Configuration Guide for Cisco Unified Communications Manager Express

Contents

Introduction

This document describes the steps in order to configure Cisco Unified Communications Manager Express (CUCME/CME).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco IOS® Router
- IP Phones
- Connection to the PSTN (Optional)

Components Used

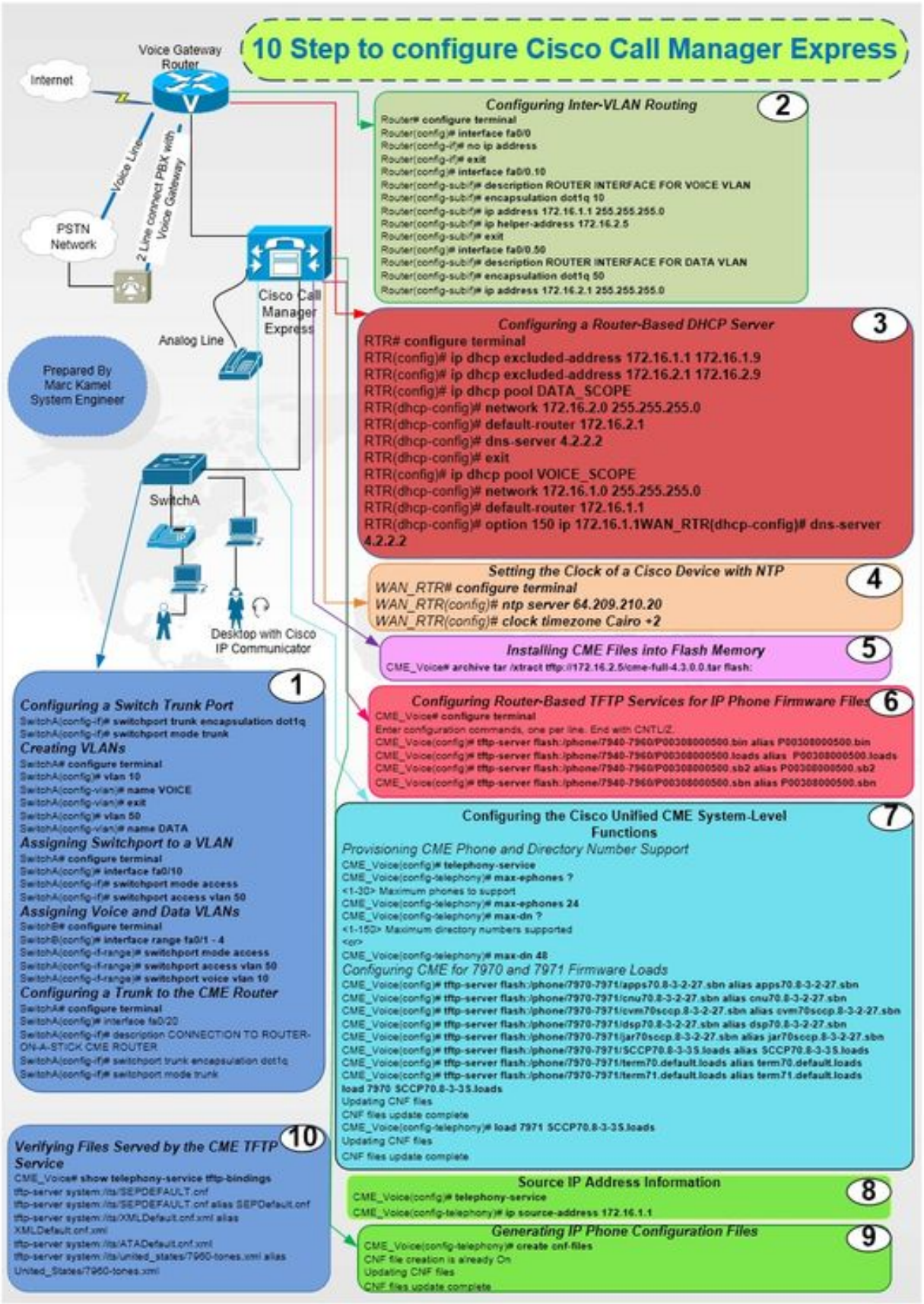
The information in this document is based on these software and hardware versions:

- Any CUCME version
- Any IP Phone

The information in this document was created from the devices in a specific lab environment. All of the devices used in here started with cleared (default) configurations. If your network is live, make sure that you understand the potential impact of any command.

Configure

Refer to this image and the steps that are documented in order to configure the Cisco Call Manager Express.



Step 1. Configure a Switch Trunk Port

```
SwitchA(config-if)#switchport trunk encapsulation dot1q
```

```
SwitchA(config-if)# switchport mode trunk
```

Step 1.1. Create VLAN

```
SwitchA# configure terminal

SwitchA(config)# vlan 10

SwitchA(config-vlan)# name VOICE

SwitchA(config-vlan)# exit

SwitchA(config)# vlan 50

SwitchA(config-vlan)# name DATA
```

Step 1.2. Assign Switchport to a VLAN

```
SwitchA# configure terminal

SwitchA(config)# interface fa0/10

SwitchA(config-if)# switchport mode access

SwitchA(config-if)# switchport access vlan 50
```

Step 1.3. Assign Voice and Data VLANs

```
SwitchA# configure terminal

SwitchA(config)#interfac range fa0/1 - 4

SwitchA(config-if-range)# switchport mode access

SwitchA(config-if-range)# switchport access vlan 50

SwitchA(config-if-range)# switchport voice vlan 10
```

Step 1.4. Configure a Trunk to the CME Router

```
SwitchA# configure terminal

SwitchA(config)# interface fa0/20

SwitchA(config-if)# description CONNECTION TO ROUTER-ON-A-STICK CME ROUTER

SwitchA(config-if)# switchport trunk encapsulation dot1q

SwitchA(config-if)# switchport mode trunk
```

Step 2. Configure Inter-VLAN Routing

```
Router# configure terminal

Router(config)# interface fa0/0

Router(config-if)# no ip address
```

```
Router(config-if)#exit
Router(config)# interface fa0/0.10
Router(config-subif)# description ROUTER INTERFACE FOR VOICE VLAN
Router(config-subif)# encapsulation dot1q 10
Router(config-subif)# ip address 172.16.1.1 255.255.255.0
Router(config-subif)# ip helper-address 172.16.2.5
Router(config-subif)#exit
Router(config)# interface fa0/0.50
Router(config-subif)# description ROUTER INTERFACE FOR DATA VLAN
Router(config-subif)# encapsulation dot1q 50
Router(config-subif)# ip address 172.16.2.1 255.255.255.0
```

Step 3. Configure a Router-Based DHCP Server

```
RTR# configure terminal
RTR(config)# ip dhcp excluded-address 172.16.1.1 172.16.1.9
RTR(config)# ip dhcp excluded-address 172.16.2.1 172.16.2.9
RTR(config)# ip dhcp pool DATA_SCOPE
RTR(dhcp-config)# network 172.16.2.0 255.255.255.0
RTR(dhcp-config)# default-router 172.16.2.1
RTR(dhcp-config)# dns-server 4.2.2.2
RTR(dhcp-config)# exit
RTR(config)# ip dhcp pool VOICE_SCOPE
RTR(dhcp-config)#netowrk 172.16.1.0 255.255.255.0
RTR(dhcp-config)# default-router 172.16.1.1
RTR(dhcp-config)# option 150 ip 172.16.1.1
RTR(dhcp-config)# dns-server 4.2.2.2
```

Step 4. Set the Clock of a Cisco Device with NTP

```
RTR# configure terminal
RTR(config)# ntp server 64.209.210.20
RTR(config)# clock timezone Cairo +2
```

Step 5. Install CME Files into Flash Memory

```
CME_Voice# archive tar /xtract tftp://172.16.2.5/<file name> flash:
```

Step 6. Configure Router-Based TFTP Services for IP Phone Firmware Files

```
CME_Voice# configure terminal

CME_Voice(config)# tftp-server flash:/phone/<file name>
```

Step 7. Configure the Cisco Unified CME System-Level Functions

Provision CME Phone and Directory Number:

```
CME_Voice# configure terminal

CME_Voice(config)# telephony-service

CME_Voice(config-telephony)# max ephone x

CME_Voice(config-telephony)# max dn x
```

Configure CME for Firmware Loads:

```
CME_Voice# configure terminal

CME_Voice(config)# tftp-server flash:/phone/<phone model>/<file name>
```

Set the firmware load for each phone:

```
CME_Voice# configure terminal

CME_Voice(config)# load <phone model> <firmware load>
```

Step 8. Source IP Address Information

```
CME_Voice# configure terminal

CME_Voice(config)# telephony-service

CME_Voice(config-telephony)# ip souerce address 172.16.1.1
```

Step 9. Generation IP Phone Configuration File

```
CME_Voice# configure terminal

CME_Voice(config)# telephony-service

CME_Voice(config-telephony)# creat cnf-files
```

Step 10. Verify Files Served by the CME TFTP Service

```
CME_Voice# show telephony-service tftp-bindings
```

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.