

UC: CUCM initial implementation configuration

Written by Alexei Spirin

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Cisco CUCM Initial configuration checklist

1) Prepare to launch

Find PAKs and get licenses for all servers (Publisher MC address used)

Download and burn patches (iso)

download phone firmware (if you need newer than bundled with CUCM)

2) INSTALLATION

-Prerequisites:

DHCP range for IP-phones on switches

DNS

Timezone

NTP-servers

Cluster security password

Hostname and IP-address

Patch exists and downloaded

Admin name/password

Application Username and Password

3) INITIAL CONFIGURATION (For publisher and subscriber)

- Disable DNS references System->Servers->Hostname/IP-address change to IP

- Change FQDN references to CUCM IP (if you've decided to not use DNS) System->Enterprise Param

- Set an NTP server Settings->NTP Servers

- System->Service Parameters->Cisco Callmanager->T302=6000

- System->Service Parameters->Cisco Callmanager->CDR Enabled Flag=True

- Enable CUCM Service: Cisco Unified Serviceability->Tools->Service Activation->CiscoCallmanager

- Enable tftp service: Cisco tftp

- Enable Media Resources service: Cisco Unified Serviceability->Tools->Service Activation->Cisco IP V

- Enable BAT services (if needed): Cisco Unified Serviceability->Tools->Service Activation->Cisco Bulk

4) Basic configuration (System->Cisco Unified CM Group)

Configure CUCM group

- CUCM group name

- Add all CUCM members to the group

- System->Phone NTP Reference

- Configure Date/Time group (System->Date/Time group)

- Configure Regions (System->Regiondir)

5) Configure SRST (optional)

- System->SRST

6) Configure MRGL

- Media Resources->Media Resource Group-> Add new "Software MRG"->add CUCMs

- Media Resources->Media Resource Group List

7) Configure Physical Location (optional)

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- System->Physical Location

8) Configure Device Pool (System->Device Pool):

- device pool name
- CUCM group
- date-time
- region
- create regions
- set codec
- softkey tempate

9) Configure Partitions (Who can call you)

- Local
- IPT-peers (Branches, HQ etc.)
- PSTN-Local
- PSTN Long Distance and Mobile
- PSTN International

10)Configure Calling Search Spaces (who you can call to)

- Unrestricted
- Restricted_IP_LD
- Restricted_IP_FREE

11) Configure Basic Device profiles

- Device->Device Settings->Common Device Configuration
- Device->Device Settings->Softkey Templates->Configure Softkey Layout->GO

12)Configure Autoregistration (optional)

- Set default Device Pool (Device->Device Settings->Device Defaults)
- Enable Autoregistration (System->Cisco Unified CM)

13) Configure Phone

- Plug phone to the LAN
- Add manually or use autoconfiguration
- Lock PC Port (public places)
- Lock settings button (Restricted recommended)
- PC Voice VLAN Access (Disabled)
- Phone Web Browser

14) Add Conference Bridge and Hardware Media Resources

- Configure Voice Gateway according to Appendix A.
- Media resources->Conference Bridges-Add New
- Add new "Hardware MRG" with Voice Gateway in it. Add "Hardware MRG" above "software MRG" in

15) Add MGCP voice gateway for PSTN calls

- Device->Add Gateway choose MGCP and hostname.domainname for VG

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- Configure VG:
ccm-manager config server 10.1.1.16 10.1.1.17
ccm-manager config
- Configure modules and ports
- Add ports to Route Group
- Add RG to Route List
- Add Route Pattern with references to RL, Calling Search Spaces

16)LDAP Synchronization (Just for Owner Id)

-Prerequisites:

LDAP Account for CUCM

LDAP User search base (OUs - ou=Domain User,dc=domain,dc=local)

LDAP Servers IP

- Cisco Unified Serviceability-> Tools->Service Activation->Cisco DirSync
- System->LDAP->LDAP System->LDAP Server Type
- System->LDAP->LDAP Directory->Add Directory

17)LDAP Authentication (for /ccmuser URL)

- System->LDAP->LDAP->LDAP Authentication->Add New
- Add users to group 'CUCM Standard End Users'

18) Route Plans

Configure route plans according to your setup.

19) More, more, more

Dive as deep as you wish :)

APPENDIX A: Gateway configuration

```
voice-card 0
 dsp services dspfarm
 sccp local Port-channel1
 sccp ccm 10.1.1.16 identifier 1 version 5
 sccp ccm 10.1.1.17 identifier 3 version 5
 sccp ccm group 1
 associate ccm 1 priority 1
 associate ccm 3 priority 3
 associate profile 1 register cisco-voice01
 bind interface Port-channel1
 exit
!
sccp
!
dspfarm profile 1 conference
 codec g711ulaw
 codec g711alaw
```

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```
codec g729br8  
maximum sessions 3  
associate application SCCP  
no shutdown
```