A MITEL
PRODUCT
GUIDE

CloudLink Daemon

Solution Guide

January 2026

Mitel
Powering connections

Notices

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Contents

Preface 1

This chapter contains the following sections:

1.1 Purpose

The guide provides an overview of CloudLink Daemon and various information on standard and debug views.

1.2 Intended Audience

The guide is intended for Mitel Administrators and Mitel Partners.

CloudLink Daemon – An Overview 2

This chapter contains the following sections:

The CloudLink Daemon is a software component designed to be embedded in multiple unified communication platforms. The primary function of the CloudLink Daemon is to facilitate the connection between Mitel CloudLink enabled applications and the Mitel Platforms deployed in the enterprise LAN, such as the communication platform. This enables seamless integration and communication between cloud-based applications and Mitel platforms deployed in enterprise networks, enhancing the overall functionality and flexibility of the enterprise communication systems.

The CloudLink Daemon (CLD) is not intended to replace the CloudLink Gateway. Rather, it complements the gateway by enabling additional features such as Inventory Management and Programming Reach-Through capabilities.

2.1 CloudLink Daemon Supported Platforms

The CloudLink Daemon supports the following platforms:

- MSL
  - MiVoice Border Gateway (MBG 11.5, 11.6 with MSL 12.1 Servicelink upgrade, and MBG 12.0
  - MiVoice Business MiVB 10.1 SP1
  - MiCollab 9.8 SP2 and higher
  - MiVB SVI 1.0.0.31 or higher
- OpenScape Business V3R3 FR2 and higher
- SIP-DECT
- MiCC-B 10.1 and higher
- MiVoice 5000 8.2 SP2
- OpenScape Voice V10R3 FR33 HF3*
- OpenScape UC (including Management Apps) V10R6 FR7 HF1
- OpenScape Session Border Controller V11R2.1.0
- OpenScape 4000 V11.R0.22
- SMBC deployments include two CloudLink Daemon (CLD) instances: one runs in the MSL container, and the other runs in the SMBC Controller Manager load (CM 2.2.x or later).
- MiVoice MX-ONE 8.1 and higher

The look and feel of the CloudLink Daemon dashboard is slightly different for each platform.

Note:

- An OpenScape Voice (OSV) node supports a connection to only one CloudLink CMP. Connecting multiple CMPs to the same OSV node for CLD integration isn't supported and can cause connection failures.
- For CloudLink configuration on MiVoice MX-ONE, the minimum Provisioning Manager (PM) version must be 7.6 and higher. CloudLink Integration supports a maximum of 5000 users and 5000 devices in MX-ONE 8.1 or higher.

2.2 SMBC Platform Support

SMBC deployments use **two CloudLink Daemon (CLD) instances**:

- One instance runs within the MSL container.
- The second instance runs in the SMBC Controller Manager load.

These daemons operate independently but are represented as a single system in **Mitel Administration**.

Note:
For instructions on installing the CloudLink Daemon on SMBC, refer to the CloudLink Gateway on MiVoice Business Deployment Guide.

Getting Started 3

CloudLink Daemon is available by default in Mitel Standard Linux (MSL) version 11.0.110 and version 12.1 onward.

Note:
Note that MSL version 12.0 is not supported.

Configuration Prerequisites 4

This chapter contains the following sections:

The CloudLink Daemon uses outgoing requests to *https://*.mitel.io* download updates, send inventory reports, and establish tunnels. If a proxy is configured on the host platform, it is used for these connections.

4.1 MX-ONE Specific Prerequisites

Before installing CloudLink Daemon on MiVoice MX-ONE, ensure the following additional prerequisites are met:

- Root password is available
- mxone_admin password is available
- CloudLink login credentials are available
- MX-ONE servers must have internet connectivity
- MX-ONE servers must be deployed behind a firewall
- MX-ONE DNS must be configured to forward queries to an external DNS server that can resolve the domain *mitel.io*.
- An active SWA license subscription is required
- MX-ONE licenses: SIP extensions, SIP trunk (optional), CSTA, Provisioning Manager.

User Interface access to CloudLink Daemon

5

This chapter contains the following sections:

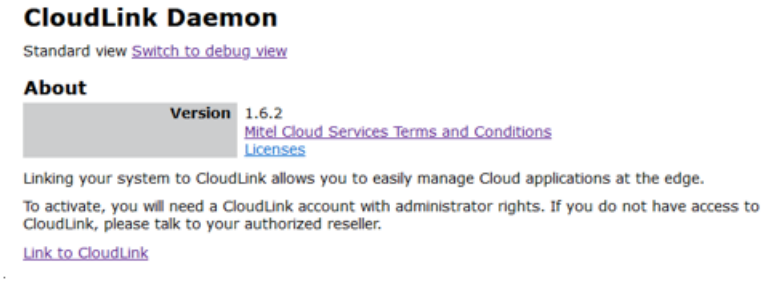
There are two views in the CloudLink Daemon as mentioned above.

The CloudLink dashboard is a web interface that allows users to manage and monitor their CloudLink devices.

Note:
The user interface of the CloudLink Daemon access is restricted to authenticated users.

The CloudLink Daemon user interface is displayed in the language chosen for the host's platform management interface. If the chosen language is unavailable, the browser's preferred language is used. If CloudLink does not support the host's platform language, English is used as the default.

The initial screen of CloudLink Daemon is shown in the image below.



Perform the following procedure to connect or link your system to your CloudLink account.

Note:
Even if the MiCollab server is already connected to CloudLink, the CloudLink daemon still needs to be connected

Note:
Requires CloudLink account with administrator rights.

1. Click **Link to CloudLink**.

   The Sign in to Mitel page is displayed.
2. Enter your CloudLink username and password.

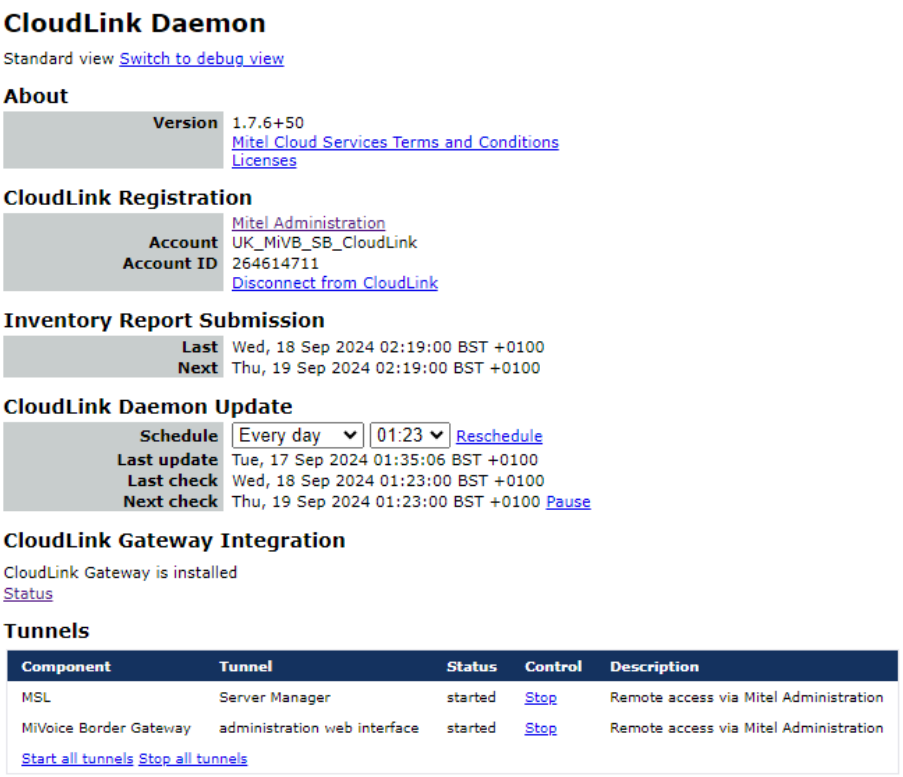
   For more information, refer Log in to Mitel Administration page

Note:
It is recommended that all the platforms be connected to the same CloudLink account.

Note:
If the email address provided is associated with multiple accounts, you will be prompted to enter the account number. If you already have a CLGW (CloudLink Gateway), please ensure you enter the same CloudLink account number so that both services are deployed in the same CloudLink Account.

5.1 Standard View

The standard view when CloudLink Daemon is connected:



When CloudLink Daemon is connected, it provides the following functionality

- About
- CloudLink Registration
- Inventory Report Submission
- CloudLink Daemon Update
- CloudLink Gateway Integration (appears if there is a CloudLink Gateway installed)
- Tunnels

5.1.1 About

- Displays the information on the version, terms, conditions, and licenses.

5.1.2 CloudLink Registration

- Displays the information on the connected Account and Account ID.
- Click the **Mitel Administration** link to connect to the Mitel Administration portal.
- Click the **Disconnect from CloudLink** link to disconnect from the CloudLink Daemon.

5.1.3 Inventory Report Submission

You can view the time of the last and next scheduled reports. An updated inventory report is sent daily.

An inventory report is submitted when:

- The daemon is connected to a CloudLink account.
- Change of relevant data is detected (for example, change of tunnel status, install/removal of supported component).
- The daemon is restarted.
- In SMBC deployments, only the child platform appears in the system inventory. The parent platform is not displayed.

The inventory report is sent to the system manager service in the CloudLink platform. This report is utilized by Mitel Administration for managing system inventory details.

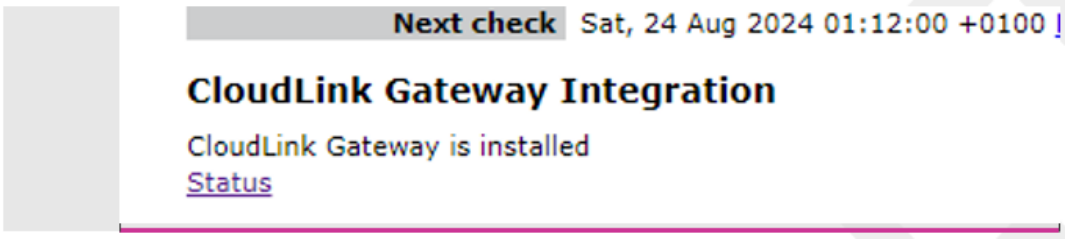
5.1.4 CloudLink Daemon Update

You can view the Schedule, Last update, Last check, and Next check options.

- The CloudLink Daemon is automatically updated. The user can choose daily or weekly updates manually.
- From the **Schedule** drop-down, you can choose when the automatic updates can be run. Once the Schedule is selected, click **Reschedule** to confirm.
- The user can pause the update by clicking **Pause** but cannot turn off the updates.
- If an update is available, the user can see an additional link to trigger the updates manually.

5.1.5 CloudLink Gateway Integration

CloudLink Gateway Integration panel appears only if a gateway is installed.



For more information on CloudLink Gateway, refer to the CloudLink Gateway User Guide.

5.1.6 Tunnels

A set of tunnels is available to connect to the components within this platform, enabling access to the management user interfaces from the cloud.

The tunnels are disabled by default and can be started or stopped in the dashboard.

To start tunnel(s) of each component, under **Tunnels**, click **Start**.

Note:
The tunnels are disabled by default for security reasons and can be started or stopped whenever required.

Note:
Remote Reach Through for ESM creates a unique secure tunnel to the system console (ESM) for MiVoice Business. The ESM provides the capability to launch or connect to another MiVoice Business system console, this functionality is not supported or is blocked when operating within a secure tunnel.

5.2 Platform-Specific Procedures

5.2.1 MiVoice MX-ONE Specific Procedure

5.2.1.1 MiVoice MX-ONE Installation

To install and enable Cloud Link Daemon on MiVoice MX-ONE:

1. Log in as mxone_admin and enter the following command: ***sudo -H mxone_maintenance***
2. From the menu, select ***cloudLinkDaemon***.
3. When prompted, enter the root password to verify installation permissions.
4. Select the action **Install Cloud Link Daemon (CLD) in system**.
5. Enter your CloudLink credentials.
6. Enter the CloudLink user password when prompted.

   A pop-up window appears indicating the successful installation.

5.2.1.2 Advanced Maintenance for MX-ONE

After installation, perform advanced maintenance actions:

1. Log in as mxone_admin and enter: ***sudo -H mxone_maintenance***.
2. Select **cloudLinkDaemon** and enter root password.
3. Select **Advanced maintenance for skilled users**.

4. Choose from these maintenance actions:

Action	Description
Enable all servers via Cloud Link to external Cloud servers.	Enables CloudLink in all servers.
Enable selected servers via Cloud Link to external Cloud servers.	Enables CloudLink in selected servers via dialog.
Disable Cloud Link Daemon (CLD) in all servers.	Disables CloudLink in all servers, containers deleted.
Disable Cloud Link Daemon (CLD) in selected servers.	Disables CloudLink in selected servers, containers deleted.
Uninstall Cloud Link Daemon (CLD) in system.	Uninstalls CLD from entire system.

5.2.1.3 Provisioning Manager Configuration

Adding CLD as Subsystem in PM:

1. Login to PM as mx-one_admin user.
2. Navigate to **System > Sub System**.
3. Click **Add** and configure:
   - Subsystem Type: CloudLink Daemon
   - Subsystem Name: CLD
   - Location: Select appropriate location
   - CloudLink Daemon URL: ***https://[SNM_IP]/cld***
   - MiVoice MX-ONE: Select MX-ONE system

User Provisioning for Zoom Integration:

1. In PM, navigate to **Users > User**.
2. Click **Add** and configure User Details.
3. In Service Summary, enter **Extension Number** and select **MiVoice MX-ONE**.
4. In CloudLink Configuration:
   - Enable Services: **ZOOM Client**

Note:
The user's Email Address must match the email activated in Zoom.

Sync Functionality:

Use the Refresh/Synchronize option for CLD and MBG subsystems to:

- Synchronize CloudLink users from PM to CloudLink Server.
- Synchronize Extension and authorization code from PM to MBG Server.

5.2.1.4 Zoom Phone Integration Features

The CloudLink Daemon enables comprehensive Zoom Phone integration with MX-ONE:

Complete Feature Set:

- Single Sign-On (SSO) across Zoom and Mitel
- Basic Call Features: make/receive calls, hold, call waiting, access to voicemail, transfer, forward
- Multiple call appearance (max 3 separate calls on hold)
- 3-party local conference, DTMF
- Integrated Workplace capabilities
- Contacts Directory Sync: Corporate, External, Personal
- Voicemail MWI and voicemail speed-dial
- Call forward via star-code
- DND sync via star-code
- User/Service Provisioning & Entitlement
- Presence synchronization
- Call Logs history sync
- NG911 compliance

Scalability and Licensing:

- Supports 20K+ Zoom phone users
- MX-ONE license control implemented in CloudLink
- Initial release supports single tenant deployments

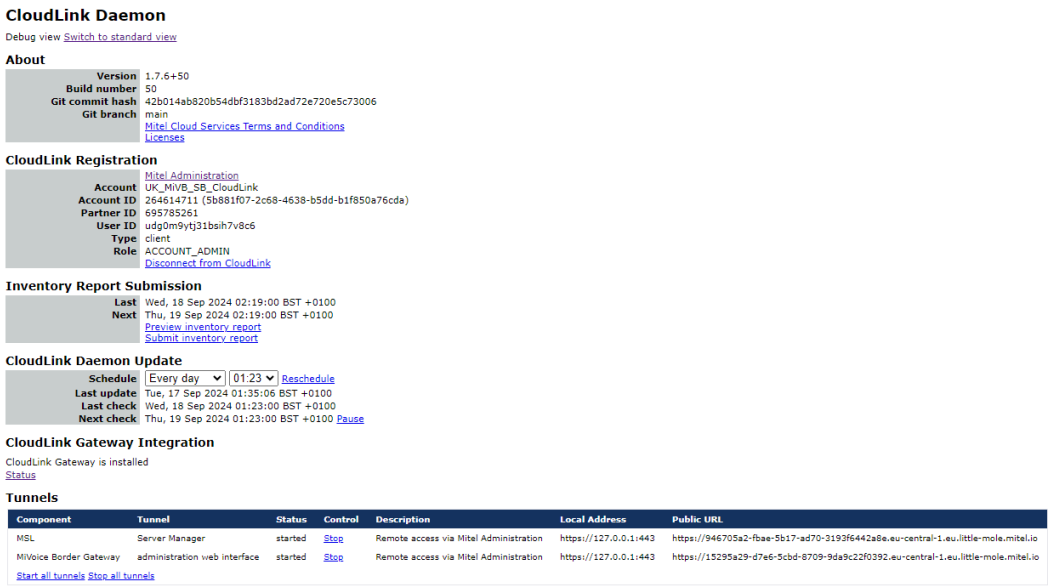
Call Race Condition Prevention:

MX-ONE's "One Number" concept supports up to eight devices per user. To prevent duplicate call attempts:

- MX-ONE detects when users register with mobile softphone
- When enabled, suppresses MEX trunk calls to avoid duplicate alerts to same mobile device

5.3 Debug View

A debug view is required to access additional information and controls, which are intended to be used for troubleshooting purposes.



When CloudLink Daemon is connected in the Debug view, there is an option to view **Preview inventory report** under **Inventory Report Submission**. The preview inventory report displays the data that is being transferred to Mitel.

Under **Tunnels**, the **Public URL** is used internally by the Mitel Administration to enable remote access.

5.3.1 Troubleshooting

Troubleshooting Time Synchronization Issues

Applies to: CloudLink Daemon on MSL platforms

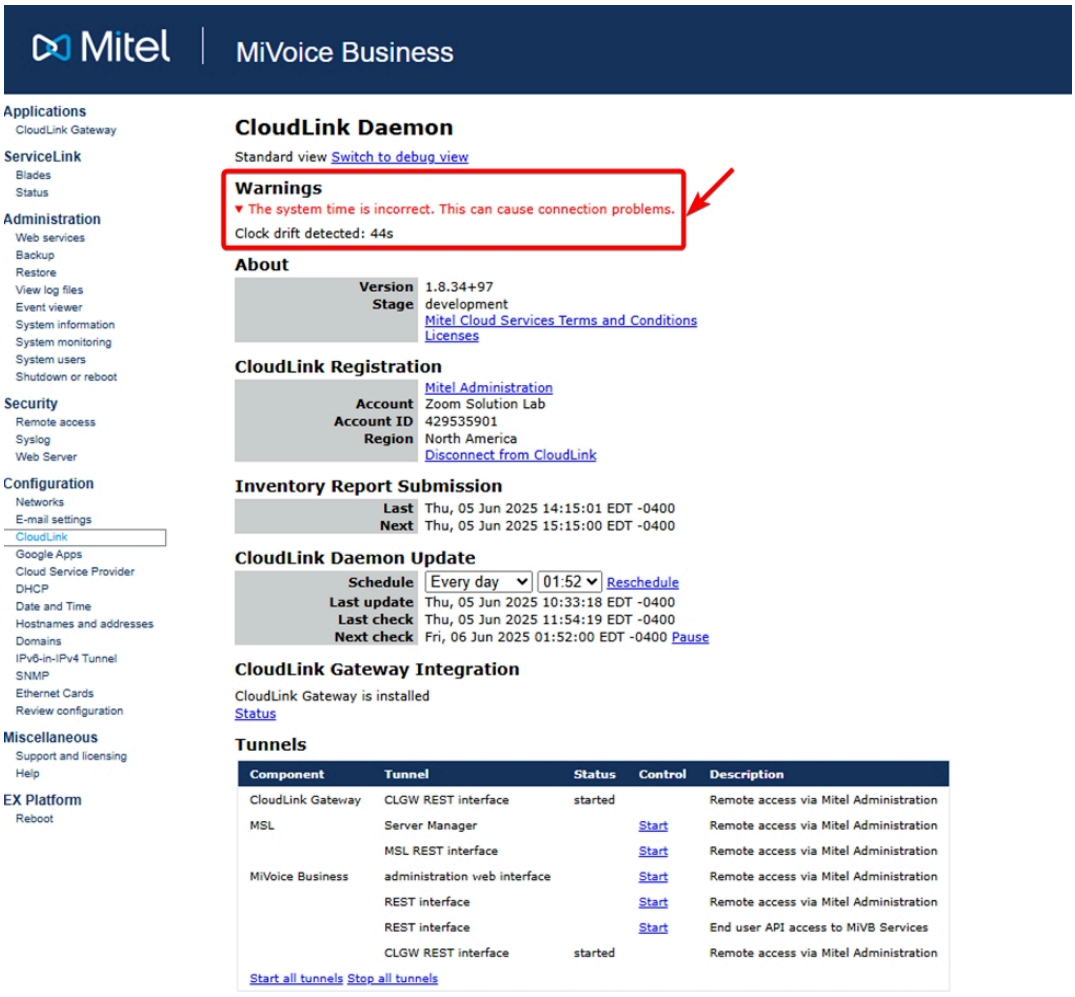
Description:

CloudLink Daemon (CLD) may stop functioning if the MSL system clock is not synchronized with a valid NTP server. A time drift exceeding 45 seconds can prevent secure tunnels from initializing, leading to provisioning failures in Mitel Administration.

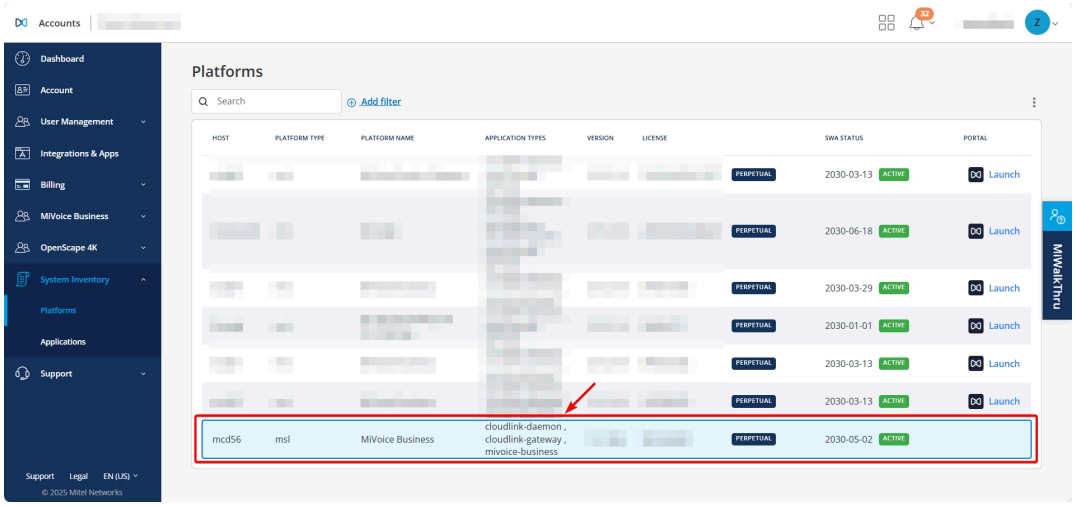
Observed Behavior:

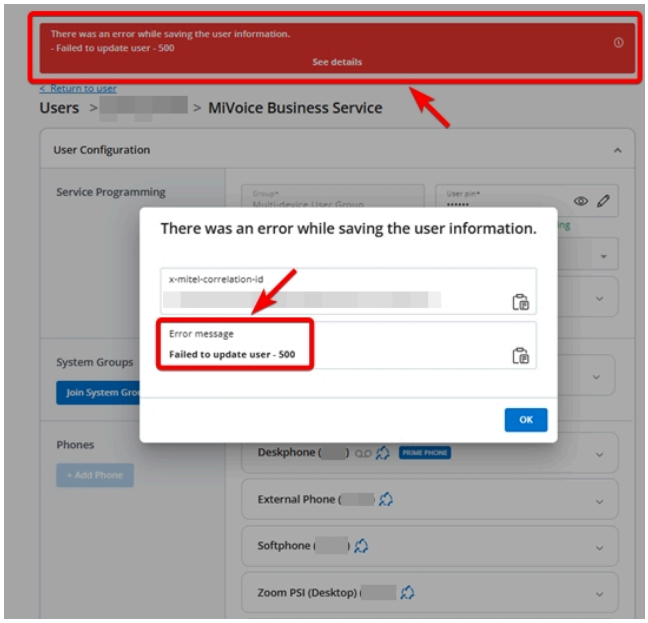
- The CLD dashboard displays a time drift warning:

  “The system time is incorrect. This can cause connection problems. Clock drift detected: [value]”



- Tunnel connections fail to initialize, resulting in user provisioning failures across MiVB nodes in a cluster.





- The Admin Portal reports MiVB synchronization errors.

Verification Steps:

1. On the MSL platform, run "***timedatectl status***".
   - If "***System clock synchronized***" is "***no***", the system clock is not synchronized.
2. On the local NTP server (e.g., a Windows PC), run "***ntpq -p***".
   - Confirm that the server responds and lists reachable peers.

Resolution:

- Confirm that a valid and reachable NTP server is configured on the MSL host.

- If the environment is isolated (no internet access), install a local NTP service (for example, Meinberg NTP) and configure the MSL host to use it.
- After correcting the time synchronization, restart the CloudLink Daemon by running ***systemctl restart cld***.

Best Practice:

Always verify time synchronization on the MSL host before troubleshooting tunnel or provisioning issues.

Troubleshooting CLGW Re-onboarding and MiVB Sync Failures

Applies to: CloudLink Daemon on MBG/MSVI platforms in traditional CLGW mode (CLD tunnels disabled)

Description:

CloudLink Daemon (CLD) may fail to provision MiVB services or re-onboard the CLGW if multiple CLGW instances are installed on the same MBG or MSVI platform. Traditional CLGW mode supports only one CLGW instance per platform. This misconfiguration can lead to sync failures and provisioning errors.

Observed Behavior:

- The CLD dashboard shows a red triangle warning.
- MiVB sync fails with errors such as:
  - *ClHttpWrapper.GET undefined*
  - *TypeError: Failed to fetch*
  - *MiVBProvisioningService.getMiVBNetworkElements - Error determining networkElements*
- Re-onboarding the CLGW fails even after cleanup.
- Admin Portal reports MiVB synchronization errors.

Verification Steps:

- Check if the MBG/MSVI platform has more than one CLGW instance installed.
- Confirm whether the platform was restored from a backup that included a previously clustered CLGW.
- Review CloudLink account associations to ensure only one CLGW is linked to the account.

Resolution:

- Remove any duplicate or conflicting CLGW instances from the MBG/MSVI platform.
- Ensure only one CLGW is installed and associated with the CloudLink account.
- Re-onboard the CLGW after cleanup.

Best Practice:

Always verify that only one CLGW is installed on MBG/MSVI platforms when operating in traditional CLGW mode. Avoid restoring clustered configurations that may introduce duplicate CLGW instances.

Troubleshooting MX-ONE Provisioning Issues

Applies to: CloudLink Daemon on MiVoice MX-ONE platforms.

Description:

Users may not be properly provisioned to CloudLink for Zoom integration due to misconfiguration in Provisioning Manager or email address mismatches.

Observed Behavior:

- Zoom clients cannot register to MX-ONE.
- Users not appearing in CloudLink administration.
- Sync failures between PM and CloudLink.
- Provisioning errors in Mitel Administration portal.

Verification Steps:

1. Verify the user's email address in PM matches the email activated in Zoom.
2. Confirm CloudLink Role is set to "None" and Zoom Client service is enabled in user provisioning.
3. Check that CLD and MBG subsystems are properly configured in PM.
4. Verify synchronization between PM and CloudLink/MBG subsystems using the Sync option.

Resolution:

- Ensure user email addresses match between MX-ONE PM and Zoom activation.
- Configure user provisioning with:
  - CloudLink Role: None.
  - Enable Services: ZOOM Client enabled.
- Use the Sync option for CloudLink & MBG Subsystems in PM to force synchronization.
- Verify MBG is properly configured with extension and authorization code provisioning.

Best Practice:

Always verify that user email addresses in MX-ONE Provisioning Manager exactly match the email addresses used for Zoom activation to ensure proper linking between CloudLink users and Zoom clients.