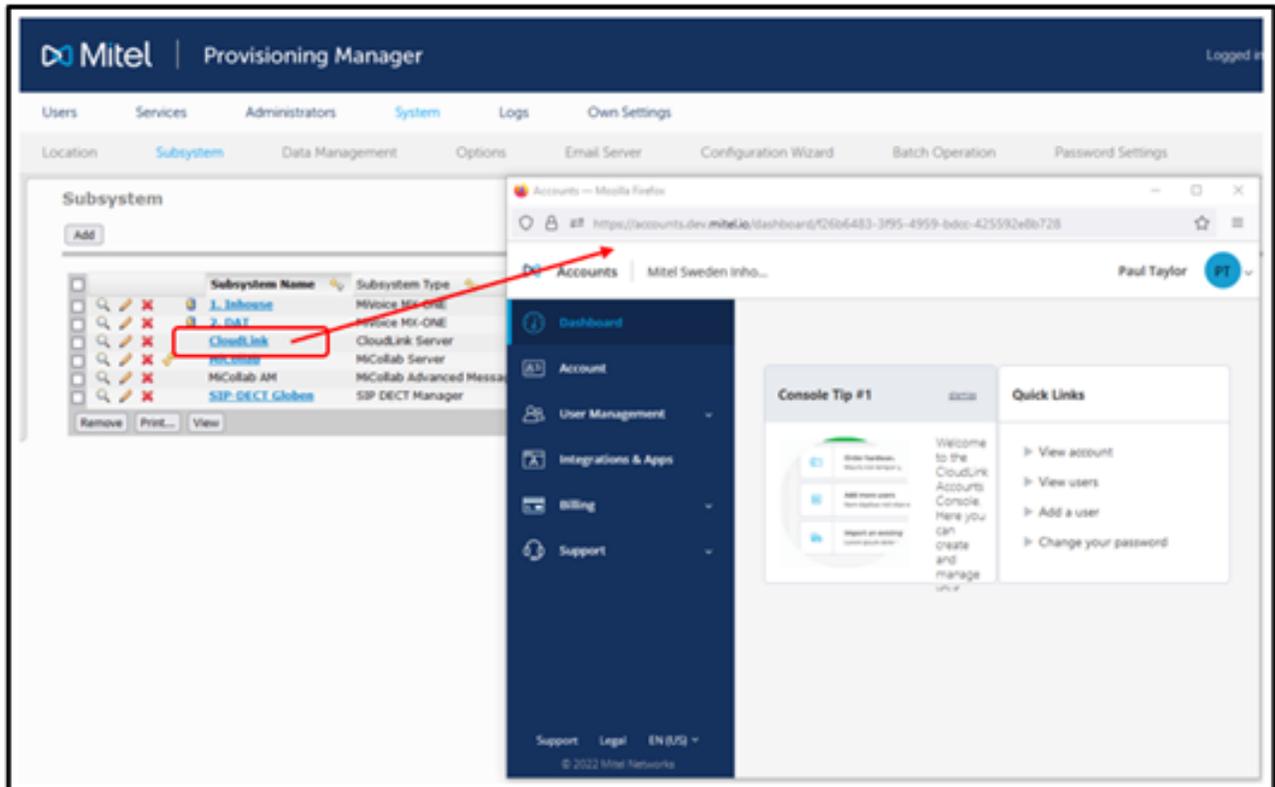
Access the CloudLink Portal via Provisioning Manager Subsystem

Note:

This section is optional.

Once the CloudLink Gateway subsystem has been created in Provisioning Manager, it can be used as another way of accessing the CloudLink Portal.

Clicking on the subsystem hyperlink opens a new browser window with the connection to the portal.



7.3 Service Node Manager

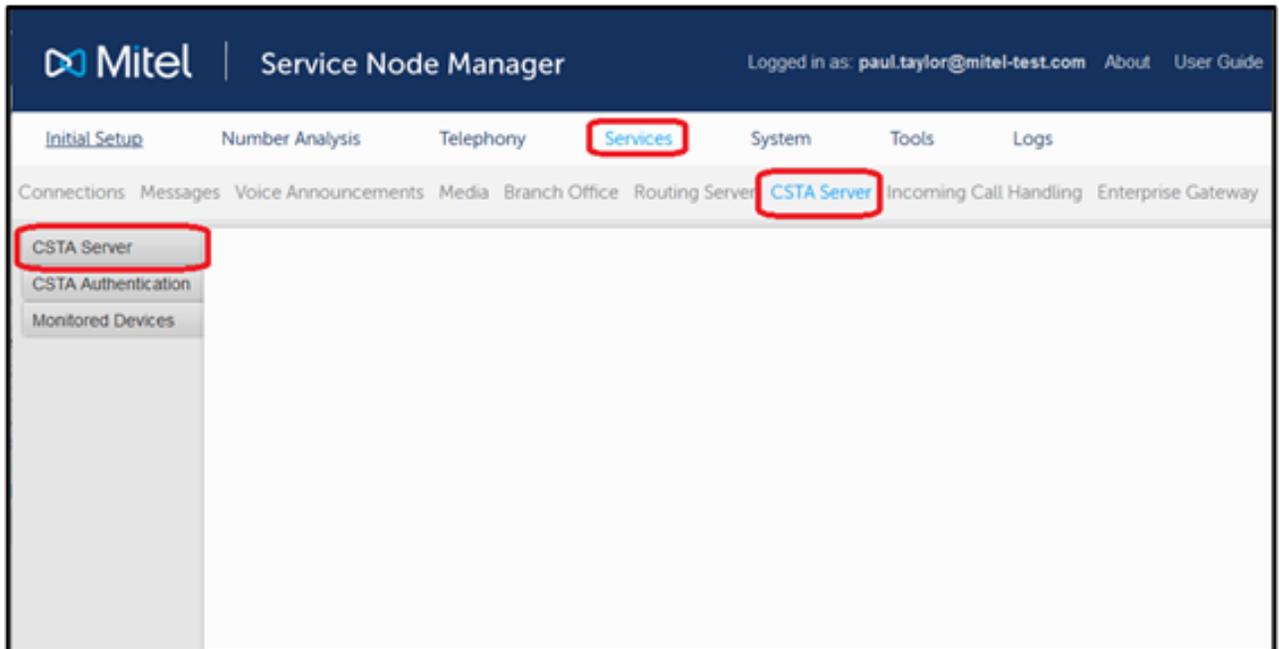
7.3.1 Configuring the MiVoice MX-ONE CSTA Server

The MiVoice MX-ONE and CloudLink use the CSTA (Computer Supported Telecommunications Application) protocol for all call control / CTI signaling between the two products via the CloudLink Gateway.

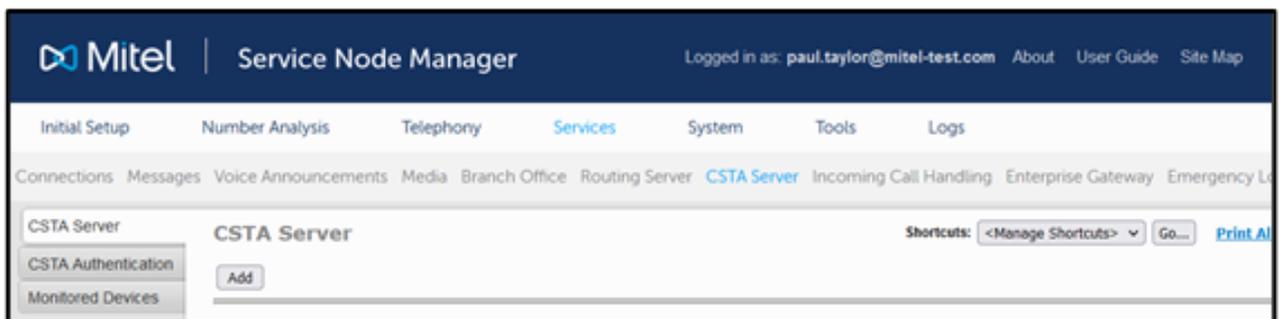
As with many other integrations, MX-ONE must have the CSTA Server function enabled to allow the CloudLink Gateway to connect via the protocol.

This is activated on MX-ONE via the Service Node Manager tool, accessed via Provisioning Manager via the MX-ONE subsystem.

1. In the **Services/CSTA Server** menu, choose the **CSTA Server** option on the left.



2. Click the **Add** button.



- Choose the MX-ONE Server (LIM) that will communicate with the CloudLink Gateway. The options shown in the following image are the default:

The screenshot shows the Mitel Service Node Manager interface. The top navigation bar includes 'Initial Setup', 'Number Analysis', 'Telephony', 'Services', 'System', 'Tools', and 'Logs'. The 'Services' tab is active, and the 'CSTA Server' sub-tab is selected. The main content area is titled 'CSTA Server - Add' and contains the following configuration options:

- Server Number: 1
- Type Of Interface: ECMA323, TR87 uaCSTA
- Port: 8882
- Call Deflect Options:
 - Heartbeat Option: No Heartbeat, Heartbeat support by external application
 - By-pass Option: No by-pass, By-pass of personal number
 - Diversion Option: No diversion, Allow diversion after deflection
 - Dialed Number Presentation Option: Do not replace dialed number, Replace dialed number with deflect-to number
 - Connection View Option: Local view, Fixed view
 - Encryption keys: Do not send Encryption keys, Send Encryption keys
 - Security:
 - Allow Diversion Category Override:
 - Application Authentication:

A help window titled 'CSTA Server' is open on the right, providing detailed information about the protocol and its implementation in MX-ONE.

If the CSTA server is already being used on MX-ONE to communicate with a different additional platform (such as MiContact Center Enterprise) using the same CSTA settings required for CloudLink Gateway but a different port number, then that port number should be used.

The port number chosen in Service Node Manager is then specified during the CloudLink Gateway configuration in Mitel Administration.

7.3.2 Configure CloudLink Gateway SIP Route via Service Node Manager

Note:

For specific CloudLink applications, an SIP trunk may be required between the MiVoice MX-ONE and the CloudLink Gateway. The *Application Documentation* provides more information on the SIP trunk configuration.

A SIP Trunk profile called **CloudLink Gateway** exists for setting up the SIP route to CloudLink Gateway. This allows a SIP connection to be established for media resources between the MX-ONE and CloudLink.

To setup the SIP route, use the following process:

1. The CloudLink Gateway profile requires the following information:

- a. **CloudLink Authentication username** and **password**. This username (default: officelinkmxone) and password must be the same as configured in the [Configure CloudLink Gateway Network Trunk via Provisioning Manager](#) on page 23.
- b. **Remote Host IP**.
- c. **Match Remote Domain**. The name format is **<Accountld><.eu.api.mitel.io>**.

To generate the Match Remote Domain name:

- i. Login to the Cloudlink portal.
- ii. Select the account for which you want to generate the Accountld.
- iii. From the URL, after *accounts/* copy the following Accountld.

```
https://accounts.mitel.io/accounts/7454089f-1145-43c2-  
aaf0-0ffdc1fa1921
```

- iv. Build the following **Match Remote Domain** name by adding the domain name at the end of the **Accountld**. For example, add *.eu.api.mitel.io*.

```
7454089f-1145-43c2-aaf0-0ffdc1fa1921.eu.api.mitel.io
```

2. Launch Service Node Manager via its subsystem in Provisioning Manager.
3. Go to the **Telephony / External Lines / Route** option and choose **Add**.

4. Set the signaling type to **SIP** and choose the **CloudLink Gateway** profile.

The screenshot shows the Mitel Service Node Manager interface. At the top, there is a navigation bar with the Mitel logo and the text 'Service Node Manager'. Below this, there are several tabs: 'Initial Setup', 'Number Analysis', 'Telephony' (which is highlighted), 'Services', and 'System'. Underneath these, there are more tabs: 'Extensions', 'Operator', 'Call Center', 'Groups', and 'External Lines' (which is highlighted). The main content area is titled 'Route - Add - Step 1 / 9'. On the left side, there is a vertical menu with the following items: 'Route', 'Destination', 'Corporate Name', 'Busy No Answer Rerouting', 'Vacant Number Rerouting', 'Customer Rerouting', 'Public Exchange Number', 'Charging', and 'Mobile Direct Access Dest'. The 'Route' item is selected. In the main configuration area, there are four buttons: '<- Back', 'Next ->', 'Apply', and 'Cancel'. Below these buttons, there are two dropdown menus. The first is labeled 'Type of Signaling:' and is set to 'SIP'. The second is labeled 'Profile Name:' and is set to 'CloudLink-Gateway'.

5. Chose a suitable Route name and select an available route number.

The screenshot displays the Mitel Service Node Manager interface. At the top, the Mitel logo and 'Service Node Manager' are visible. Below the header, there are navigation tabs: 'Initial Setup', 'Number Analysis', 'Telephony' (highlighted), 'Services', and 'System'. Underneath, there are sub-tabs: 'Extensions', 'Operator', 'Call Center', 'Groups', and 'External Lines' (highlighted).

The main content area is titled 'Route - Add - Step 2 / 4' and is divided into a left sidebar and a main configuration area. The sidebar contains a list of configuration options: 'Route', 'Destination', 'Corporate Name', 'Busy No Answer Rerouting', 'Vacant Number Rerouting', 'Customer Rerouting', 'Public Exchange Number', 'Charging', and 'Mobile Direct Access Dest'. The 'Route' option is selected.

The main configuration area is titled 'General' and contains the following fields and controls:

- Navigation buttons: '<- Back', 'Next ->', 'Apply', and 'Cancel'.
- 'Route Name: *' field: A text input box containing 'CloudLinkGateway'.
- 'Route Number:' field: A dropdown menu showing '10'.

- Equip the route with trunk individuals for the server that connects to the CloudLink Gateway, i.e., Server 1 1-10. This would allocate 10 SIP channels to the route.

The screenshot shows the Mitel Service Node Manager interface. At the top, the Mitel logo and 'Service Node Manager' are displayed. Below this is a navigation bar with tabs: 'Initial Setup', 'Number Analysis', 'Telephony' (highlighted), 'Services', and 'System'. A secondary navigation bar includes 'Extensions', 'Operator', 'Call Center', 'Groups', and 'External Lines' (highlighted). The main content area is titled 'Route - Add - Step 3 / 4' and 'Individuals'. On the left, a sidebar lists various route options, with 'Route' selected. The main form area contains navigation buttons: '<- Back', 'Next ->', 'Apply', and 'Cancel'. Below these are two columns: 'Server' and 'Trunk Index'. The 'Server' column has three dropdown menus, each showing '1'. The 'Trunk Index' column has three input fields; the top one contains '1-10' and is highlighted with a red asterisk, while the others are empty.

- Enter the specific CloudLink Gateway information mentioned in **Step 1**.

8. Click **Apply**.

Mitel | Service Node Manager Logged in as: mpadmin

Initial Setup | Number Analysis | **Telephony** | Services | System | Tools

Extensions | Operator | Call Center | Groups | **External Lines** | System Data

Route

Route - Add - Step 4 / 4

Profile specific settings

<- Back | Next -> | **Apply** | Cancel

Profile specific settings

Profile Name: CloudLink-Gateway

Password: *

Authentication Username: * officelinkmxone

Match Remote Domain: * 6454089f-1145-43c2-aaf0-0f

Remote Host IP: * 10.105.82.9

Note: External Destination Number needs to initiate in the Number Analysis -> Number Series and it needs to be associated with the route in Telephony -> External Lines -> Destination.

Note:

Match Remote Domain name is built from the CloudLink/CloudLink Gateway **AccountId** and the attached domain. For more information, see **Step 1.c**.

- After the SIP route has been created, Destination Code/Codes may need to be created to route calls to the relevant CloudLink Application. To assign Destination Code to the created SIP route, navigate to **Telephony/External Lines/Destinations** and **Add** a new Destination code.

The screenshot displays the Mitel Service Node Manager interface. At the top, the Mitel logo and 'Service Node Manager' title are visible. Below this is a navigation bar with tabs for 'Initial Setup', 'Number Analysis', 'Telephony', 'Services', and 'System'. A secondary navigation bar includes 'Extensions', 'Operator', 'Call Center', 'Groups', and 'External Lines'. On the left, a sidebar menu lists various configuration options, with 'Destination' currently selected. The main content area is titled 'Destination - Add - Step 2 / 3' and 'Route Details'. It features navigation buttons: '<- Back', 'Next ->', 'Apply', and 'Cancel'. The configuration fields are as follows:

- Destination:** 43800-External (with an 'Edit...' button)
- Route Name:** CloudLinkGateway (with 'View...' and 'Edit...' buttons)
- Customer Choice:**

10. Select the **Start Position for Digit Transmission** from the drop-down list to send digits required digits to the CloudLink Application and set **Type of Calling Number** and **Type of Calling Private Number** to Private Unknown.

Mitel | Service Node Manager Logged in as: mpadmin

Initial Setup | Number Analysis | **Telephony** | Services | System | Tools | Logs

Extensions | Operator | Call Center | Groups | **External Lines** | System Data | IP Phone | DECT

- Route
- Destination
- Corporate Name
- Busy No Answer Rerouting
- Vacant Number Rerouting
- Customer Rerouting
- Public Exchange Number
- Charging
- Mobile Direct Access Dest

Destination - Add - Step 3 / 3

ADC Details

<- Back
Next ->
Apply
Cancel

Destination:	43800
Route Name:	CloudLinkGateway
<small>Primary Choice is the sequence number for the route choice in alternative routing</small>	
Start Position for Digit Transmission:	1
Type of Seizure of External Line:	Immediate seizure
Forward Switching:	<input type="checkbox"/>
Type of Called Number:	Unknown private
Type of Calling Public Number:	Unknown public
Type of Calling Private Number:	Unknown private
Use as Emergency Destination:	<input type="checkbox"/>
Pre-digits in order to form a new External Number:	
Truncated Digits in Dialed Number:	0
Type of Signal Seizure:	<input checked="" type="radio"/> Terminating seizure <input type="radio"/> Transit seizure
B-Answer Signal Available:	<input checked="" type="checkbox"/>
Allow to send Traveling Class Mark:	<input type="checkbox"/>
Route Type:	
Maximum Number of Transit Exchanges:	25
PNR Number Translation Information:	No Translation
Supplementary Services Using User to User Interface:	Not Allowed
Use Least Cost Routing for All Calls:	<input type="checkbox"/>
Allow Sending of Expensive Route Warning Tone:	<input type="checkbox"/>
Type of Protocol to use for Supplementary Service Call Offer:	<input checked="" type="radio"/> User to User Interface(UUI) <input type="radio"/> Generic Function Protocol(GFP)
Type of Protocol for Call Back/Call Completion:	<input checked="" type="radio"/> User to User Interface(UUI) <input type="radio"/> Generic Function Protocol(GFP)
Show Original A-Number:	<input checked="" type="checkbox"/>
Use Original A-Number's Type of Number:	<input type="checkbox"/>
Enable Enhanced Sent A-Number Conversion:	<input checked="" type="checkbox"/>
Use ETSI Diversion Supplementary Service:	<input type="checkbox"/>

Basic...

MX-ONE Provisioning Manager – CloudLink Tasks

8

This chapter contains the following sections:

- [Provisioning Manager User Task](#)
- [Bulk Function via Provisioning Manager Import](#)
- [Sync Option for CL/CLGW Subsystem](#)

Provisioning Manager is the tool to onboard users in CloudLink.

There are two ways of onboarding users in CloudLink:

- Provisioning Manager User Task

One by one, users are defined and added in CloudLink Platform and CloudLink Gateway.

- Bulk function via Provisioning Manager import

User are imported into Provisioning Manger in bulk using a predefined Import Source template.

8.1 Provisioning Manager User Task

To configure a user, do the following:

1. Navigate to **Users > User** and type asterisk(*) in the **Enter User Name(s), Extension Number, Department** field.

The screenshot shows the Mitel Provisioning Manager interface. The top navigation bar includes the Mitel logo, 'Provisioning Manager', and user information. Below the navigation bar, there are tabs for 'Users', 'Services', 'Administrators', 'System', 'Logs', and 'Own Settings'. The 'User' tab is selected, and the 'User' sub-tab is active. The main content area shows a search bar with the text 'Enter User Name(s), Extension Number, Department:' and a dropdown menu for 'Imported from:'. Below the search bar, there is a table of users with columns for 'User Id', 'Last Name', 'First Name', 'Extension / MiVoice MX-ONE', 'Department(s)', 'Import from', 'Customer', 'CloudLink Server', and 'CloudLink Role'. The table contains 10 rows of user data.

User Id	Last Name	First Name	Extension / MiVoice MX-ONE	Department(s)	Import from	Customer	CloudLink Server	CloudLink Role
admin_rd	rd	admin		Company01				
Jack_smith	Smith	Jack		Company01				
Emma.Smith	Smith	Emma	900000 / MX7-54-SN1	Company01			10	USER
Olivia.Johnson	Johnson	Olivia	900001 / MX7-54-SN1	Company01				
Sophia.Williams	Williams	Sophia	900002 / MX7-54-SN1	Company01				
Isabella.Brown	Brown	Isabella	900003 / MX7-54-SN1	Company01				
Ava.Jones	Jones	Ava	900004 / MX7-54-SN1	Company01				
Mia.Miller	Miller	Mia	900005 / MX7-54-SN1	Company01				
Emily.Davis	Davis	Emily	900006 / MX7-54-SN1	Company01				
Abigail.Garcia	Garcia	Abigail	900007 / MX7-54-SN1	Company01				

2. Click **View** to view the list of users.

- Click the **Change** button beside the user whose details you want to configure.

The screenshot shows the 'User - Change - ptest' configuration page in the Mitel Provisioning Manager. The 'CloudLink Configuration' tab is active. The form contains the following fields:

- Assign CloudLink Extension (Extension, LIM IP):** A dropdown menu with the value '1008.10.110.53.7' selected.
- CloudLink Server:** A dropdown menu with the value 'cloudlink test' selected.
- CloudLink Role:** A dropdown menu with the value 'User' selected.
- Enable Services:**
 - MiTeam Meetings:**
 - MOMA and MOWA Clients:**

Buttons for 'Apply' and 'Cancel' are located at the top left and bottom left of the form.

- In the page that opens, click the **CloudLink Configuration** tab and do the following:
 - Select a CloudLink Extension from the **Assign CloudLink Extension (Extension, LIM IP)** drop-down list.
 - Select a CloudLink Server from the **CloudLink Server** drop-down list.
 - Select a role for the user from the **CloudLink Role** drop-down list.
 - Deselect **MiTeam Meetings** parameter.
 - Select **Softphone Client** parameter.
- Click **Apply** to complete the configuration for the user. With this, a user is synchronized with the CloudLink account. Follow the steps **3-5** for configuring each user.

You can navigate to **CloudLink Gateway portal > Deployment** and check if the user is added there.

You can navigate to **CloudLink portal > User Management > Users** and check if the user is added there.

8.2 Bulk Function via Provisioning Manager Import

To use the bulk function via the Provisioning Manager Import option, do the following:

1. Navigate to **System > Data Management > Import task** and select the type of the file to be imported under **Import Source** and click **Next**.

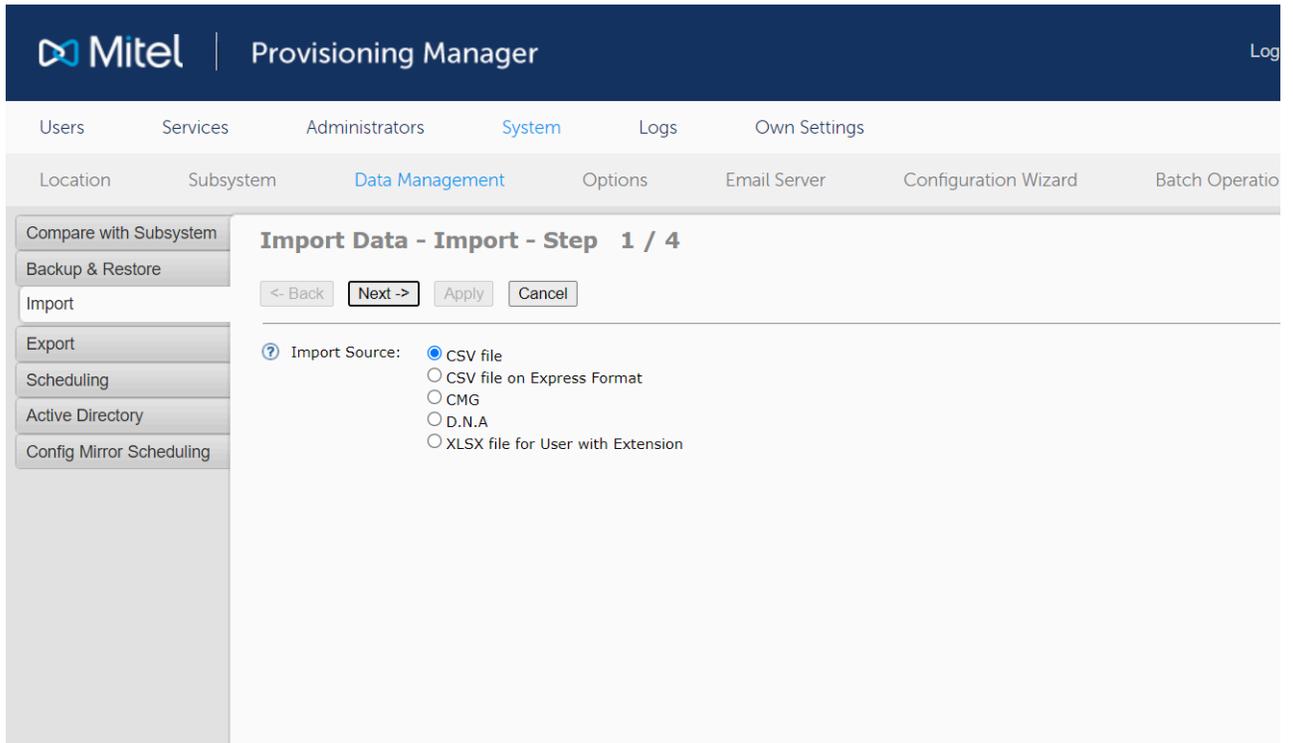


Figure 1: Import Source

2. Click **Choose File** and select the file from your system to be imported and then click **Next**.

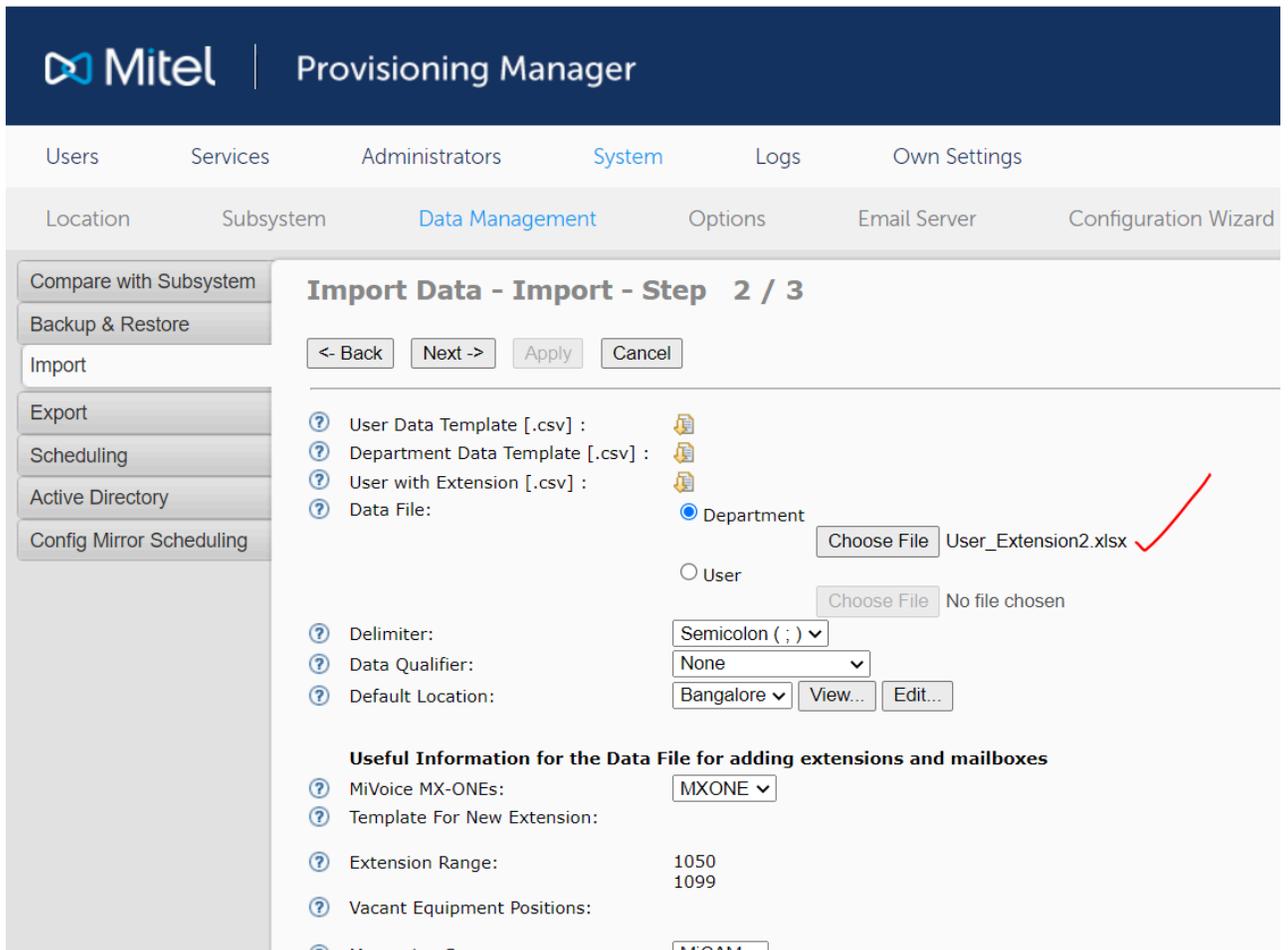


Figure 2: Select Data File

3. Click **Apply** and the users will be imported successfully into the Provisioning Manager system and CloudLink portal.

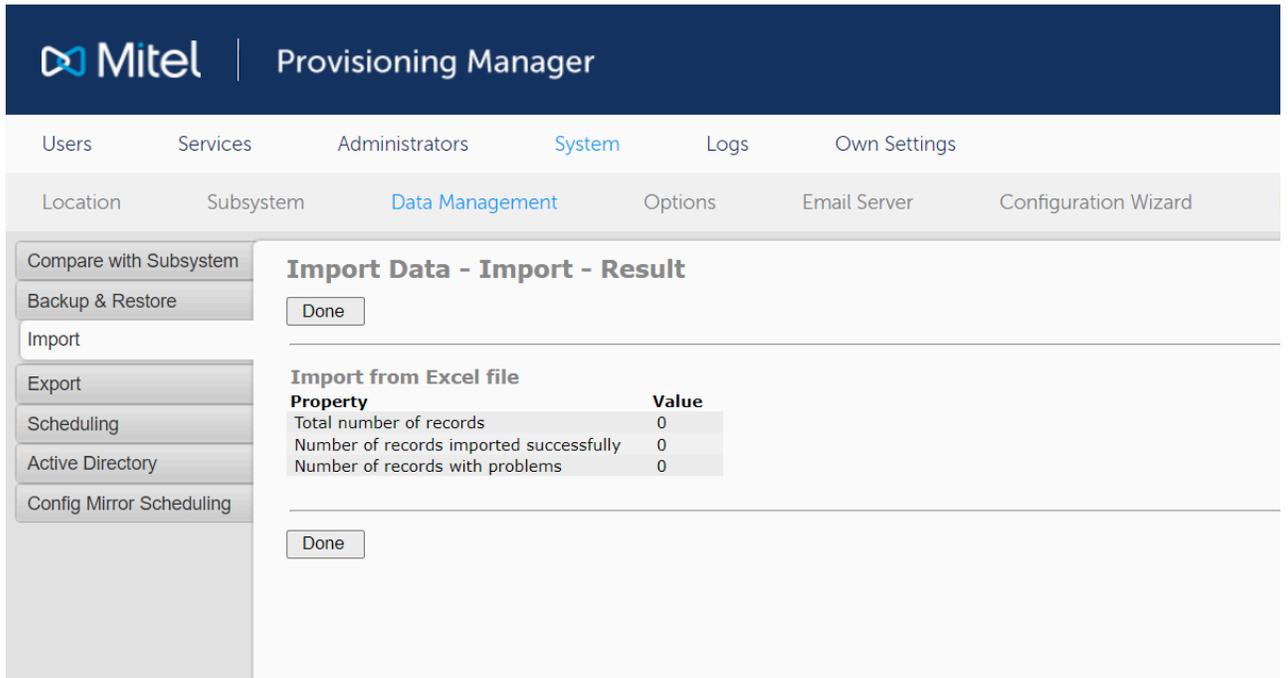


Figure 3: Import Successful

8.3 Sync Option for CL/CLGW Subsystem

The **Refresh/Synchronize** option is available for CloudLink Subsystem.

This option is used to synchronize the CloudLink users from PM user database to CloudLink Server. The CloudLink users present in PM will only be synchronized using this option.

Note:

The version and license details will not be displayed for CloudLink subsystems in PM.

Subsystem

[Print All](#) [Help](#)

[Add](#)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Subsystem Name	Subsystem Type	Version	Location	License Details	Expiration Date		
<input type="checkbox"/>	10.211.159.225	MVoice MX-ONE	7.4 SP2	Location01	Traditional			
<input type="checkbox"/>	CloudLink	CloudLink Server		Location01				



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