



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 solution 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 solution 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 solution 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 solution 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](#)
- [CloudLink Accounts](#)
- [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

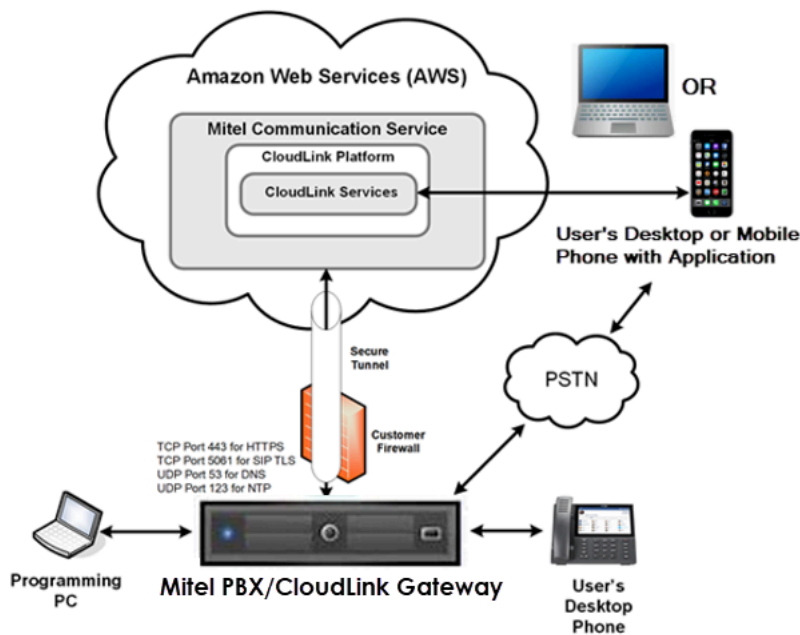
The CloudLink Gateway connects PBXs to the CloudLink Platform and CloudLink Applications. The gateway enables the connection between the PBX and the endpoints by supporting the signaling protocols from different PBXs. Effectively, only one Signaling and Messaging Protocol is used between the CloudLink 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

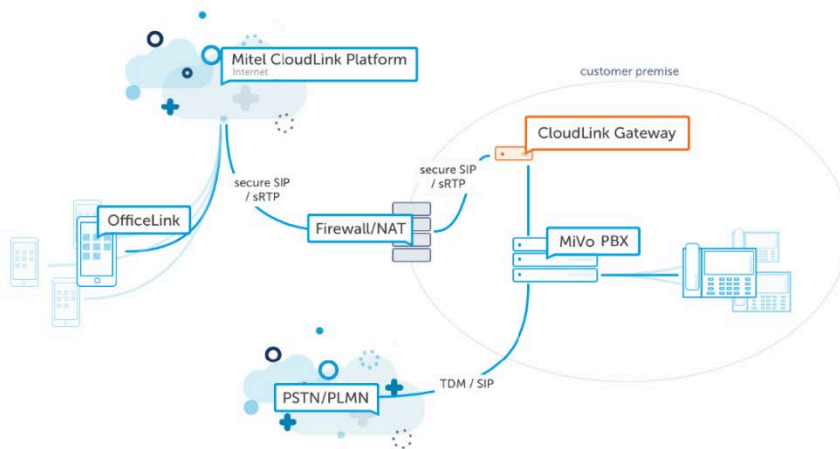
3

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.

The following figure shows the CloudLink overall solution, where the MiVO PBX represents MX-ONE.

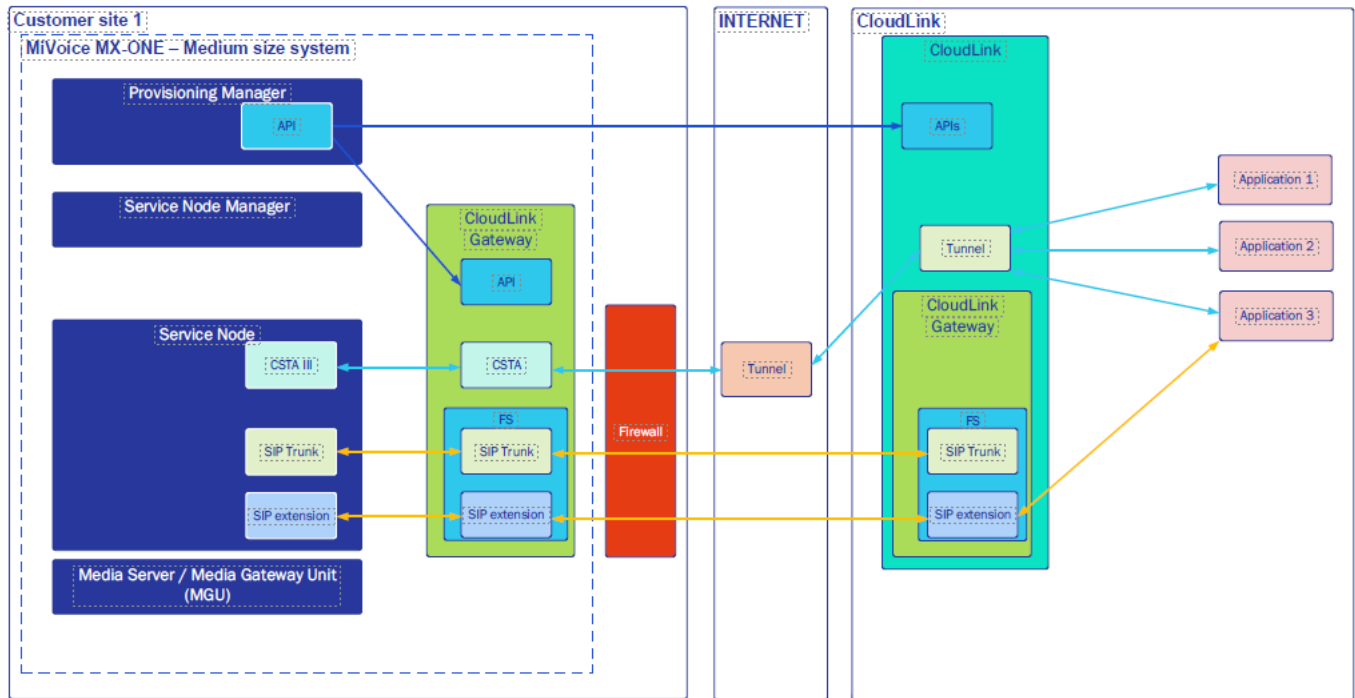


The solution between MX-ONE and CloudLink has the following key system functions:

- 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 solution.

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, Billing, 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 administrator.

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 solution 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. 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.
4. The solution is supported only for a single MiVoice MX-ONE.
5. A single CloudLink Gateway is supported. There is no CTI resiliency.
6. 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.
7. The CloudLink solution 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.
8. CloudLink Integration supports a maximum of 2500 users 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.
9. 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

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.
- Admin account to be used by Provisioning Manager.
- CloudLink licenses for the specific services, such as MiTeam Meetings licenses.

Introduction to CloudLink Account Console

4

This chapter contains the following sections:

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

Also see the [CloudLink Accounts Console User Guide \(mitel.com\)](#).

The CloudLink Account Console 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 CloudLink Account Console

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>.

A Mitel partner, customer account administrator, or user can access the CloudLink Gateway directly at <http://gateway.mitel.io/>.

4.2 Create a CloudLink Customer Account

For information about creating a CloudLink Customer account, see the section Managing Accounts in [CloudLink Accounts Console 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 [CloudLink Accounts Console User Guide \(mitel.com\)](https://mitel.com/cloudlink-accounts-console-user-guide).

Note:

A Mitel Partner can add users to customer accounts. An Account Admin of a customer account can add users to that account.

After a Mitel Partner or an Account Admin adds a user to a customer account, the CloudLink Accounts Console 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 [CloudLink Accounts Console User Guide \(mitel.com\)](https://mitel.com/cloudlink-accounts-console-user-guide).

Note:


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

4.3.1 Provisioning Manager Admin User

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

To create an admin user:

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 admin user to the account.

**New User**
Enter user details below

☒ Account Admin

*required

**Note:**

The account admin needs to have a valid email address. CloudLink will validate the address and send a Welcome Email for setting up the password.

4.3.2 Validation of the Admin User

The Admin user must complete the account setup by following the instructions sent via mail to the mail ID given during creation of the admin user.



Note:


This validation must be done before the user can use any CloudLink service.

Mail

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](#)

Account Number: [redacted]

[mitel.com](#) [Support](#) [Privacy Policy](#)

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4 days to complete the setup

Account Number

Integrating CloudLink Gateway with CloudLink Accounts

5

After you create a customer account in the Accounts console, 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 CloudLink Accounts](#)

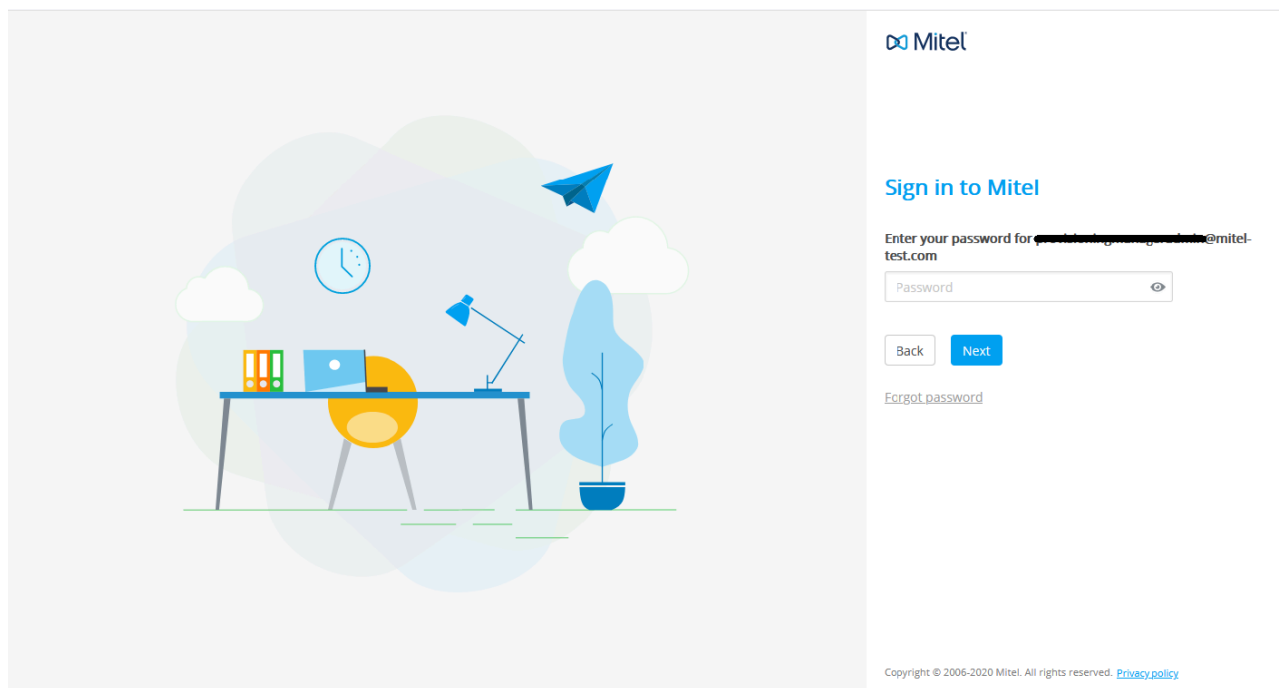
As part of the CloudLink solution, a CloudLink Gateway in the customer premises is required. It is using services that require CSTA and SIP.

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 shows the CloudLink Gateway Portal interface. At the top, there is a navigation bar with the 'Gateway Portal' logo and a 'Successfully updated customer' notification banner. The user is logged in as 'PM Admin'. Below the navigation bar, a progress indicator shows the current step is 'Gateway', with other steps being 'Customer', 'PBX', 'Connect', 'Deployment', 'Advanced', and 'Overview'. The main content area displays the 'Gateway Information' form, which includes fields for 'Site Name*', 'Address', 'Town*', 'Country*', and 'Postal / Zip Code*'. Below these fields is the 'Appliance Ethernet Configuration' section, which has a 'Port 1' configuration area with 'DHCP' and 'Static' tabs. The 'DHCP' tab is selected, and the 'Current IP' is displayed. A red asterisk indicates that the 'Country' field is required. At the bottom right of the form, there 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 | PM Admin

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

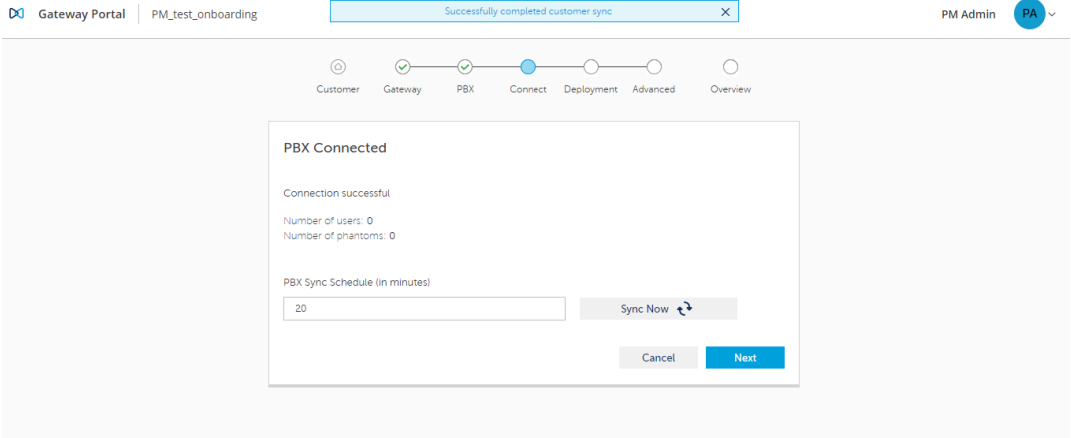
Customer Gateway PBX **Connect** Deployment Advanced Overview

Start PBX Connection

Verify and start your connection to the PBX

Connect

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



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

6

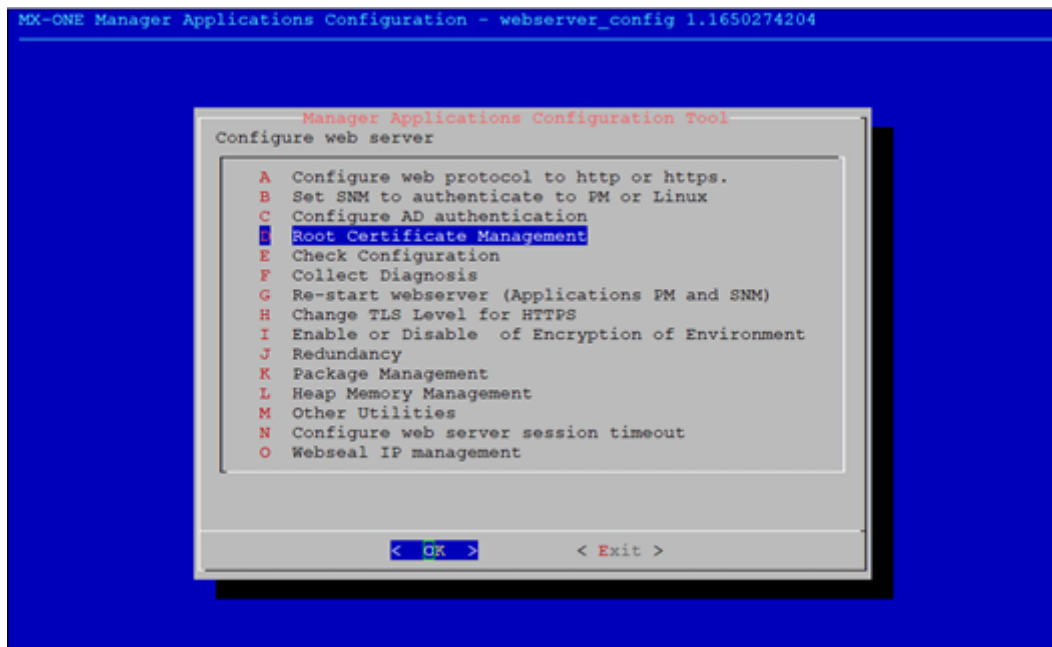
The CloudLink Server/ CloudLink Gateway communicates via an API with Provisioning Manager. For this, the CLGW certificate has to be installed on PM server.

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

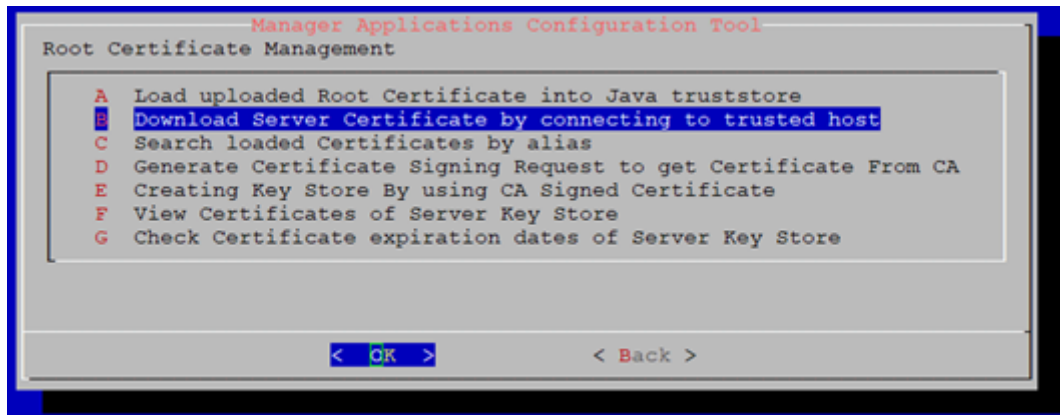
The following procedure explains the process to establish the certificate using the **webserver_config** (or **mxone_maintenance**) tool on the command prompt.

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

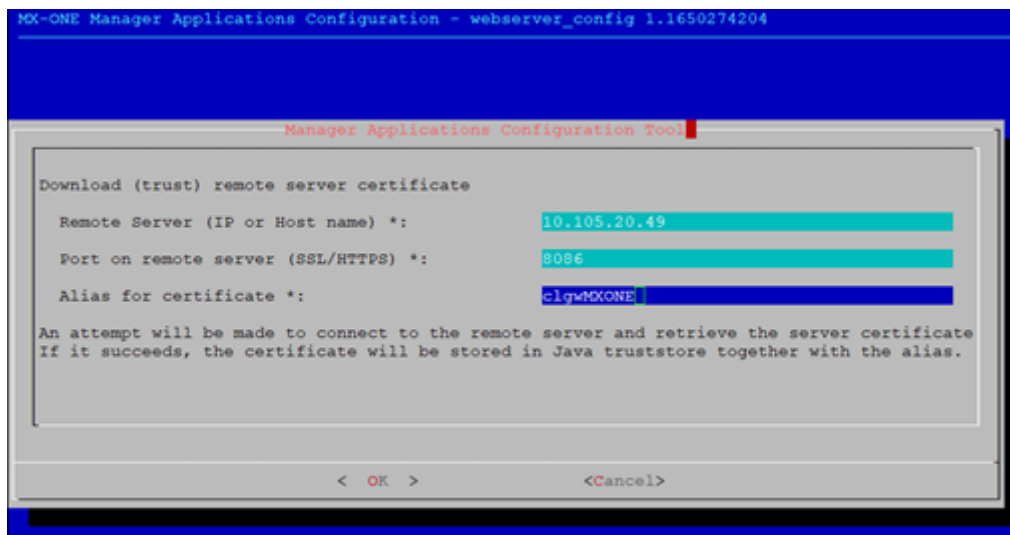
1. Open up an SSH connection (using Putty or a similar app) to the PM server.
2. Login using a suitable username and password (such as **mxone_admin**) and launch the webserver configuration tool using the command **sudo -H webserver_config**.
3. Navigate to the **Root Certificate Management** option.



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



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

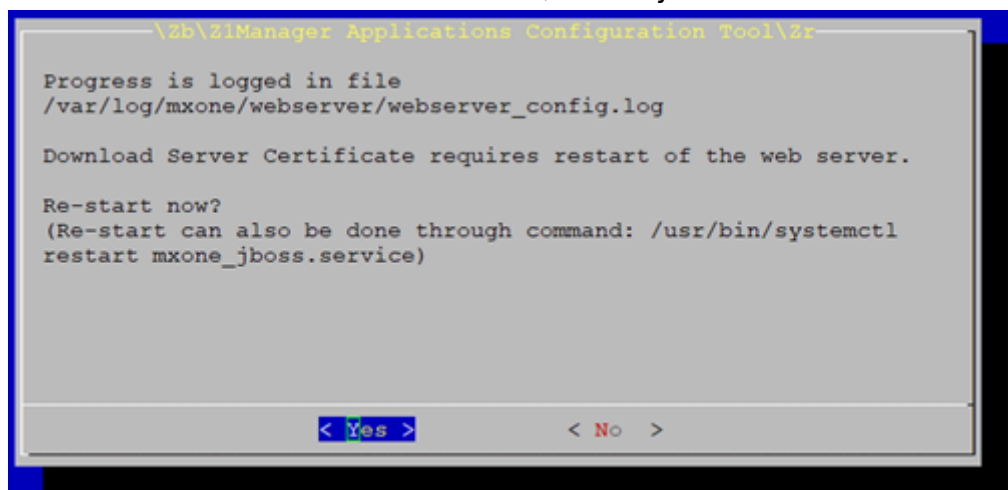


MX-ONE will attempt to connect to CLGW and download the certificate. After successful connection, a command-line based message is displayed asking to trust the certificate. Type Yes and then press enter to close the dialog.

```
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](#)
- [Configure CloudLink Gateway SIP Route via Service Node Manager](#)
- [Access the CloudLink Portal via Provisioning Manager Subsystem](#)
- [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:

Mitel | Provisioning Manager Logged in as: [redacted] About User Guide Site Map Logout

Users Services Administrators **System** Logs Own Settings

Location **Subsystem** Data Management Options Email Server Configuration Wizard Batch Operation Password Settings

Subsystem - Add

Apply Cancel

Subsystem Type: CloudLink Server

Subsystem Name: *

CloudLink API URL:

CloudLink Account ID:

User ID in Subsystem:

Password in Subsystem:

Confirm Password in Subsystem:

Location: Location01 Edit...

CloudLink Gateway URL:

MX7-S4-SN1

Apply Cancel

Help

Subsystem

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 runs.

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:

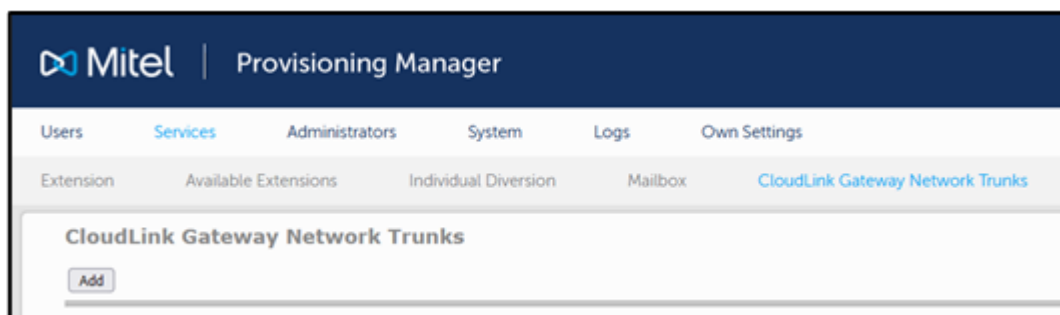
- a. In the **Subsystem Type** field, select CloudLink Server from the drop-down list.
- b. In the **Subsystem Name** field, enter the name of the subsystem. For example, CloudLink.
- c. In the **CloudLink API URL** field, enter the CloudLink subsystem URL address. For example, <https://authentication.api.mitel.io/2017-09-01/token>
- 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 admin user of your CloudLink account.
- f. In the **Password in Subsystem** field, enter the password of the admin 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

This is performed via Provisioning Manager under the **Services** menu.

1. Choose the **CloudLink Gateway Network Trunks** option and click **Add**.



2. The wizard then asks for the following information:

- 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, an MX-ONE user account used to authenticate SIP messages
- PBX user password, password for the user above
- CloudLink Gateway user name, this defaults to **officelinkmxone**
- CloudLink Gateway user password, password for the user above
- GSM Callthrough Deploy Number, this allows mobile calls via the PBX to be routed through the CloudLink Gateway.

The screenshot shows the Mitel Provisioning Manager interface. The top navigation bar includes 'Users', 'Services', 'Administrators', 'System', 'Logs', and 'Own Settings'. Below this, a sub-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 fields:

- IP/FQDN Address: [Text Input]
- SIP Port Number: [Text Input]
- Transport Protocol: [Dropdown Menu, currently showing 'TCP']
- Description: [Text Area]
- PBX User name: [Text Input]
- PBX User Password: [Text Input]
- CloudLink Gateway User name: [Text Input, pre-filled with 'officelinkmxone']
- CloudLink Gateway User Password: [Text Input]
- GSM Callthrough Deploy number: [Text Input]

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

7.3 Configure CloudLink Gateway SIP Route via Service Node Manager

A new SIP Trunk profile has been added to MX-ONE 7.4 SP2 onwards, called **CloudLink Gateway**. This allows a SIP connection to be established for media resources between the MX-ONE and CloudLink. A SIP trunk only needs to be configured between MXONE and CloudLink Gateway in case there exists an application in CloudLink requiring this type of connection.

To setup the SIP route, use the following process:

1. The CloudLink Gateway profile requires the following information:
 - CloudLink Authentication username
 - CloudLink Authentication username password
 - Remote Proxy IP of CloudLink Gateway
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.

5. Chose a suitable Route name and select an available route number.
6. 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.

7. Enter the specific CloudLink Gateway information mentioned in step 1 and click apply.

Mitel | Service Node Manager Logged in as: paul.taylor@mitel-test

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

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

Route

Destination

Corporate Name

Busy No Answer Rerouting

Vacant Number Rerouting

Customer Rerouting

Public Exchange Number

Charging

Mobile Direct Access Dest

Route - Add - Step 4 / 4

Profile specific settings

<- Back Next -> Apply Cancel

Profile specific settings

Profile Name: CloudLink-Gateway

Password: *

Remote Proxy IP: * sip:+468568?@10.105.2

Authentication Username: * CLG-STO01

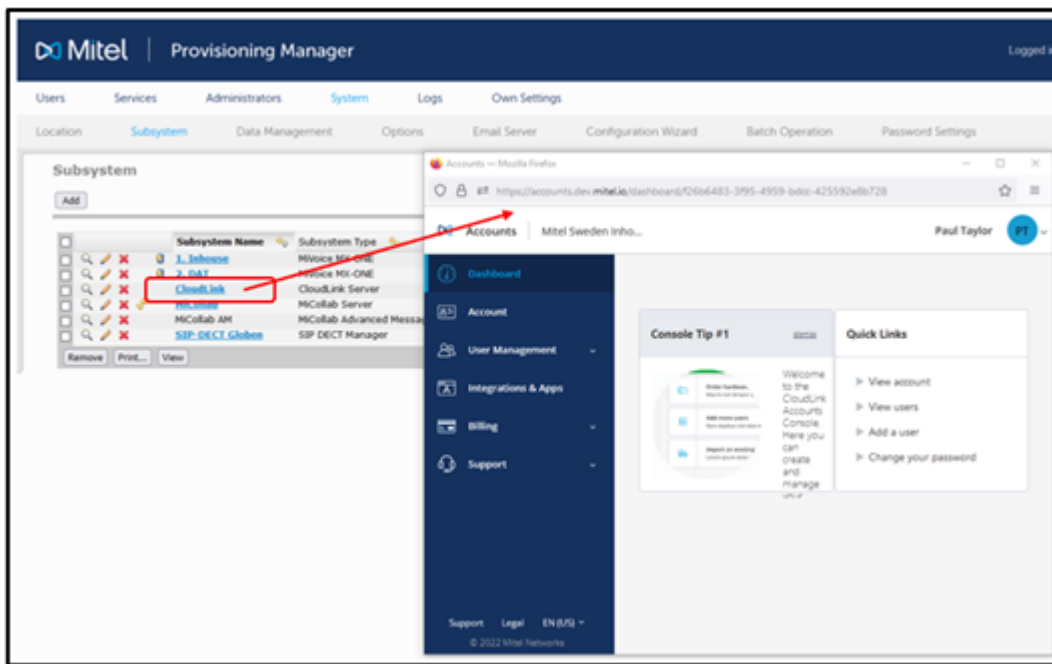
Note: External Destination Number needs to initiate in the Number Analysis -> Number Series and it needs to be associated with the route in Telephony -> External Lines -> Destination.

8. As is shown on the image above, after the SIP route has been created a Destination may also need to be created to direct calls to be able to reach the GSM CallThrough Number (if defined in the next step).

7.4 Access the CloudLink Portal via Provisioning Manager Subsystem

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.



7.5 Service Node Manager

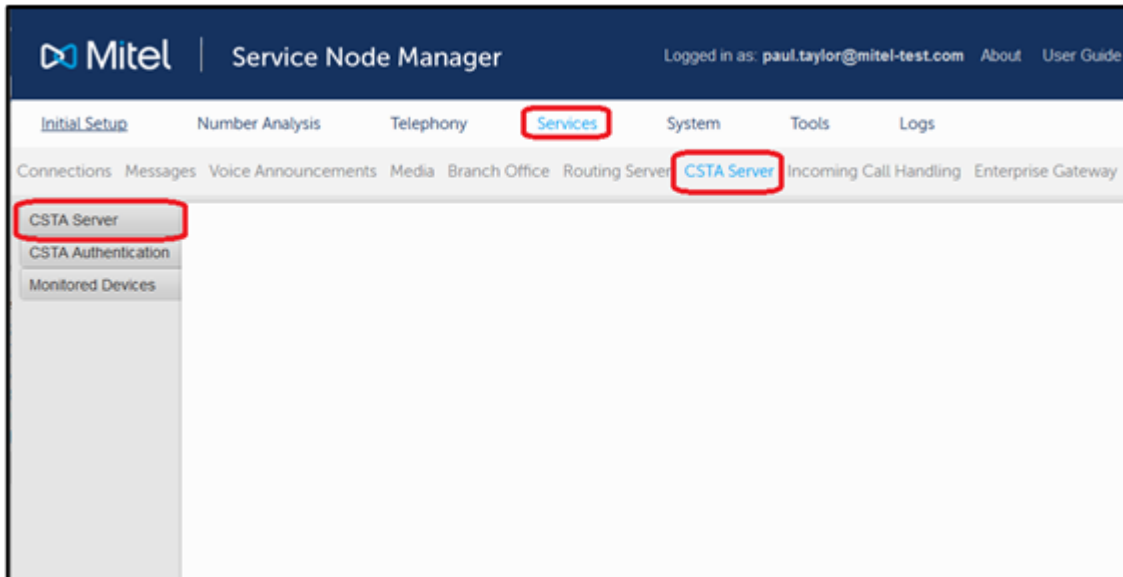
7.5.1 Configuring the MiVoice MX-ONE CSTA Server

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.

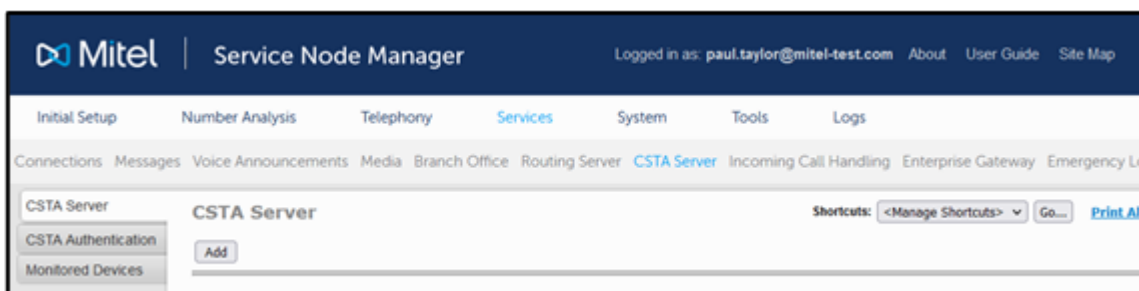
As with many other integrations, MX-ONE must have the CSTA Server function enabled to allow the CloudLink Gateway to connect via the protocol.

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.



3. 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' (selected), 'System', 'Tools', and 'Logs'. Below this, a secondary navigation bar lists various services, with 'CSTA Server' highlighted. The main content area is titled 'CSTA Server - Add' and contains several configuration sections:

- Server Number:** A dropdown menu set to '1'.
- Type Of Interface:** Radio buttons for 'ECMA323' (selected) and 'TR87 uaCSTA'.
- Port:** A text input field containing '8882'.
- Call Deflect Options:**
 - Heartbeat Option:** Radio buttons for 'No Heartbeat' (selected) and 'Heartbeat support by external application'.
 - By-pass Option:** Radio buttons for 'No by-pass' (selected), 'By-pass', and 'By-pass of personal number'.
 - Diversion Option:** Radio buttons for 'No diversion' (selected), 'Allow diversion after deflection', and 'Replace dialed number with deflect-to number'.
 - Dialed Number Presentation Option:** Radio buttons for 'Do not replace dialed number' (selected), 'Replace dialed number with deflect-to number', and 'Fixed view'.
 - Connection View Option:** Radio buttons for 'Local view' (selected) and 'Fixed view'.
 - Encryption keys:** Radio buttons for 'Do not send Encryption keys' (selected) and 'Send Encryption keys'.
 - Security:** A checkbox that is unchecked.
 - Allow Diversion Category Override:** A checkbox that is unchecked.
 - Application Authentication:** A checkbox that is unchecked.

At the bottom of the form are 'Apply' and 'Cancel' buttons. On the right side, a help window titled 'CSTA Server' is open, providing a description of the protocol and its use in call centers.

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 via the Portal.

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 web interface. The top navigation bar includes the Mitel logo, 'Provisioning Manager', and links for 'Logged in as: [user]', 'About', 'User Guide', 'Site Map', and 'Logout'. Below this is a secondary navigation bar with tabs: 'Users', 'Services', 'Administrators', 'System', 'Logs', and 'Own Settings'. The 'Users' tab is active, and within it, the 'User' sub-tab is selected. The main content area is titled 'User' and contains an 'Add' button, a search field with the placeholder 'Enter User Name(s), Extension Number, Department:' (with a hint 'Example: * or will Smith or 101 or Smith'), and a dropdown for 'Imported from:' set to 'All'. Below the search area is a table with columns: 'User Id', 'Last Name', 'First Name', 'Extension / N/Voice MX-ONE', 'Department(s)', 'Import from', 'Customer', 'CloudLink Server', and 'CloudLink Role'. The table lists several users, including 'admin_rd', 'jack_smith', 'Emma.Smith', 'Olivia.Johnson', 'Sophia.Williams', 'Isabella.Brown', 'Ava.Jones', 'Mia.Miller', 'Emily.Davis', and 'Abigail.Garcia'. The 'Import from' column shows '10' for the first user and 'USER' for the others. The 'CloudLink Role' column shows 'USER' for the first user and is empty for the others.

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

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

4. In the page that opens, click the **CloudLink Configuration** tab and do the following:

- a. Select a CloudLink Extension from the **Assign CloudLink Extension (Extension, LIM IP)** drop-down list.
 - b. Select a CloudLink Server from the **CloudLink Server** drop-down list.
 - c. Select a role for the user from the **CloudLink Role** drop-down list.
5. 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**.

The screenshot shows the Mitel Provisioning Manager interface. The top navigation bar includes 'Users', 'Services', 'Administrators', 'System' (highlighted), 'Logs', and 'Own Settings'. Below this, a secondary navigation bar shows 'Location', 'Subsystem', 'Data Management' (highlighted), 'Options', 'Email Server', 'Configuration Wizard', and 'Batch Operation'. The main content area is titled 'Import Data - Import - Step 1 / 4'. On the left, a sidebar contains buttons for 'Compare with Subsystem', 'Backup & Restore', 'Import', 'Export', 'Scheduling', 'Active Directory', and 'Config Mirror Scheduling'. The 'Import' button is highlighted. The main area displays the 'Import Source' section with a question mark icon and the following options:
• ☒ CSV file
• ☐ CSV file on Express Format
• ☐ CMG
• ☐ D.N.A
• ☐ XLSX file for User with Extension
At the top of the main area, there are buttons for '< Back', 'Next ->', 'Apply', and 'Cancel'.

Figure 1: Import Source

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

Mitel | Provisioning Manager

Users Services Administrators **System** Logs Own Settings

Location Subsystem **Data Management** Options Email Server Configuration Wizard

Compare with Subsystem
Backup & Restore
Import
Export
Scheduling
Active Directory
Config Mirror Scheduling

Import Data - Import - Step 2 / 3

<- Back Next -> Apply Cancel

? User Data Template [.csv] :
 ? Department Data Template [.csv] :
 ? User with Extension [.csv] :
 ? Data File:

☒ Department
☐ User

Choose File User_Extension2.xlsx ✓
 Choose File No file chosen

? Delimiter: Semicolon (;)
 ? Data Qualifier: None
 ? Default Location: Bangalore View... Edit...

Useful Information for the Data File for adding extensions and mailboxes

? MiVoice MX-ONEs: MXONE
 ? Template For New Extension:
 ? Extension Range: 1050 1099
 ? Vacant Equipment Positions:

Figure 2: Select Data File

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

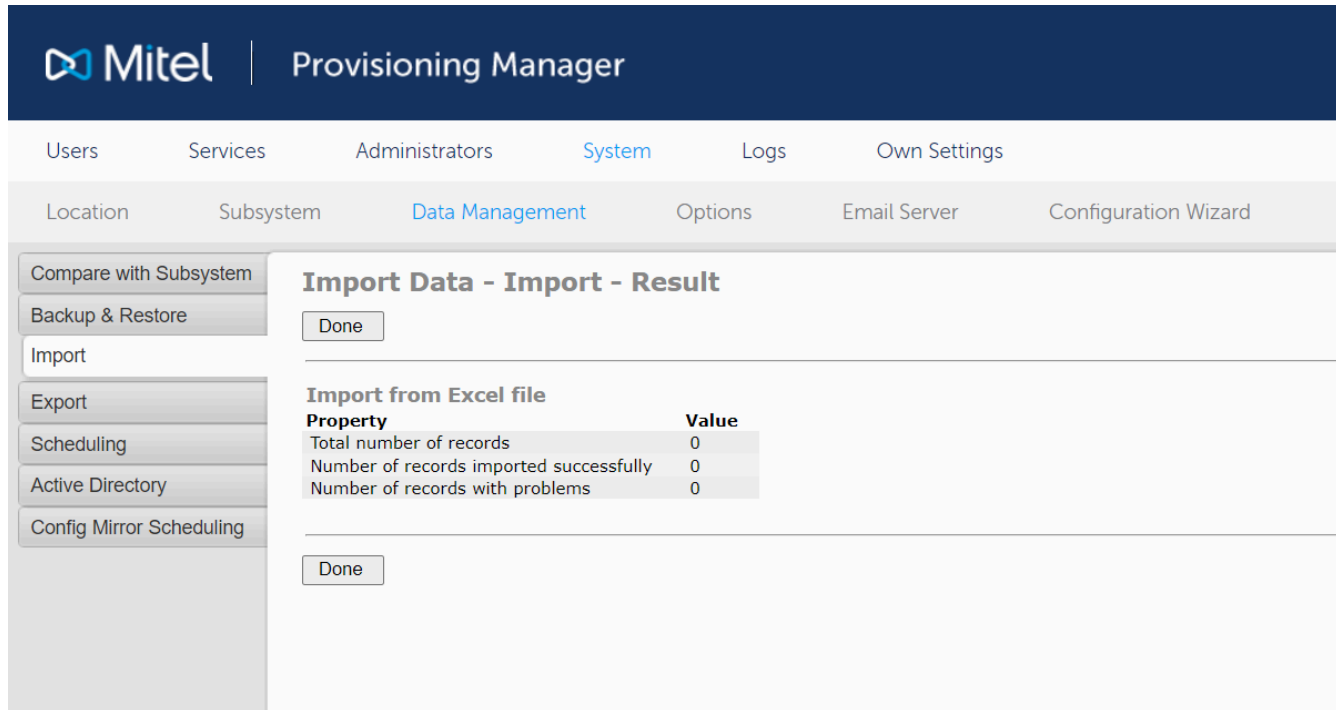


Figure 3: Import Successful

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

	Subsystem Name	Subsystem Type	Version	Location	License Details	Expiration Date
   	10.211.159.225	MiVoice MX-ONE	7.4 SP2	Location01	Traditional	
   	CloudLink	CloudLink Server		Location01		

