## Virtual Mobility Router Installation Guide August 2024

This document describes the one-time installation procedure for the Virtual Mobility Router. The topics discussed in this document include:

Virtual Mobility Hardware	2
VMware Virtual Environment	2
Before You Begin	3
Installing the Virtual Mobility Router ISO	3
Creating New Virtual Machine in VMware or Hyper-V	3
Configuring and Installing the Virtual Mobility Router $\epsilon$	3
Installing the Virtual Mobility Router OVA	3
Configuring Ethernet Interfaces 10	)
Updating Remote Access FQDN and Public NAT IP 11	
Importing Local Access Certificate 11	
Importing Remote Access Certificate 12	2
Generating and Installing SIP TLS Certificate	2
Generating a TLS Certificate on the PBX 12	2
Configuring CMR 12	2
Creating a Mitel Directory Server	3
Configuring Support Service 14	ŀ
Migrating CMR from VMware to Microsoft Hyper-V Infrastructure 15	5
Backing up the CMR	5
Restoring CMR on Hyper-V 15	5
Configuring CloudLink to enable Push Notifications 17	7
Prerequisites 17	,
Enabling Push Notification18	3
Incoming Call Alert 20	)

## **Virtual Mobility Hardware**

Recommended configuration for the Virtual Mobility Router is as follows:

- 4 cores
- 4 GB RAM
- 100 GB disk space
- 2 network interfaces
- The following interfaces where the Mobility Router is installed:
  - Eth0—Management VLAN. Requires a web service for admin portal, SSH, SNMP, Diagnostics and Monitoring in Director (D&M), Syslog, NTP, and SMTP. D&M shows information like call statistics, duration, numbers involved, and so on.
  - <sup>o</sup> Eth1—External DMZ. The connection to SMC is through RAST.



Note

Only Virtual CMR supports Rocky Linux.

## VMware Virtual Environment

The following versions of VMware are supported:

VMware vSphere ESXi 6.x, 7.x.



Notes for VMware Support:

- High Availability and VMware vSphere vMotion are supported.
- Fault Tolerance is not supported. VMware does not support this feature across multiple CPUs.
- Snapshots are not supported. Snapshots can consume significant CPU and memory resources, impacting system operation.

# **Before You Begin**

Before beginning the configuration:

- You must have the Mobility Router hostname.
- If you are not using DHCP, you must have the Mobility Router IP address, Subnet mask, Default Gateway, DNS server address, and domain name for the Mobility Router.



### Note

Upgrading the CentOS-based Virtual CMR is not supported. A fresh install of the Rocky Linux-based Virtual CMR is required. Ensure to take a backup of the CentOS-based CMR and then restore the backup in the fresh install of the Rocky Linux-based CMR.

# Installing the Virtual Mobility Router ISO

Follow the steps to create a new virtual machine for virtual Mobility Router Software:

- Creating New Virtual Machine in VMware or Hyper-V on page 3
- Configuring and Installing the Virtual Mobility Router on page 6



Note

The Virtual Mobility Router ISO must be installed on VMware version 6.5, 6.7, 7.0 and 8.

## **Creating New Virtual Machine in VMware or Hyper-V**

### **Creating a new Virtual Machine in VMware**

Before creating a new virtual machine in VMware, it is recommended to upload the ISO installer to the VMware datastore. The ISO installer is uploaded only once for a given build, and it can be reused for creating multiple new virtual machines.

To upload ISO Installer file to the vSphere Web Client ESXi 6.0 or 6.5, do the following:

- 1. Open the vSphere Desktop Client and log in to VMware ESXi server with valid credentials.
- 2. Navigate to Home, and click Inventory.
- 3. Click Datastores and Datastore Clusters.
- 4. On the **Datastores and Datastore Clusters** tab, select the datastore to which you want to upload the ISO installer file.
- 5. Right-click the datastore and select Browse Datastore.

The Datastore Browser window appears.

- 6. (Optional) Select the root folder and click **Create a new folder** icon from the menu bar, type the required name, and click **OK**.
- 7. Select the folder that you created or select an existing folder, and click **Upload a File** icon from the menu bar, and select **Upload File**.
- 8. Click **Browse** and select the virtual Mobility Router iso file from your local drive or location, and click **Next**.

Time required to upload the ISO installer file varies, depending on the file size and the network upload speed.

9. In the confirmation dialog box, click Yes.

Refresh the datastore file browser to verify the uploaded ISO installer file is in the list.

To create a new virtual machine in VMware:

- 1. Connect to the VM blade through a web browser.
- 2. In vSphere Web Client, click Create/Register VM.

The wizard to set up a new virtual machine is displayed.

- 3. In the wizard, select Create a new virtual machine, and then click Next.
- **4.** Enter a name for the new VM (for example, cmr01), and select the following options in the other fields:
  - In the Compatibility field, select ESXi 6.0 virtual machine.
  - In the Guest OS family field, select Linux.
  - In the Guest OS version field, select CentOS 8 (64-bit).
- 5. On the Select storage page, select the destination datastore for the new VM, and click Next.
- **6.** On the Customize Settings page and the Virtual Hardware tab, select values for the options as follows:
  - In the **CPU** field, select **4**.
  - In the **Memory** field, select **4096 MB**.
  - In the Hard disk 1 field, select 100 GB.
  - In the SCSI Controller 0 field, select VMware Paravirtual.
- 7. Ensure that **Network Adapter 1** is attached to an internal network.
- 8. Click Add network adapter, and for the second network adapter select an external/DMZ network.
- 9. Click Add other device, and select CD/DVD drive.
- 10. In the New CD/DVD Drive field, select Datastore ISO file.

11. In the Datastore browser window, highlight CMR-<w.x.y.z>.iso, and click Select.



Note

This ISO file was included with the CMR image and OVA file. You might need to upload this ISO file so that it is available to be selected in the list.

- 12. Click Next, and review the details. Ensure that the Provisioning field is set to Thin Provisioned.
- 13. Click Finish.
- 14. Select the new VM from the list of VMs, and click Power on.

### **Creating a Hyper-V Standard and Standalone Virtual Machine**

To create a virtual machine in Hyper-V:

- 1. On the Hyper-V Manager, right-click HYP-V, and click New.
- 2. In the pop-up menu, select Virtual Machine. The New Virtual Machine wizard appears.
- 3. On the Specify Name, and Location tab, type the required virtual machine name, and click Next.
- 4. On the Specify Generation tab, select Generation 1, and click Next.
- 5. On the Assign Memory tab, type the memory size allocate for the virtual machine:
  - Startup memory: 4096 MB (4 GB).
- 6. Click Next. The Configure Networking tab appears.
- 7. On the Connect Virtual Hard Disk tab, type the virtual hard disk size:
  - Size: 100 GB.
- 8. Click Next. The Installation Options tab appears.
- 9. On the Installation Options tab, select Install an operating system from a bootable CD/DVD-ROM. Select Image file (.iso).
- 10. Click Browse, select the Virtual Mobility Router ISO file from the file location, and click Next.
- **11.** In **Completing the New Virtual Machine Wizard**, verify the details you have entered, and click **Finish**. From the **Virtual Machines** list, right-click the newly created virtual machine, and do the following:
  - a. Click Start to start the virtual machine.
  - b. Click Connect to connect to the console.
- **12.** After a few minutes, the installation process completes as indicated by the status bar. You must remove the **Virtual Mobility Router ISO** file selected in step 10. Switch-off the Mobility Router, remove the ISO file, and then switch-on the Mobility Router again. Once the Mobilily Router is switched-on, it will display a login prompt, which indicates successful installation.

#### Components Supported under Microsoft Hyper-V



Note

Microsoft Hyper-V Windows 2016 Generation 1 and Microsoft Hyper-V Windows 2019 Generation 1 are *only* supported.

## **Configuring and Installing the Virtual Mobility Router**

- 1. After the VM is turned on, select **Console**, and in the drop-down list select **Open browser console**.
- **2.** The virtual machine boots from a bootflop image. Enter the following command to manufacture the CMR image:

```
cd /mnt/cdrom
manufacture.sh -a -m mrVirtual -d /dev/sda -f /mnt/cdrom/image.img
```

**3.** After a few minutes, the installation process completes, and the CMR reboots and displays the **login** prompt. A successful installation generates messages similar to the following:

/m	iware: ESXi"	( Help -	Q Search
	SVQAblade2-7.	- Virtual Machines	
		🖬 smr01 🖓 🖬 🖷 🏠 Actions 🔇	
	😭 Create / Register VM 📔 💕	== Updating bootmgr settings == Cleanun	Search
	Virtual machine	====== Ending image install at 20171219-060845 == System successfully imaged	✓ Host mem ✓
	ramr-9.5.1712.481New	Writing Host ID: 95404c8dc5d8 Writing mapping for 00:0C:29:8F:77:D6 from eth0 to eth0	887 MB
jator	🔲 🏦 ReverseProxyServer	Writing mapping for 00:0C:29:8F:77:E0 from eth1 to eth1	0 MB
SIVEN	🕑 🗗 smr01	== Using layout: Virtual	0 MB
11	🗐 👸 smrTemplateOVF	== Using dev list: /dev/sda == Usrifuing image location 1	0 MB
	🗐 🚯 ST HQ-MP	=== Mounting partitions	2.47 GB
	🔲 👘 ST SMR MP	=== Checking manifest === Unmounting martitions	694 MB
	🔲 者 ST SW-MP	=== Image location 1 verified successfully.	0 MB
	ST SW2 -MP	== Verifying image location 2 === Mounting partitions	2.02 GB
<u>д</u>	Quick filters	== Checking manifest === Unmounting partitions	45 items 🦼
2		=== Image location 2 verified successfully. == Done	
	<ul> <li>Bydeling Hostage settings</li> <li>Conseque Statistics and Alexandre Statistics</li> <li>Bydeling Basga (modal) at 20170239-004095</li> <li>Bydeling Hostage (Million Statistics)</li> <li>Bydeling Hostage (Million Statistics)</li></ul>	===== Ending manufacture at 20171219-060943 Manufacture done.	CPU 🔲
	<ul> <li>Failing input Ty is unity minifestured system</li> <li>Bring Japet Tyreal</li> <li>Bring Japet Tyreal</li> <li>Werlying impeg Tyreal</li> <li>Werlying input Standard</li> </ul>	Please type reboot command to boot the device with the newly manufactured image.	MEMORY III
	2. Range long hims is net (Find successfully, expectively famp in constains 2 consecting portitions consecting portitions constant (and the partitions) constant (and the partition) constant (and the partition) constant (and the partition)	ala such as CD-ROM from their drivers to boot the system from the hard drive.	STORAGE 100 GB
	🗊 Recent tasks		

4. As prompted, type **reboot** and press Enter.

The system reboots, which takes a few minutes.

- 5. At the login prompt, log in as "admin". (No password is required.)
- 6. At the next prompt, type **Enable** and press **Enter**. At the next prompt type **\_crusto** and press **Enter**.
- 7. At the next prompt, type wizard and press Enter.
- 8. At the Hostname prompt, enter the VM name you specified in step 4 (for example, cmr01).

- 9. At the Use DHCP on eth0 interface prompt, type No.
- 10. Enter the Primary IPv4 address and masklen (0.0.0.0/0), for example 10.23.174.100/24.
- **11.** Enter the default gateway (0.0.0.0).
- 12. Enter the primary DNS server address.
- **13.** Enter the domain name.
- **14.** Enter a new strong Admin password. Passwords should not be left at default and should meet the customers password security policy, for example, complexity, length, and so on.
- **15.** Enter a new strong Monitor password (if monitor account exists). Passwords should not be left at default and should meet the customers password security policy, for example, complexity, length, and so on.
- **16.** If you need to edit any of the parameters you've just entered, type the step number to edit that parameter. Or press **Enter** to save changes and exit.
- **17.** At the next prompt, type **reboot** and press Enter.



#### Note

When the system needs to be redeployed, then in Steps 14 and 15 you must enter new strong passwords for the Admin and Monitor (if exists) accounts.

After the reboot, the CMR is successfully deployed.

The Virtual Mobility Router is now ready to be configured using the Administration Portal. For more information on configuring and maintaining the Mobility router, refer to the *Mobility Router Administration Guide*.



### Note

The Admin users have root privileges and entering **\_crusto** provides the admin user root level CLI access.



#### Note

For information about installing CMR behind a firewall, see the Mitel Connect Mobility Router Integration Guide for Mitel MiVoice Connect document in the doc center.

# **Installing the Virtual Mobility Router OVA**



Note

The Virtual Mobility Router OVA must be installed on VMware version 5.1 or higher.

- 1. Log in to VMware ESXi server.
- 2. Select File > Deploy OVF Template.
- 3. Enter the path to the Mobility Router OVA/OVF.
- 4. Enter, or copy/paste the URL to the web source of the OVA/OVF. Click Next.

or

- 5. Click Browse, and select the OVA/OVF from your local drive/location. Click Next.
- 6. On the OVF Template Details page, click Next.
- 7. Select **Open** and follow the prompts. Change the name if desired and note this name for configuring the DVS server later, and choose the options best suited for your environment.
- 8. Enter the virtual machine Name and select the inventory location. Click Next. The Storage page opens.
- 9. Select the host or cluster on where you want to deploy the virtual Mobility Router and click Next.
- **10.** Select the destination storage for Virtual Mobility Router files. Make sure that the required disk space is available on the destination storage. Click **Next**. The Disk Format page opens.
- 11. Check the **Thick Provision Lazy Zeroed** check box. Click **Next**. The Network Mapping page opens.
- **12.** Map the networks used in the OVF template to network in MiCloud inventory. Click **Next**. The Ready to Complete page opens.
- 13. Check the Power on after deployment check box. Click Finish.

The vSphere client loads the virtual Virtual Mobility Router and installs it on the vCenter server. After the installation is complete, the virtual Virtual Mobility Router appears in a powered-on state in the vSphere client.

- **14.** Open the vCMR console.
- 15. At the login prompt, type admin in the Username field and click Enter.
- A pop-up to accept the End User License Agreement appears. Click YES to accept the end user license agreement. The initial configuration wizard opens.
- **17.** Enter **Y** to proceed with the configuration using the wizard.
- **18.** Enter the **DNS hostname** of the Mobility Router. The hostname can be in short-name format or fully qualified domain name (FQDN).

- 19. At the Use DHCP on ETH0 interface prompt, Enter NO.
- **20.** Enter the Mobility Router's **Primary IP address**. IP addresses on other interfaces are configured through the Admin portal.
- 21. Enter the Subnet Mask.
- 22. Enter the IP Address of the default gateway for the Mobility Router.
- 23. Enter the IP Address of the primary DNS server.
- 24. Enter the domain name in the format domain-name.com.
- **25.** Assign a strong password to the default Admin account for future access to the Mobility Router Administration Portal.
- **26.** Confirm the password for the default Admin account. After completing the initial configuration wizard, a summary list appears. Verify the information and click **Enter** to save the configuration.
- 27. At the prompt, click Enable.
- **28.** Enter **reload** to restart the Mobility Router. Wait for the login prompt in the terminal emulation software window, which indicates that the Mobility Router has finished restarting.
- **29.** Verify a network connection to the Mobility Router by accessing the Administration Portal. To access the Administration Portal, enter the Mobility Router hostname or IP address in a Web browser:

To access the Administration Portal:

**a.** Using a Web browser, enter the IP address or hostname of the Mobility Router in the address bar using the following format:

https://Mobility-Router-address/admin

where *Mobility-Router-address* is the IP address or fully qualified domain name (FQDN) of the Mobility Router (for example, https://10.11.12.13/admin or https://sj.example.com/admin).

- b. Type the username and password, and click OK.
- **30.** After verifying the access to the Administration Portal, disconnect the console connection via the hypervisor (Console access is no longer required).

# **Configuring Ethernet Interfaces**

After specifying the basic Ethernet interface in the Initial Configuration Wizard, you can configure the following settings for the Ethernet interface (eth1):

- Interface speed
- Duplex settings

Some information in the fields under the Interface menu reflect the responses provided during the Initial Configuration Wizard setup. Some fields are set to system defaults that generally do not require changing.

- eth1—Configure an IP address from external DMZ. The SMCs connect to this IP address through RAST.
- 1. Click Configuration > System > Networking > Interface. The Interface page displays.
- 2. Click eth1. You can enable or disable the interface.
- 3. Enter the Static IP Address and Gateway.
- 4. Enter the IP Address, Subnet mask, and Gateway address in their respective fields.
- **5.** For eth1 interfaces, we need to enter the Gateway address along with IP address and network mask.
- **6.** Verify the interface speed. The default and recommended value is **Auto**. To change the speed, select one of the following in the Speed list:
  - 10—10 Mbps
  - 100—100 Mbps
  - 1000—1000 Mbps
  - Auto—Speed is auto-detected
- **7.** Verify the duplex value. The default value is **Auto**. To change the duplex setting, select one of the following in the Duplex list:
  - Full—Full-duplex
  - Half—Half-duplex
  - Auto—Auto-detect duplex setting.
- 8. Review the MTU value.
- 9. Verify the MAC address.
- **10.** Review the online Status of the Mobility Router.
- **11.** To save your changes, click **Apply**.

# **Updating Remote Access FQDN and Public NAT IP**

1. Click Configuration > System > Networking > Remote Access.

The Remote Access page displays with the General tab active.

- 2. To enable remote access, make sure the **Enable** check box is selected. By default, this check box is not selected.
- **3.** In the **Remote Access IP Interface** list, select the Ethernet interface used for remote access. Typically, this is the eth1 interface.
- 4. To establish a secure remote connection from an external network, enter a valid FQDN in the **Remote Access FQDN** field.
- 5. In the Public NAT area, configure the following:
  - To enable a public network address translation (NAT) IP address for the Mobility Router, make sure that the **Enable** check box is selected. By default, this check box is selected. To disable the NAT IP address, clear the **Enable** check box.
  - In the IP Address field, type the external IP address used for NAT.
  - In the UDP Port field, type the port number for the external IP address to which clients connect. The port number can be between 80 through 49151. The default value is 443.
  - In the TCP Port field, type the port number for the external IP address to which clients connect. The port number can be between 80 through 49151. The default value is 443.
- 6. Click Apply.

## **Importing Local Access Certificate**

1. Click Configuration > System > Certificate > Mobility Router > Standalone > Local Access.

The Local Access page displays.

2. Click Import.

The Import Certificate page displays.

- 3. In the Import area, **paste** the Certificate.
- 4. Click Apply.

# **Importing Remote Access Certificate**

- 1. Click Configuration > System > Certificate > Mobility Router > Standalone > Remote Access. The Remote Access page displays.
- 2. Click Import. The Import Certificate page displays.
- 3. In the Import area, paste the Certificate.
- 4. Click Apply.

## Generating and Installing SIP TLS Certificate

To generate and install the SIP TLS certificate, do the following:

- Generate a TLS Certificate on the PBX
- Configure the CMR

### Generating a TLS Certificate on the PBX

- 1. On the HQ Machine, click Run.
- 2. Type cmd and press ENTER.
- 3. Type cd C:\Program Files (x86)\Shoreline Communications\ShoreWare Director\App\bin and press ENTER.
- **4.** Execute the following command by providing IP address of the CMR: pki.bat –s IP\_Address\_of\_CMR (For ex. IP Address on my CMR is 10\_23\_223\_50)

The following two certificates are generated for SRTP:

- C:\Shoreline Data\keystore\certs named as 10\_23\_223\_50.crt and
- C:\Shoreline Data\keystore\private named as 10\_23\_223\_50.key

### **Configuring CMR**

- 1. Click Configuration > Voice > IP PBXs.
- 2. Click Add.

The Add IP PBX page displays.

- 3. In Line-Side Support area, do the following:
  - a. From the SIP Transport drop-down list, choose TLS.
  - b. Click Import next to the Certificate field.

- **c.** Enter the SRTP Certificate ID.
- **d.** Enter the hq\_ca.crt in the HQ CA Root Certificate area. (The hq\_ca.crt is stored in C:\Shoreline Data\keystore\certs.)
- e. Enter the SRTP TLS Certificate in the SRTP TLS Certificate area. (The SRTP TLS Certificate is stored in C:\Shoreline Data\keystore\certs.)
- **f.** Enter the SRTP TLS Private Key in the SRTP TLS Private Key area. (The SRTP TLS Private Key is stored in C:\Shoreline Data\keystore\private.)
- 4. Click Import.

## **Creating a Mitel Directory Server**

The following procedure configures a Mitel Directory Server:

- 1. Click Configuration > System > Authentication > Directory.
- 2. Click Add.
- 3. Select ShoreTel Directory from the Server Type drop-down list.
- 4. Enter a Name.
- 5. Click Apply to advance to the Add New Directory Group parameters page.
- 6. Enter a fully qualified domain name (FQDN) for the Mitel HQ server in the Server Address field.
- 7. In the Server Port field, use the default port number.
- Select the Sky cluster check box. Enter the FQDN server address in the ABC server address field.
- 9. Choose TLS from the Security Type drop-down list.
- **10.** Use the default **Secure Port** value, 5448 (CAS secure port).
- **11.** Select the **Trusted Admin App** check box.
- 12. Click the Manage App Certificate link to view and import the Trusted App certificate. A new window opens. A new API is provided for CAS to utilize the more efficient permanent connection to the Mobility Router. One connection is used for all users.
- **13.** Click **Import.** Copy and paste the appropriate Trusted App Certificate. Paste the Trusted App private key. The encrypted key is not accepted. The certificate must be enclosed within the following tags:

----BEGIN RSA PRIVATE KEY----

and

----END RSA PRIVATE KEY-----

- **14.** Click **Apply** to save the directory configuration.
- 15. Click Verify to verify the directory server configuration is correct.
- **16.** When the certificate verification is enforced, the Mobility Router verifies the following:
  - The certificate is valid and not expired or damaged.
  - The subject name or the first name in the Subject Alternative Name (SAN) matches with the Fully Qualified Domain Name (FQDN) of the Mitel Directory server.
  - It was issued by the trusted authority, and a certificate chain can be established up to the hq\_ca certificate imported before.
- 17. Click Sync ABC Keys to exchange the authenticator public keys with Mitel HQ and DVS servers.



### Note

If verification or sync fail, login to HQ/D2 server, and start the Shoreware Client Application Services. Click Sync ABC Keys.

- **18.** Create External User Authorization enabled CMR group for the tenant.
- **19.** Choose Mitel Directory to map the Mobility Router group to a Mitel Directory. Choose the appropriate one from the drop-down list as "Directory Search Group" and "Authorization Directory".
- 20. Click Apply.
- **21.** Create the external CMR user (user@domain) for the tenancy group, which activates the CMR service to HQ bootstrapper database automatically. For the existing users, you can activate the HQ bootstrapper by enabling them.

## **Configuring Support Service**

Click **Configuration > System > Support Service** to enter a Support email and phone number for Mitel Connect users.

When "Call Support" is initiated by the user on the Mobility app, the phone number entered here is called. If the user opts to select "send log", the information is sent to the email address entered here.

# Migrating CMR from VMware to Microsoft Hyper-V Infrastructure

This section describes how to migrate your existing CMR from VMware to Microsoft Hyper-V Infrastructure.

### Backing up the CMR

Procedure to back up MR:

- 1. Log in to the Connect Mobility Router with the administrator access.
- 2. Navigate to Maintenance > System > On Demand Backup.
- 3. On the On Demand Backup page, do the following:
  - **a.** Type **Hostname** or the **IP Address** of the location to which you want to send the configuration file.
  - b. Select Protocol: scp
  - c. Type Port: 22
  - d. Type the User ID and the Password that match the Hostname credentials.
  - **e.** In the path field, type the path of the directory or the file name where you want to save the configuration file.

For example, /home/admin/backup/sample.bak.

f. Click Backup.

The status of the Mobility Router backup is displayed. A notification appears when the backup is complete.

g. Log in to the Host that you have created.

For the successful completion of the backup procedure, ensure that the backup files are created in the specified location.

### **Restoring CMR on Hyper-V**

1. Create a new virtual machine in the Microsoft Hyper-V infrastructure for CMR, similar to that of the VMware infrastructure. For example, CMR build, ISO file, and the same network configuration.

Refer to the Installing the Virtual Mobility Router ISO on page 3 for information about creating a new virtual machine in Hyper-V infrastructure.

- 2. Log in to the Connect Mobility Router with the administrator access.
- 3. Navigate to Maintenance > System > Restore.

- 4. On the **Restore** page, do the following:
  - **a.** Type **Hostname** or the **IP Address** of the location to which you want to send the configuration file.
  - b. Select Protocol: scp
  - c. Type Port: 22
  - d. Type the User ID and the Password that match the Hostname credentials.
  - **e.** In the path field, type the path of the directory or the file name from which you want to restore the configuration file.

For example, /home/admin/backup/sample.bak.

- f. Enable the following:
  - Include License
  - Include Network Information
  - Include Certificates
- g. Click Restore.

The status of the Mobility Router restore is displayed. A notification appears when the backup is complete.

- 5. Click **Exit** and restart the browser.
- 6. Log in to the Mobility Router with the administrator access.

For the successful completion of the restore procedure, ensure that the backup files are restored in the specified location.



#### Note

- After the migration, the CMR MAC address (Mobility Router > Configuration > System > Interface) gets changed; therefore, you must delete the existing license key, and then request for a new license key with a new CMR MAC address. You have 45 days to install the license key. After you add the new license (Mobility Router > Configuration > license), the state should be valid and active.
- IMs will not be synced after the migration.

# Configuring CloudLink to enable Push Notifications

### **Prerequisites**

Before configuring the CloudLink, you need to complete the below steps:

- 1. A CloudLink Customer Account and a verified CloudLink Account Admin User in that account must be created in order to associate the mobility users within CloudLink. Refer to the following link to create the Account and User credentials necessary to enable CloudLink.
- 2. CloudLink must be enabled in **MiVoice Connect Director (D2)**. Refer to the *CloudLink* configuration section under the Setting Up System Parameters chapter of MiVoice Connect System Administration Guide.
- 3. Connect Mobility Client (CMC) sends an API request to Connect Mobility Router (CMR) to get the basic configuration at port 4433. Based on the response from CMR, CMC determines the CloudLink integration status and whether push notification is supported or not. For the list of ports used by CMC and CMR, refer to Appendix D Port Usage table (Originating Device: CMC, Destination Device: CMR) of the MiVoice Connect Maintenance Guide.

Make sure the following requirements are met to ensure the push notification call works:

#### **Connect Mobility Router (CMR)**

A. Firewall should allow the TCP Port 4433 for CMR.

B. Go to **Configuration -> System -> Cloudlink**, input the appropriate CloudLink info, and click the **Verify** button.

The verification should be successful.

If the verification fails, check the CloudLink admin account or check whether CloudLink is enabled in the Director.

#### **Connect Mobility Client (CMC)**

A. If the user does not want to use the push notification calls and the CloudLink configuration is disabled, then the user must logout and re-login.

B. If the user wants to use the push notification calls and the CloudLink configuration is successful, then CMC displays the CloudLink Auth portal.

If the CloudLink Auth portal is not displayed, recheck the CMR conditions (A and B).

## **Enabling Push Notification**

Mobility client registers (SIP registration) with Mobility router for receiving events. However the application is suspended by the mobile operating system when its on the background and hence mobility client is unable to receive the real time events related to calls. Push notification will refresh the mobility client application and hence mobility client will be able to receive the calls all the time.

To enable push notification, perform the following steps:

- 1. Access the administration portal and navigate to System > CloudLink.
- 2. Select the internal interface for CloudLink IP Interface option.
- 3. Select TLS 1.2 as Min TLS Version.
- 4. Enter api.mitel.io in CloudLink Host.
- 5. Select the check box Push Notification Enable.
- 6. For all other fields leave default values.
- 7. Click Apply.

The administration portal navigates to the CloudLink Authentication portal.

- 1. Enter the CloudLink credentials and click OK.
- 2. Click on Verify to confirm the CloudLink integration status.

l	Configuration	Monitor	Maintenance	Troubleshooting	Administration Portal v10.1.2403.113 06:13 Apr 22, 2024 US/Pacific Logged in as admin Logout Oocs
CloudLink					
CloudLink IP Interface	eth0 (10.209.3.33) 🗸				
Min TLS Version	TLS1.2 ¥				
	Energies 1				
Cloud Link Host	api.mitel.io				
Cloud Link Partner Admin Client ID	5				
Cloud Link Partner Admin Client Secret	5				
Push Notification Timeout	25 (seconds)				
Push Notification Enable					
	Apply Verify				
	Croutink Croutink IP Interface Mn TLS Version Crout Link Heat Crout Link Partner Admin Client ID Crout Link Partner Admin Client Secret Push hotification Timeout Push hotification Employ	Configuration Condition Co	Censtland: Censult init: Censult init: Censult init: Censult init: Censult init: Censult init: Censult init: Product init: Partners: Product init: Partners: Admin Client: III Censult init: Product init: Partners: Admin Client: IIII Censult init: Product init: Partners: Admin Client: IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Condiguration     Monitor     Maintenance       Choudulis 19 Interface     Into (10.209.0.33)     Monitor     Maintenance       Min TS Version     TUR.2     Into (10.209.0.33)     Monitor       Min TS Version     TUR.2     Into (10.209.0.33)     Monitor       Cloud Link Petrice Admin Clent ID     Into (Into Into Into Into Into Into Into Into	Conductive Intervence       Window       Window       Totalistations         Cloudink IP Interface       #10.010209.3.33)       Window       Window       Window         Cloudink IP Interface       #10.010209.3.33)       Window       Window       Window       Window         Cloudink IP Interface       #10.010209.3.33)       Window       Window       Window       Window         Cloudink IP Interface       #10.010209.3.33)       Window       Window       Window       Window         Cloud Link Patter Admon Client ID       Image: Cloud Link Patter Admon Client ID       Image: Cli

- 8. User accounts in CloudLink portal are automatically created once the **Enable enhanced mobility** with extension option is checked in D2.
- **9.** For users which are already enabled with **Enhance mobility**, need to disable and enable again. The option "enable enhanced mobility with extension" needs to be 'enabled again' only after "enable CloudLink" step is completed.
- **10.** Update the new mobility **Client ID** for all the users in the Mobility Router Administration portal.

- 11. It is mandatory for all the Users who are enabled with Enhanced mobility with extension to have valid email address. Welcome email containing "the link to build the CloudLink account" will be sent to the user's email address. Users need to access the link and configure the password. If the user fails to receive the Welcome email, the Admin will need to manually send welcome emails to the user accounts that were created once the option "enable enhanced mobility with extension" is checked from D2. The CloudLink portal has the option to "send welcome emails" to verify the users to complete the onboarding process. Additionally, verified users can be sent Reset Password emails. See the "Managing Users" section in https://www.mitel.com/document-center/ technology/cloudlink/all-releases/en/cloudlink-accounts-html.
- **12.** Launch the mobility client and enter the user credentials. CloudLink Authentication portal opens up and the users need to enter the CloudLink credentials and then login to the mobility client application. The user is now configured to receive incoming calls even when the application is suspended by mobile operating system.

### **Incoming Call Alert**

Note

Once the Push Notification is enabled, the user will be able to receive an incoming call even when the mobile is idle for more than 3 minutes. Without the push notification, the call goes to voicemail.

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Push Notification will work only when the Mobility Client is connected using Public Network.

The following table describes the various incoming call alerts with screenshots after enabling push notifications on Android and iOS devices. The sample screenshots are provided for illustration purpose only.

Alerts	Screenshot
Alerts Normal incoming call alert	Screenshot         Image: Screenshot
	Messages Recent Events Contacts

Table 1: Incoming Call Alert - Normal & Push Notification

Alerts	Screenshot
Initial Incoming Call alert using Push notification	19:30 Mitel Connect Audio Connecting call. Plex Remind Me Slide to answor
Updated Incoming call alert using Push notification The notification is updated after the application processes the caller details, similar to a Normal incoming call alert.	1938 Mitel Connect Audio <b>miteammobileO7@g</b>

#### Table 1: Incoming Call Alert(Continued)- Normal & Push Notification