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**SAMART**

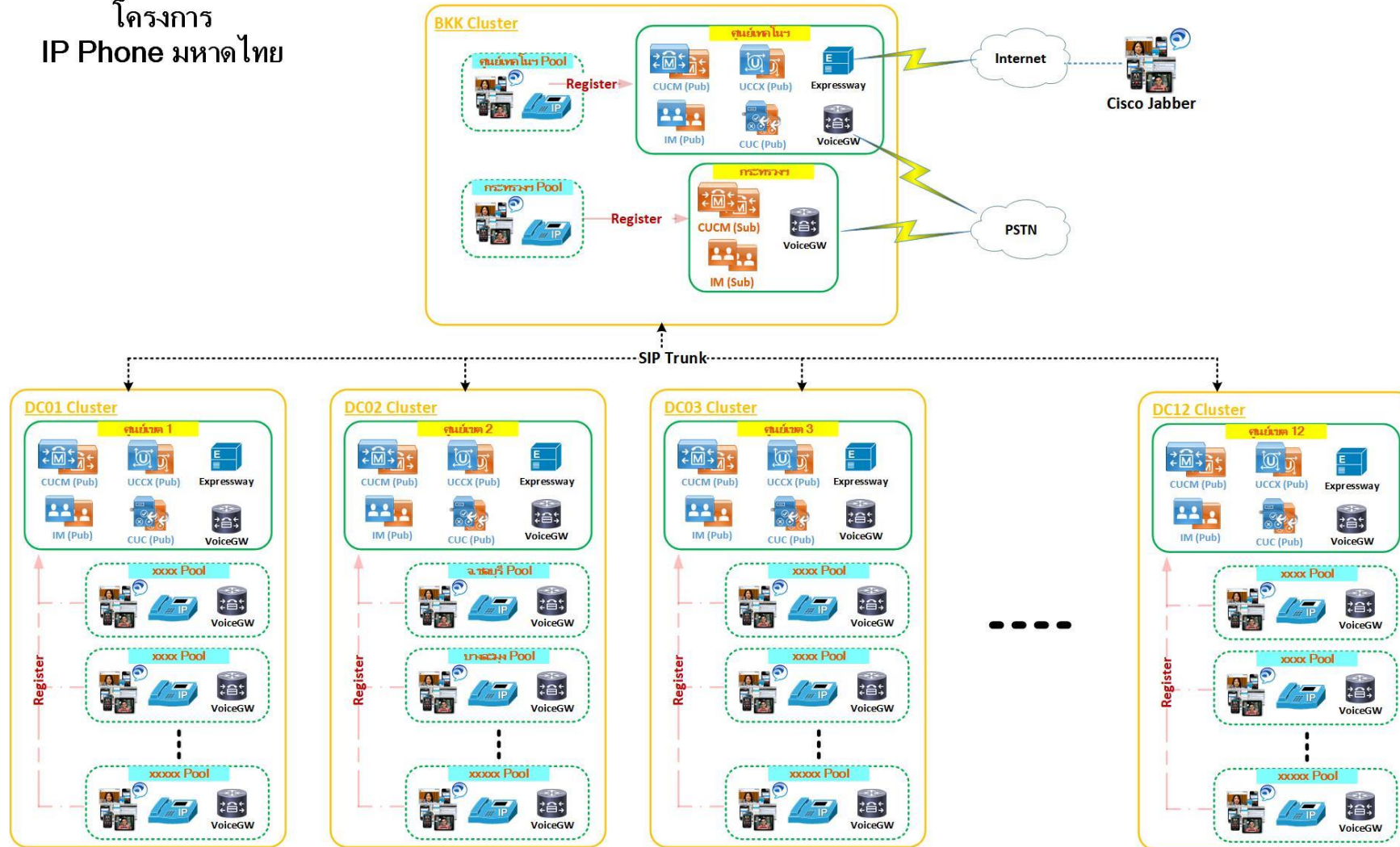
# IP Telephony

*ISR 4000 CONFIGURATION*



# System Diagram

## โครงการ IP Phone มหาดไทย



- Basic Config

```
1 Basic Config
2 =====
3 hostname XXXX.moi.go.th
4 clock timezone GMT 7 0
5 ip domain lookup
6 ip name-server 10.252.0.61 10.252.1.11
7 ip domain-name moi.go.th
8 crypto key generate rsa
9
10 username XXXX privilege 15 secret 0 XXXX
11 ntp master
12 line vty 0 4
13   transport input ssh telnet
14   login local
15
16 interface GigabitEthernet0/0/0
17   ip addr X.X.X.X X.X.X.X
18
19 ip tftp source-interface GigabitEthernet0/0/0
20 ip route 0.0.0.0 0.0.0.0 X.X.X.X
21
22
23
24 E1
25 =====
26 card type e1 0 2
27
```

```
30 Transcoder & Conference Bridge
31 =====
32 voice-card 0/4
33   dsp services dspfarm
34
35 sccp local GigabitEthernet0/0/0
36 sccp ccm X.X.X.X identifier 1 version 7.0
37 sccp ccm X.X.X.X identifier 2 version 7.0
38 sccp ccm X.X.X.X identifier 3 version 7.0
39 sccp ccm X.X.X.X identifier 4 version 7.0
40 sccp
41
42 sccp ccm group 1
43   bind interface GigabitEthernet0/0/0
44   associate ccm 1 priority 1
45   associate ccm 2 priority 2
46   associate ccm 3 priority 3
47   associate ccm 4 priority 4
48   associate profile 1 register 01-COPI-Xcode01
49   associate profile 2 register 01-COPI-Conf01
50
51 dspfarm profile 1 transcode
52   codec g729r8
53   codec g711ulaw
54   codec g711alaw
55   codec g729ar8
56   codec g729abr8
57   maximum sessions 10
58   associate application SCCP
59   no shut
60
61 dspfarm profile 2 conference
62   codec g729r8
63   codec g711ulaw
64   codec g711alaw
65   codec g729ar8
66   codec g729abr8
67   maximum sessions 4
68   associate application SCCP
69   no shut
```

- Basic Config

```
72 MGCP
73 =====
74 mgcp
75 mgcp call-agent X.X.X.X service-type mgcp version 0.1
76 mgcp bind control source-interface GigabitEthernet0/0/0
77 mgcp bind media source-interface GigabitEthernet0/0/0
78
79 ccm-manager fallback-mgcp
80 ccm-manager redundant-host X.X.X.X X.X.X.X
81 ccm-manager mgcp
82 no ccm-manager fax protocol cisco
83 ccm-manager config server X.X.X.X
84 ccm-manager config
85
```

```
86 voice service
87 =====
88 voice service voip
89 ip address trusted list
90 ipv4 0.0.0.0 0.0.0.0
91 allow-connections h323 to h323
92 allow-connections h323 to sip
93 allow-connections sip to h323
94 allow-connections sip to sip
95 no supplementary-service h450.2
96 no supplementary-service h450.3
97 supplementary-service h450.12
98 no supplementary-service h225-notify cid-update
99 no supplementary-service sip moved-temporarily
100 no supplementary-service sip refer
101 fax protocol pass-through g711alaw
102 modem passthrough nse codec g711alaw
103 h323
104 emptycapability
105 h225 id-passthru
106 h225 connect-passthru
107 h245 passthru tcsnonstd-passthru
108 sip
109 bind control source-interface GigabitEthernet0/0/0
110 bind media source-interface GigabitEthernet0/0/0
111 registrar server expires max 600 min 60
112 early-offer forced
113 midcall-signaling passthru
114
115 voice class codec 1
116 codec preference 1 g711alaw
117 codec preference 2 g711ulaw
118 codec preference 3 g729br8
119
```

- Basic Config

```
124 srst
125 =====
126 application
127   global
128     service alternate default
129
130 voice register global
131   mode esrst
132   no allow-hash-in-dn
133   system message SRST Fallback Active
134   max-dn 300
135   max-pool 300
136
137
138 voice register pool 1
139   id network X.X.X.X mask X.X.X.X
140   voice-class codec 1
141
142
143 call-manager-fallback
144   max-conferences 8 gain -6
145   transfer-system full-consult
146   ip source-address X.X.X.X port 2000
147   max-ephones 300
148   max-dn 300
149   system message Primary SRST Fallback Active
150   transfer-pattern .....
151   keepalive 20
152   default-destination 5060
153   call-forward pattern .
154   multicast moh 239.1.1.1 port 2000
155   time-zone 41
156   time-format 24
157   date-format dd-mm-yy
```

```
161 voice-port
162 =====
163 voice-port X/X/X
164   supervisory disconnect dualtone mid-call
165   timeouts call-disconnect 5
166   timeouts wait-release 1
167   timing hookflash-out 50
168   timing guard-out 1000
169
170
171 snmp
172 =====
173 snmp-server community m01@dm1nRW RW
174 snmp-server community m01@dm1nRO RO
175 snmp-server ip dscp 16
176 snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
177 snmp-server enable traps config
178 snmp-server enable traps entity
179 snmp-server enable traps syslog
180 snmp-server host X.X.X.X version 2c m01@dm1n
```

- show running-config

```
1 copi-voip-voicegw09#sho run
2 Building configuration...
3
4
5 Current configuration : 5890 bytes
6 !
7 ! Last configuration change at 21:51:38 UTC Mon Oct 10 2022
8 ! NVRAM config last updated at 21:52:41 UTC Mon Oct 10 2022
9 !
10 version 16.8
11 service timestamps debug datetime msec
12 service timestamps log datetime msec
13 platform qfp utilization monitor load 80
14 no platform punt-keepalive disable-kernel-core
15 !
16 hostname copi-voip-voicegw09
17 !
18 boot-start-marker
19 boot-end-marker
20 !
21 !
22 vrf definition Mgmt-intf
23 !
24 address-family ipv4
25 exit-address-family
26 !
27 address-family ipv6
28 exit-address-family
29 !
30 card type e1 0 2
31 !
32 no aaa new-model
33 !
34 ip name-server 10.252.0.61 10.252.1.11
35 ip domain name moi.go.th
36 !
37 !
```

```
37 !
38 !
39 !
40 !
41 !
42 !
43 !
44 !
45 !
46 subscriber templating
47 !
48 !
49 multilink bundle-name authenticated
50 !
51 !
52 !
53 !
54 isdn switch-type primary-net5
55 !
56 !
57 !
58 !
59 !
60 !
61 voice class custom-cptone TOT
62 dualtone disconnect
63 frequency 400 400
64 cadence 500 500 500 500 500 continuous
65 !
66 !
67 !
68 !
69 !
70 !
71 !
72 !
73 !
74 voice-card 0/1
75 no watchdog
76 !
77 voice-card 0/2
78 no watchdog
79 !
```

- show running-config

```
79  !
80  voice-card 0/4
81  dsp services dspfarm
82  no watchdog
83  !
84  license udi pid ISR4351/K9 sn FDO24261U12
85  no license smart enable
86  diagnostic bootup level minimal
87  !
88  spanning-tree extend system-id
89  !
90  !
91  !
92  username admin privilege 15 secret 5 $!$Bqd5$r3/CsHXjQIH7CVM4EWstP1
93  !
94  redundancy
95  mode none
96  !
97  controller E1 0/2/0
98  framing no-crc4
99  clock source network
100 pri-group timeslots 1-31 service mgcp
101 !
102 controller E1 0/2/1
103 framing no-crc4
104 clock source network
105 pri-group timeslots 1-31 service mgcp
106 !
107 !
108 !
109 !
110 !
111 !
112 !
113 !
114 interface GigabitEthernet0/0/0
115 ip address 10.230.1.41 255.255.255.0
116 negotiation auto
117 !
```

```
117 !
118 interface GigabitEthernet0/0/1
119 no ip address
120 shutdown
121 negotiation auto
122 !
123 interface GigabitEthernet0/0/2
124 no ip address
125 shutdown
126 negotiation auto
127 !
128 interface Service-Engine0/1/0
129 !
130 interface Service-Engine0/2/0
131 !
132 interface Serial0/2/0:15
133 no ip address
134 encapsulation hdlc
135 no cdp enable
136 isdn switch-type primary-qsig
137 isdn timer T310 120000
138 isdn protocol-emulate network
139 isdn incoming-voice voice
140 isdn bind-13 ccm-manager
141 !
142 interface Serial0/2/1:15
143 no ip address
144 encapsulation hdlc
145 no cdp enable
146 isdn switch-type primary-qsig
147 isdn timer T310 120000
148 isdn protocol-emulate network
149 isdn incoming-voice voice
150 isdn bind-13 ccm-manager
151 !
152 interface Service-Engine0/4/0
153 !
154 interface GigabitEthernet0
155 vrf forwarding Mgmt-intf
156 no ip address
157 shutdown
158 negotiation auto
159 !
```

- show running-config

```
159 |
160 ip forward-protocol nd
161 ip http server
162 ip http authentication local
163 ip http secure-server
164 ip tftp source-interface GigabitEthernet0/0/0
165 ip route 0.0.0.0 0.0.0.0 10.230.1.1
166 !
167 !
168 !
169 !
170 snmp-server community m01@dm1nRW RW
171 snmp-server community m01@dm1nRO RO
172 snmp-server ip dscp 16
173 snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
174 snmp-server enable traps config
175 snmp-server enable traps entity
176 snmp-server enable traps syslog
177 snmp-server host 10.252.0.31 version 2c m01@dm1n
178 !
179 !
180 control-plane
181 !
182 !
183 voice-port 0/2/0:15
184 !
185 voice-port 0/1/0
186     supervisory disconnect dualtone mid-call
187     supervisory custom-cptone TOT
188     timeouts call-disconnect 5
189     timeouts wait-release 1
190     timing hookflash-out 50
191     timing guard-out 1000
192     caller-id enable
193 !
```

```
193 |
194 voice-port 0/1/1
195     supervisory disconnect dualtone mid-call
196     supervisory custom-cptone TOT
197     timeouts call-disconnect 5
198     timeouts wait-release 1
199     timing hookflash-out 50
200     timing guard-out 1000
201     caller-id enable
202 !
203 voice-port 0/1/2
204     supervisory disconnect dualtone mid-call
205     supervisory custom-cptone TOT
206     timeouts call-disconnect 5
207     timeouts wait-release 1
208     timing hookflash-out 50
209     timing guard-out 1000
210     caller-id enable
211 !
212 voice-port 0/1/3
213     supervisory disconnect dualtone mid-call
214     supervisory custom-cptone TOT
215     timeouts call-disconnect 5
216     timeouts wait-release 1
217     timing hookflash-out 50
218     timing guard-out 1000
219     caller-id enable
220 !
221 voice-port 0/2/1:15
222 !
```



- show running-config

```
222 !
223 mgcp
224 mgcp call-agent copi-voip-cucm02.moi.go.th 2427 service-type mgcp version 0.1
225 mgcp rtp unreachable timeout 1000 action notify
226 mgcp modem passthrough voip mode nse
227 mgcp modem passthrough voip codec g711alaw
228 mgcp package-capability rtp-package
229 mgcp package-capability sst-package
230 mgcp package-capability pre-package
231 no mgcp package-capability res-package
232 no mgcp timer receive-rtcp
233 mgcp sdp simple
234 mgcp fax t38 inhibit
235 mgcp bind control source-interface GigabitEthernet0/0/0
236 mgcp bind media source-interface GigabitEthernet0/0/0
237 mgcp behavior rsip-range tgcp-only
238 mgcp behavior comedia-role none
239 mgcp behavior comedia-check-media-src disable
240 mgcp behavior comedia-sdp-force disable
241 !
242 mgcp profile default
243 !
244 sccp local GigabitEthernet0/0/0
245 sccp ccm 10.230.1.24 identifier 1 version 7.0
246 sccp ccm 10.230.1.27 identifier 2 version 7.0
247 sccp ccm 10.230.1.31 identifier 3 version 7.0
248 sccp
249 !
250 sccp ccm group 1
251   bind interface GigabitEthernet0/0/0
252   associate ccm 1 priority 1
253   associate ccm 2 priority 2
254   associate ccm 3 priority 3
255   associate profile 2 register 01-COPI-Conf09
256   associate profile 1 register 01-COPI-Xcode9
257 !
258 ccm-manager music-on-hold
259 !
```

```
259 !
260 ccm-manager fallback-mgcp
261 ccm-manager redundant-host copi-voip-cucm03.moi.go.th copi-voip-cucm04.moi.go.th
262 ccm-manager mgcp
263 no ccm-manager fax protocol cisco
264 ccm-manager config server 10.230.1.24
265 ccm-manager config
266 !
267 dspfarm profile 1 transcode
268   codec g729abr8
269   codec g729ar8
270   codec g711alaw
271   codec g711ulaw
272   codec g729r8
273   maximum sessions 10
274   associate application SCCP
275 !
276 dspfarm profile 2 conference
277   codec g729br8
278   codec g729r8
279   codec g729abr8
280   codec g729ar8
281   codec g711alaw
282   codec g711ulaw
283   maximum sessions 4
284   associate application SCCP
285 !
286 dial-peer voice 999010 pots
287   service mgcpapp
288   port 0/1/0
289 !
290 dial-peer voice 999011 pots
291   service mgcpapp
292   port 0/1/1
293 !
294 dial-peer voice 999012 pots
295   service mgcpapp
296   port 0/1/2
297 !
298 dial-peer voice 999013 pots
299   service mgcpapp
300   port 0/1/3
301 !
```

- show running-config

```
301 !
302 !
303 !
304 line con 0
305   transport input none
306   stopbits 1
307 line aux 0
308   stopbits 1
309 line vty 0 4
310   login local
311   transport input telnet ssh
312 !
313 network-clock synchronization automatic
314 ntp master
315 wsma agent exec
316 !
317 wsma agent config
318 !
319 wsma agent filesys
320 !
321 wsma agent notify
322 !
323 !
324 end
325
326 copi-voip-voicegw09#
```

- show running-config

```
1 moi-voip-voicegw01#sh run
2 Building configuration...
3
4
5
6 Current configuration : 9926 bytes
7 !
8 ! Last configuration change at 04:25:47 GNT Tue Oct 11 2022
9 ! NVRAM config last updated at 11:54:08 GNT Tue Oct 25 2022 by admin
10 !
11 version 16.6
12 service config
13 service timestamps debug datetime msec
14 service timestamps log datetime msec
15 platform qfp utilization monitor load 80
16 no platform punt-keepalive disable-kernel-core
17 !
18 hostname moi-voip-voicegw01
19 !
20 boot-start-marker
21 boot-end-marker
22 !
23 !
24 vrf definition Mgmt-intf
25 !
26 address-family ipv4
27 exit-address-family
28 !
29 address-family ipv6
30 exit-address-family
31 !
32 !
33 no aaa new-model
34 clock timezone GNT 7 0
35 !
36 ip name-server 10.252.0.61 10.252.1.11
37 ip domain name moi.go.th
38 !
```

```
35 !
36 ip name-server 10.252.0.61 10.252.1.11
37 ip domain name moi.go.th
38 !
39 !
40 !
41 !
42 !
43 !
44 !
45 !
46 !
47 !
48 subscriber templating
49 !
50 !
51 multilink bundle-name authenticated
52 !
53 !
54 !
55 !
56 !
57 !
58 !
59 !
60 !
61 !
62 !
63 voice service voip
64 dtmf-interworking rtp-nte
65 allow-connections h323 to h323
66 allow-connections h323 to sip
67 allow-connections sip to h323
68 allow-connections sip to sip
69 no supplementary-service h450.2
70 no supplementary-service h450.3
71 supplementary-service h450.12
72 fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback none
73 sip
74 !
```

- show running-config

```
74  !
75  voice class codec 1
76  codec preference 1 g711alaw
77  codec preference 2 g711ulaw
78  codec preference 3 g729br8
79  codec preference 4 g729r8
80  !
81  !
82  !
83  !
84  !
85  !
86  !
87  !
88  !
89  !
90  !
91  !
92  voice-card 0/1
93  no watchdog
94  !
95  voice-card 0/2
96  no watchdog
97  !
98  voice-card 0/4
99  dsp services dspfarm
100 no watchdog
101 !
102 voice-card 1/0
103 no watchdog
104 !
105 license udi pid ISR4331/K9 sn FDO24310BUX
106 diagnostic bootup level minimal
107 spanning-tree extend system-id
108 !
109 !
110 !
111 username admin privilege 15 secret 5 $1$djUZ$g$xfQkLsnyiEwnGyb.jhg1
112 !
113 redundancy
114 mode none
115 !
```

```
115 !
116 !
117 !
118 !
119 !
120 !
121 !
122 !
123 interface GigabitEthernet0/0/0
124 ip address 10.230.2.27 255.255.255.0
125 negotiation auto
126 !
127 interface GigabitEthernet0/0/1
128 description ### Link to TOT ###
129 ip address 172.31.214.238 255.255.255.252
130 negotiation auto
131 !
132 interface GigabitEthernet0/0/2
133 no ip address
134 shutdown
135 negotiation auto
136 !
137 interface Service-Engine0/1/0
138 !
139 interface Service-Engine0/2/0
140 !
141 interface Service-Engine0/4/0
142 !
143 interface Service-Engine1/0/0
144 !
145 interface GigabitEthernet0
146 vrf forwarding Mgmt-intf
147 no ip address
148 shutdown
149 negotiation auto
150 !
151 ip forward-protocol nd
152 ip http server
153 ip http authentication local
154 ip http secure-server
155 ip http client source-interface GigabitEthernet0/0/0
156 ip route 0.0.0.0 0.0.0.0 10.230.2.1
157 ip route 172.30.245.23 255.255.255.255 172.31.214.237
```

- show running-config

```
157 ip route 172.30.245.23 255.255.255.255 172.31.214.237
158 !
159 !
160 logging host 10.252.0.31
161 !
162 !
163 snmp-server community m01@dmlnRW RW
164 snmp-server community m01@dmlnRO RO
165 snmp-server ip dscp 16
166 snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
167 snmp-server enable traps config
168 snmp-server enable traps entity
169 snmp-server enable traps syslog
170 snmp-server host 10.252.0.31 version 2c m01@dmln
171 !
172 !
173 control-plane
174 !
175 !
176 voice-port 0/1/0
177   timing hookflash-out 50
178   timing guard-out 1000
179 !
180 voice-port 0/1/1
181   timing hookflash-out 50
182   timing guard-out 1000
183 !
184 voice-port 0/1/2
185   timing hookflash-out 50
186   timing guard-out 1000
187 !
188 voice-port 0/1/3
189   timing hookflash-out 50
190   timing guard-out 1000
191 !
192 voice-port 0/2/0
193   cptone TH
194   timing hookflash-out 50
195   timing guard-out 1000
196   caller-id enable
197 !
```

```
197 !
198 voice-port 0/2/1
199   cptone TH
200   timing hookflash-out 50
201   timing guard-out 1000
202   caller-id enable
203 !
204 voice-port 0/2/2
205   cptone TH
206   timing hookflash-out 50
207   timing guard-out 1000
208   caller-id enable
209 !
210 voice-port 0/2/3
211   timing hookflash-out 50
212   timing guard-out 1000
213   caller-id enable
214 !
215 voice-port 1/0/0
216   cptone TH
217   timing hookflash-out 50
218   timing guard-out 1000
219   caller-id enable
220 !
221 voice-port 1/0/1
222   cptone TH
223   timing hookflash-out 50
224   timing guard-out 1000
225   caller-id enable
226 !
227 voice-port 1/0/2
228   cptone TH
229   timing hookflash-out 50
230   timing guard-out 1000
231   caller-id enable
232 !
233 voice-port 1/0/3
234   cptone TH
235   timing hookflash-out 50
236   timing guard-out 1000
237   caller-id enable
238 !
```

- show running-config

```
238 !
239 mgcp
240 mgcp call-agent moi-voip-cucm01.moi.go.th 2427 service-type mgcp version 0.1
241 mgcp rtp unreachable timeout 1000 action notify
242 mgcp modem passthrough voip mode nse
243 mgcp package-capability rtp-package
244 mgcp package-capability sst-package
245 mgcp package-capability pre-package
246 no mgcp package-capability res-package
247 no mgcp timer receive-rtcp
248 mgcp sdp simple
249 mgcp fax t38 inhibit
250 mgcp bind control source-interface GigabitEthernet0/0/0
251 mgcp bind media source-interface GigabitEthernet0/0/0
252 mgcp behavior rsip-range tgcp-only
253 mgcp behavior comedia-role none
254 mgcp behavior comedia-check-media-src disable
255 mgcp behavior comedia-sdp-force disable
256 !
257 mgcp profile default
258 !
259 sccp local GigabitEthernet0/0/0
260 sccp ccm 10.230.1.24 identifier 1 version 7.0
261 sccp ccm 10.230.1.27 identifier 2 version 7.0
262 sccp ccm 10.230.1.31 identifier 3 version 7.0
263 sccp
264 !
265 sccp ccm group 1
266 bind interface GigabitEthernet0/0/0
267 associate ccm 1 priority 1
268 associate ccm 2 priority 2
269 associate ccm 3 priority 3
270 associate profile 1 register 02-MOI-Xcode01
271 associate profile 2 register 02-MOI-Conf01
272 !
273 ccm-manager music-on-hold
274 !
```

```
274 !
275 ccm-manager fallback-mgcp
276 ccm-manager redundant-host moi-voip-cucm02.moi.go.th moi-voip-cucm03.moi.go.th
277 ccm-manager mgcp
278 no ccm-manager fax protocol cisco
279 ccm-manager config server 10.230.2.21
280 ccm-manager config
281 !
282 dspfarm profile 1 transcode
283 codec g729abr8
284 codec g729ar8
285 codec g711alaw
286 codec g711ulaw
287 codec g729r8
288 maximum sessions 6
289 associate application SCCP
290 !
291 dspfarm profile 2 conference
292 codec g729abr8
293 codec g729r8
294 codec g729abr8
295 codec g729ar8
296 codec g711alaw
297 codec g711ulaw
298 maximum sessions 3
299 associate application SCCP
300 !
301 dial-peer voice 999020 pots
302 service mgcpapp
303 port 0/2/0
304 !
305 dial-peer voice 999021 pots
306 service mgcpapp
307 port 0/2/1
308 !
309 dial-peer voice 999022 pots
310 service mgcpapp
311 port 0/2/2
312 !
313 dial-peer voice 999023 pots
314 service mgcpapp
315 port 0/2/3
316 !
```

- show running-config

```
316 !
317 dial-peer voice 999100 pots
318   service mgcpapp
319   port 1/0/0
320 !
321 dial-peer voice 999101 pots
322   service mgcpapp
323   port 1/0/1
324 !
325 dial-peer voice 999102 pots
326   service mgcpapp
327   port 1/0/2
328 !
329 dial-peer voice 999103 pots
330   service mgcpapp
331   port 1/0/3
332 !
333 dial-peer voice 999010 pots
334   service mgcpapp
335   port 0/1/0
336 !
337 dial-peer voice 999011 pots
338   service mgcpapp
339   port 0/1/1
340 !
341 dial-peer voice 999012 pots
342   service mgcpapp
343   port 0/1/2
344 !
345 dial-peer voice 999013 pots
346   service mgcpapp
347   port 0/1/3
348 !
349 dial-peer voice 100 voip
350   description ### Incoming Peer ###
351   session protocol sipv2
352   incoming called-number .
353   voice-class codec 1
354   voice-class sip dtmf-relay force rtp-nte
355   dtmf-relay rtp-nte
356 !
```

```
356 !
357 dial-peer voice 101 voip
358   description ### DID Incoming from TOT ###
359   translation-profile outgoing AIS-IN
360   preference 1
361   destination-pattern 0216695..
362   session protocol sipv2
363   session target ipv4:10.230.2.21
364   voice-class codec 1
365   voice-class sip dtmf-relay force rtp-nte
366   voice-class sip options-keepalive up-interval 100 down-interval 50 retry 6
367   voice-class sip bind control source-interface GigabitEthernet0/0/0
368   voice-class sip bind media source-interface GigabitEthernet0/0/0
369   dtmf-relay rtp-nte
370 !
371 dial-peer voice 102 voip
372   description ### DID Incoming from TOT ###
373 !
374 dial-peer voice 103 voip
375   description ### DID Incoming from TOT ###
376 !
377 dial-peer voice 104 voip
378   description ### DID Incoming from TOT ###
379 !
380 dial-peer voice 105 voip
381   description ### DID Incoming from TOT ###
382 !
383 dial-peer voice 106 voip
384   description ### DID Incoming from TOT ###
385 !
386 dial-peer voice 107 voip
387   description ### DID Incoming from TOT ###
388 !
389 dial-peer voice 108 voip
390   description ### DID Incoming from TOT ###
391 !
392 dial-peer voice 109 voip
393   description ### DID Incoming from TOT ###
394 !
```

- show running-config

```
394 !
395 dial-peer voice 201 voip
396   description ### DID_Outgoing_Mobile ###
397   destination-pattern 0[689].....
398   session protocol sipv2
399   session target ipv4:172.30.245.23
400   session transport udp
401   voice-class codec 1
402   voice-class sip dtmf-relay force rtp-nte
403   voice-class sip bind control source-interface GigabitEthernet0/0/1
404   voice-class sip bind media source-interface GigabitEthernet0/0/1
405   dtmf-relay rtp-nte
406 !
407 dial-peer voice 202 voip
408   description ### DID_Outgoing_Domestic ###
409   destination-pattern 0[3457].....
410   session protocol sipv2
411   session target ipv4:172.30.245.23
412   session transport udp
413   voice-class codec 1
414   voice-class sip dtmf-relay force rtp-nte
415   voice-class sip bind control source-interface GigabitEthernet0/0/1
416   voice-class sip bind media source-interface GigabitEthernet0/0/1
417   dtmf-relay rtp-nte
418 !
419 dial-peer voice 203 voip
420   description #### DID_Outgoing_BKK ####
421   destination-pattern 02.....
422   session protocol sipv2
423   session target ipv4:172.30.245.23
424   session transport udp
425   voice-class codec 1
426   voice-class sip dtmf-relay force rtp-nte
427   voice-class sip bind control source-interface GigabitEthernet0/0/1
428   voice-class sip bind media source-interface GigabitEthernet0/0/1
429   dtmf-relay rtp-nte
430 !
```

```
430 !
431 dial-peer voice 204 voip
432   description ### DID_Outgoing_International ###
433   destination-pattern 00[1-9]T
434   session protocol sipv2
435   session target ipv4:172.30.245.23
436   session transport udp
437   voice-class codec 1
438   voice-class sip dtmf-relay force rtp-nte
439   voice-class sip bind control source-interface GigabitEthernet0/0/1
440   voice-class sip bind media source-interface GigabitEthernet0/0/1
441   dtmf-relay rtp-nte
442 !
443 dial-peer voice 205 voip
444   description ### DID_Outgoing_Hotline ###
445   destination-pattern 1...
446   session protocol sipv2
447   session target ipv4:172.30.245.23
448   session transport udp
449   voice-class codec 1
450   voice-class sip dtmf-relay force rtp-nte
451   voice-class sip bind control source-interface GigabitEthernet0/0/1
452   voice-class sip bind media source-interface GigabitEthernet0/0/1
453   dtmf-relay rtp-nte
454 !
455 dial-peer voice 206 voip
456   description ### DID_Outgoing ###
457 !
458 dial-peer voice 207 voip
459   description ### DID_Outgoing ###
460 !
461 dial-peer voice 208 voip
462   description ### DID_Outgoing ###
463 !
464 dial-peer voice 209 voip
465   description ### DID_Outgoing ###
466 !
467 !
```



- show running-config

```
467 !
468 !
469 line con 0
470   transport input none
471   stopbits 1
472 line aux 0
473   stopbits 1
474 line vty 0 4
475   exec-timeout 90 0
476   login local
477   transport input telnet ssh
478 !
479 network-clock synchronization automatic
480 ntp master
481 ntp server 10.230.1.33
482 wsma agent exec
483 !
484 wsma agent config
485 !
486 wsma agent filesys
487 !
488 wsma agent notify
489 !
490 !
491 end
492
493 moi-voip-voicegw01#
494
```

- show running-config

```
1 cmi-voip-voicegw01#show running-config
2 Building configuration...
3
4
5 Current configuration : 8131 bytes
6 !
7 ! Last configuration change at 14:42:54 UTC Mon Dec 12 2022
8 ! NVRAM config last updated at 14:13:21 UTC Fri Jun 9 2023
9 !
10 version 16.6
11 service timestamps debug datetime msec
12 service timestamps log datetime msec
13 platform qfp utilization monitor load 80
14 no platform punt-keepalive disable-kernel-core
15 !
16 hostname cmi-voip-voicegw01
17 !
18 boot-start-marker
19 boot system flash bootflash:isr4400-universalk9.16.06.07.SPA.bin
20 boot-end-marker
21 !
22 !
23 vrf definition Mgmt-intf
24 !
25 address-family ipv4
26 exit-address-family
27 !
28 address-family ipv6
29 exit-address-family
30 !
31 card type e1 0 1
32 !
33 no aaa new-model
34 !
35 ip name-server 10.252.0.61 10.252.1.11
36 ip domain name moi.go.th
37 !
38 !
39 !
40 no login on-success log
41 !
```

```
43 !
44 !
45 !
46 !
47 !
48 subscriber templating
49 !
50 !
51 multilink bundle-name authenticated
52 !
53 !
54 !
55 !
56 isdn switch-type primary-net5
57 !
58 !
59 trunk group FXO-GROUP-1
60 hunt-scheme round-robin
61 !
62 !
63 !
64 !
65 !
66 !
67 !
68 voice service voip
69 ip address trusted list
70 ipv4 0.0.0.0 0.0.0.0
71 allow-connections h323 to h323
72 allow-connections h323 to sip
73 allow-connections sip to h323
74 allow-connections sip to sip
75 no supplementary-service h450.2
76 no supplementary-service h450.3
77 supplementary-service h450.12
78 no supplementary-service h225-notify cid-update
79 no supplementary-service sip moved-temporarily
80 no supplementary-service sip refer
81 fax protocol pass-through g711alaw
82 modem passthrough nse codec g711alaw
83 h323
84 emptycapability
85 h225 id-passthru
```

- show running-config

```
85 h225 id-passthru
86 h225 connect-passthru
87 h245 passthru tcsnonstd-passthru
88 sip
89 bind control source-interface GigabitEthernet0/0/0
90 bind media source-interface GigabitEthernet0/0/0
91 registrar server expires max 600 min 60
92 early-offer forced
93 midcall-signaling passthru
94 !
95 voice class codec 1
96 codec preference 1 g711alaw
97 codec preference 2 g711ulaw
98 !
99 !
100 !
101 !
102 !
103 voice register global
104 mode esrst
105 no allow-hash-in-dn
106 max-dn 300
107 max-pool 300
108 !
109 voice register pool 1
110 id network 10.228.112.0 mask 255.255.255.0
111 voice-class codec 1
112 !
113 !
114 !
115 !
116 !
117 application
118 global
119 service alternate default
120 !
121 !
122 !
123 !
124 !
125 !
```

```
125 !
126 voice-card 0/1
127 no watchdog
128 !
129 voice-card 0/2
130 no watchdog
131 !
132 voice-card 0/3
133 no watchdog
134 !
135 voice-card 0/4
136 dsp services dspfarm
137 no watchdog
138 !
139 license udi pid ISR4431/K9 sn FOC243801LT
140 diagnostic bootup level minimal
141 spanning-tree extend system-id
142 !
143 !
144 !
145 username admin privilege 15 secret 5 $1$1GUR$f13GY9msWNRvJZ48Hdrcy.
146 !
147 redundancy
148 mode none
149 !
150 controller E1 0/1/0
151 pri-group timeslots 1-31 service mgcp
152 !
153 controller E1 0/1/1
154 pri-group timeslots 1-31
155 !
156 !
157 !
158 !
159 !
160 !
161 !
162 !
163 interface GigabitEthernet0/0/0
164 ip address 10.228.112.32 255.255.255.0
165 negotiation auto
166 !
```

- show running-config

```
166 |  
167 interface GigabitEthernet0/0/1  
168 no ip address  
169 shutdown  
170 negotiation auto  
171 |  
172 interface GigabitEthernet0/0/2  
173 no ip address  
174 shutdown  
175 negotiation auto  
176 |  
177 interface GigabitEthernet0/0/3  
178 no ip address  
179 shutdown  
180 negotiation auto  
181 |  
182 interface Service-Engine0/1/0  
183 |  
184 interface Serial0/1/0:15  
185 no ip address  
186 encapsulation hdlc  
187 isdn switch-type primary-net5  
188 isdn incoming-voice voice  
189 |  
190 interface Serial0/1/1:15  
191 no ip address  
192 encapsulation hdlc  
193 isdn switch-type primary-net5  
194 isdn incoming-voice voice  
195 |  
196 interface Service-Engine0/2/0  
197 |  
198 interface Service-Engine0/3/0  
199 |  
200 interface Service-Engine0/4/0  
201 |  
202 interface GigabitEthernet0  
203 vrf forwarding Mgmt-intf  
204 no ip address  
205 shutdown  
206 negotiation auto  
207 |
```

```
207 |  
208 ip forward-protocol nd  
209 no ip http server  
210 no ip http secure-server  
211 ip tftp source-interface GigabitEthernet0/0/0  
212 ip route 0.0.0.0 0.0.0.0 10.228.112.1  
213 |  
214 |  
215 |  
216 |  
217 snmp-server community m01@dm1nRW RW  
218 snmp-server community m01@dm1nRO RO  
219 snmp-server ip dscp 16  
220 snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart  
221 snmp-server enable traps config  
222 snmp-server enable traps entity  
223 snmp-server enable traps syslog  
224 snmp-server host 10.252.0.31 version 2c m01@dm1n  
225 |  
226 |  
227 control-plane  
228 |  
229 |  
230 voice-port 0/1/0:15  
231 |  
232 voice-port 0/2/0  
233 supervisory disconnect dualtone mid-call  
234 cptone TH  
235 timeouts call-disconnect 5  
236 timeouts wait-release 1  
237 timing hookflash-out 50  
238 timing guard-out 1000  
239 connection plar opx 25611  
240 caller-id enable  
241 |  
242 voice-port 0/2/1  
243 supervisory disconnect dualtone mid-call  
244 cptone TH  
245 timeouts call-disconnect 5  
246 timeouts wait-release 1  
247 timing hookflash-out 50  
248 timing guard-out 1000  
249 connection plar opx 25614
```

- show running-config

```
249 connection plar opx 25614
250 caller-id enable
251 !
252 voice-port 0/2/2
253 supervisory disconnect dualtone mid-call
254 cptone TH
255 timeouts call-disconnect 5
256 timeouts wait-release 1
257 timing hookflash-out 50
258 timing guard-out 1000
259 connection plar opx 25617
260 caller-id enable
261 !
262 voice-port 0/2/3
263 supervisory disconnect dualtone mid-call
264 cptone TH
265 timeouts call-disconnect 5
266 timeouts wait-release 1
267 timing hookflash-out 50
268 timing guard-out 1000
269 connection plar opx 25620
270 caller-id enable
271 !
272 voice-port 0/3/0
273 supervisory disconnect dualtone mid-call
274 cptone TH
275 timeouts call-disconnect 5
276 timeouts wait-release 1
277 timing hookflash-out 50
278 timing guard-out 1000
279 connection plar opx 25623
280 caller-id enable
281 !
282 voice-port 0/3/1
283 supervisory disconnect dualtone mid-call
284 cptone TH
285 timeouts call-disconnect 5
286 timeouts wait-release 1
287 timing hookflash-out 50
288 timing guard-out 1000
289 connection plar opx 25627
290 caller-id enable
291 !
```

```
291 !
292 voice-port 0/3/2
293 supervisory disconnect dualtone mid-call
294 cptone TH
295 timeouts call-disconnect 5
296 timeouts wait-release 1
297 timing hookflash-out 50
298 timing guard-out 1000
299 connection plar opx 25554
300 caller-id enable
301 !
302 voice-port 0/3/3
303 supervisory disconnect dualtone mid-call
304 cptone TH
305 timeouts call-disconnect 5
306 timeouts wait-release 1
307 timing hookflash-out 50
308 timing guard-out 1000
309 connection plar opx 25565
310 caller-id enable
311 !
312 mgcp
313 mgcp call-agent rg7-voip-cucm01.moi.go.th 2427 service-type mgcp version 0.1
314 mgcp modem passthrough voip mode nse
315 mgcp package-capability rtp-package
316 mgcp package-capability sst-package
317 mgcp package-capability pre-package
318 mgcp default-package mt-package
319 no mgcp timer receive-rtcp
320 mgcp sdp simple
321 mgcp fax t38 inhibit
322 mgcp bind control source-interface GigabitEthernet0/0/0
323 mgcp bind media source-interface GigabitEthernet0/0/0
324 mgcp behavior rsip-range tgcp-only
325 mgcp behavior comedia-role none
326 mgcp behavior comedia-check-media-src disable
327 mgcp behavior comedia-sdp-force disable
328 !
329 mgcp profile default
330 !
```

- show running-config

```
330 !
331 sccp local GigabitEthernet0/0/0
332 sccp ccm 10.228.112.21 identifier 1 version 7.0
333 sccp ccm 10.228.112.27 identifier 2 version 7.0
334 sccp
335 !
336 sccp ccm group 1
337 bind interface GigabitEthernet0/0/0
338 associate ccm 1 priority 1
339 associate ccm 2 priority 2
340 associate profile 1 register 02-CMI-Xcode01
341 associate profile 2 register 02-CMI-Conf01
342 !
343 ccm-manager music-on-hold
344 !
345 ccm-manager fallback-mgcp
346 ccm-manager redundant-host rg7-voip-cucm02.moi.go.th
347 ccm-manager mgcp
348 no ccm-manager fax protocol cisco
349 ccm-manager config server 10.228.112.21
350 ccm-manager config
351 !
352 dspfarm profile 1 transcode
353 codec g729abr8
354 codec g729ar8
355 codec g711alaw
356 codec g711ulaw
357 codec g729r8
358 maximum sessions 6
359 associate application SCCP
360 !
361 dspfarm profile 2 conference
362 codec g729br8
363 codec g729r8
364 codec g729abr8
365 codec g729ar8
366 codec g711alaw
367 codec g711ulaw
368 maximum sessions 3
369 associate application SCCP
370 !
```

```
370 !
371 dial-peer voice 999020 pots
372 service mgcpapp
373 port 0/2/0
374 !
375 dial-peer voice 999021 pots
376 service mgcpapp
377 port 0/2/1
378 !
379 dial-peer voice 999022 pots
380 service mgcpapp
381 port 0/2/2
382 !
383 dial-peer voice 999023 pots
384 service mgcpapp
385 port 0/2/3
386 !
387 dial-peer voice 999030 pots
388 service mgcpapp
389 port 0/3/0
390 !
391 dial-peer voice 999031 pots
392 service mgcpapp
393 port 0/3/1
394 !
395 dial-peer voice 999032 pots
396 service mgcpapp
397 port 0/3/2
398 !
399 dial-peer voice 999033 pots
400 service mgcpapp
401 port 0/3/3
402 !
403 !
404 sip-ua
405 retry invite 1
406 registrar 1 ipv4:10.228.112.32 expires 3600
407 !
408 !
```

- show running-config

```
408 !
409 call-manager-fallback
410   max-conferences 8 gain -6
411   transfer-system full-consult
412   ip source-address 10.228.112.32 port 2000
413   max-ephones 300
414   max-dn 300
415   system message primary SRST Fallback Active
416   transfer-pattern .....
417   keepalive 20
418   default-destination 5060
419   call-forward pattern .
420   multicast moh 239.1.1.1 port 2000
421   time-zone 41
422   time-format 24
423   date-format dd-mm-yy
424 !
425 !
426 line con 0
427   transport input none
428   stopbits 1
429 line aux 0
430   stopbits 1
431 line vty 0 4
432   login local
433   transport input telnet ssh
434 !
435 network-clock synchronization automatic
436 ntp master
437 !
438 !
439 !
440 !
441 !
442 end
443
444 cmi-voip-voicegw01#
```

- show running-config

```
1 rg11-voip-voicegw01#sho run
2 Building configuration...
3
4
5 Current configuration : 5746 bytes
6 !
7 ! Last configuration change at 19:53:51 GMT Mon Jun 19 2023
8 ! NVRAM config last updated at 20:02:04 GMT Mon Jun 19 2023 by admin
9 !
10 version 16.6
11 service timestamps debug datetime msec
12 service timestamps log datetime msec
13 platform qfp utilization monitor load 80
14 no platform punt-keepalive disable-kernel-core
15 !
16 hostname rg11-voip-voicegw01
17 !
18 boot-start-marker
19 boot-end-marker
20 !
21 !
22 vrf definition Mgmt-intf
23 !
24   address-family ipv4
25   exit-address-family
26 !
27   address-family ipv6
28   exit-address-family
29 !
30 card type e1 0 2
31 !
32 no aaa new-model
33 clock timezone GMT 7 0
34 !
35 ip name-server 10.252.0.61 10.252.1.11
36 ip domain name moi.go.th
37 !
38 !
39 !
40 !
41 !
42 !
43 !
```

```
43 !
44 !
45 !
46 !
47 subscriber templating
48 !
49 !
50 multilink bundle-name authenticated
51 !
52 !
53 !
54 !
55 isdn switch-type primary-net5
56 !
57 !
58 !
59 !
60 !
61 !
62 !
63 voice service voip
64   ip address trusted list
65     ipv4 0.0.0.0 0.0.0.0
66   allow-connections h323 to h323
67   allow-connections h323 to sip
68   allow-connections sip to h323
69   allow-connections sip to sip
70   no supplementary-service h450.2
71   no supplementary-service h450.3
72   supplementary-service h450.12
73   no supplementary-service h225-notify cid-update
74   no supplementary-service sip moved-temporarily
75   no supplementary-service sip refer
76   fax protocol pass-through g711alaw
77   modem passthrough nse codec g711alaw
78   h323
79     emptycapability
80     h225 id-passthru
81     h225 connect-passthru
82     h245 passthru tcsnonstd-passthru
```



- show running-config

```
82 h245 passthru tcsnonstd-passthru
83 sip
84 bind control source-interface GigabitEthernet0/0/0
85 bind media source-interface GigabitEthernet0/0/0
86 registrar server expires max 600 min 60
87 early-offer forced
88 midcall-signaling passthru
89 !
90 voice class codec 1
91 codec preference 1 g711alaw
92 codec preference 2 g711ulaw
93 !
94 !
95 !
96 !
97 !
98 voice register global
99 mode esrst
100 no allow-hash-in-dn
101 system message SRST Fallback Active
102 max-dn 200
103 max-pool 50
104 !
105 voice register pool 1
106 id network 10.228.176.0 mask 255.255.255.0
107 voice-class codec 1
108 !
109 !
110 !
111 !
112 !
113 application
114 global
115 service alternate default
116 !
117 !
118 !
119 !
120 voice-card 0/1
121 no watchdog
122 !
```

```
122 !
123 voice-card 0/2
124 dsp services dspfarm
125 no watchdog
126 !
127 license udi pid ISR4321/K9 sn FDO24390P4P
128 diagnostic bootup level minimal
129 spanning-tree extend system-id
130 !
131 !
132 !
133 username admin privilege 15 secret 5 $1$47mr$PI7Tufcz9hJ9F1b8mOtTPO
134 !
135 redundancy
136 mode none
137 !
138 controller E1 0/2/0
139 pri-group timeslots 1-31 service mgcp
140 !
141 controller E1 0/2/1
142 !
143 !
144 !
145 !
146 !
147 !
148 !
149 !
150 interface GigabitEthernet0/0/0
151 ip address 10.228.176.31 255.255.255.0
152 negotiation auto
153 !
154 interface GigabitEthernet0/0/1
155 no ip address
156 shutdown
157 negotiation auto
158 !
159 interface Service-Engine0/1/0
160 !
161 interface Service-Engine0/2/0
162 !
```

- show running-config

```
162 !
163 interface Serial0/2/0:15
164   no ip address
165   encapsulation hdlc
166   isdn switch-type primary-net5
167   isdn incoming-voice voice
168 !
169 interface GigabitEthernet0
170   vrf forwarding Mgmt-intf
171   no ip address
172   shutdown
173   negotiation auto
174 !
175 ip forward-protocol nd
176 ip http server
177 ip http authentication local
178 ip http secure-server
179 ip tftp source-interface GigabitEthernet0/0/0
180 ip route 0.0.0.0 0.0.0.0 10.228.176.1
181 !
182 !
183 !
184 !
185 snmp-server community m01@dmlnRW RW
186 snmp-server community m01@dmlnRO RO
187 snmp-server ip dscp 16
188 snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
189 snmp-server enable traps config
190 snmp-server enable traps entity
191 snmp-server enable traps syslog
192 snmp-server host 10.252.0.31 version 2c m01@dmln
193 !
194 !
195 control-plane
196 !
197 !
198 voice-port 0/2/0:15
199 !
```

```
199 !
200 voice-port 0/1/0
201   supervisory disconnect dualtone mid-call
202   cptone TH
203   timeouts call-disconnect 5
204   timeouts wait-release 1
205   timing hookflash-out 50
206   timing guard-out 1000
207   caller-id enable
208 !
209 voice-port 0/1/1
210 !
211 voice-port 0/1/2
212 !
213 voice-port 0/1/3
214 !
215 mgcp
216 mgcp call-agent rg11-voip-cucm01.moi.go.th 2427 service-type mgcp version 0.1
217 mgcp rtp unreachable timeout 1000 action notify
218 mgcp modem passthrough voip mode nse
219 mgcp modem passthrough voip codec g711alaw
220 mgcp package-capability rtp-package
221 mgcp package-capability sst-package
222 mgcp package-capability pre-package
223 no mgcp package-capability res-package
224 no mgcp timer receive-rtcp
225 mgcp sdp simple
226 mgcp fax t38 inhibit
227 mgcp bind control source-interface GigabitEthernet0/0/0
228 mgcp bind media source-interface GigabitEthernet0/0/0
229 mgcp behavior rsip-range tgcp-only
230 mgcp behavior comedia-role none
231 mgcp behavior comedia-check-media-src disable
232 mgcp behavior comedia-sdp-force disable
233 !
234 mgcp profile default
235 !
236 sccp local GigabitEthernet0/0/0
237 sccp ccm 10.228.176.21 identifier 1 version 7.0
238 sccp ccm 10.228.176.27 identifier 2 version 7.0
239 sccp
240 !
```

- show running-config

```
240 !
241 sccp ccm group 1
242   bind interface GigabitEthernet0/0/0
243   associate ccm 1 priority 1
244   associate ccm 2 priority 2
245   associate profile 2 register 01-RG11-Conf01
246   associate profile 1 register 01-RG11-Xcode01
247 !
248 ccm-manager music-on-hold
249 !
250 ccm-manager fallback-mgcp
251 ccm-manager redundant-host rg11-voip-cucm02.moi.go.th
252 ccm-manager mgcp
253 no ccm-manager fax protocol cisco
254 ccm-manager config server 10.228.176.21
255 ccm-manager config
256 !
257 dspfarm profile 1 transcode
258   codec g729abr8
259   codec g729ar8
260   codec g711alaw
261   codec g711ulaw
262   codec g729r8
263   maximum sessions 1
264   associate application SCCP
265 !
266 dial-peer voice 999010 pots
267   service mgcpapp
268   port 0/1/0
269 !
270 !
271 sip-ua
272   retry invite 1
273   registrar 1 ipv4:10.228.176.31 expires 3600
274 !
275 !
```

```
275 !
276 call-manager-fallback
277   max-conferences 8 gain -6
278   transfer-system full-consult
279   ip source-address 10.228.176.31 port 2000
280   max-ephones 50
281   max-dn 200
282   system message primary SRST Fallback Active
283   transfer-pattern .....
284   keepalive 20
285   default-destination 5060
286   call-forward pattern .
287   multicast moh 239.1.1.1 port 2000
288   time-zone 41
289   time-format 24
290   date-format dd-mm-yy
291 !
292 !
293 line con 0
294   transport input none
295   stopbits 1
296 line aux 0
297   stopbits 1
298 line vty 0 4
299   login local
300   transport input telnet ssh
301 !
302 network-clock synchronization automatic
303 ntp master
304 wsma agent exec
305 !
306 wsma agent config
307 !
308 wsma agent filesys
309 !
310 wsma agent notify
311 !
312 !
313 end
314
315 rg11-voip-voicegw01#
```

- show ccm-manager

```
copi-voip-voicegw09#show ccm-manager
MGCP Domain Name: copi-voip-voicegw09.moi.go.th
Priority      Status      Host
=====
Primary      Registered  copi-voip-cucm02.moi.go.th (10.230.1.24)
First Backup Backup Ready copi-voip-cucm03.moi.go.th (10.230.1.27)
Second Backup Backup Ready copi-voip-cucm04.moi.go.th (10.230.1.31)

Current active Call Manager: 10.230.1.24
Backhaul/Redundant link port: 2428
Failover Interval: 30 seconds
Keepalive Interval: 15 seconds
Last keepalive sent: 05:26:36 UTC Jul 25 2023 (elapsed time: 00:01:40)
Last MGCP traffic time: 05:28:08 UTC Jul 25 2023 (elapsed time: 00:00:08)
Last failover time: 05:09:04 UTC Sep 6 2022 from (10.230.1.27)
Last switchback time: 05:09:34 UTC Sep 6 2022 from (10.230.1.31)
Switchback mode: Graceful
MGCP Fallback mode: Enabled/OFF
Last MGCP Fallback start time: 05:09:53 UTC Sep 6 2022
Last MGCP Fallback end time: 05:10:14 UTC Sep 6 2022
MGCP Download Tones: Disabled
TFTP retry count to shut Ports: 2

Backhaul Link info:
Link Protocol: TCP
Remote Port Number: 2428
Remote IP Address: 10.230.1.24
Current Link State: OPEN
Statistics:
Packets recvd: 3004839
Recv failures: 1
Packets xmitted: 4062993
Xmit failures: 0
PRI Ports being backhauled:
Slot 0, VIC 2, port 1
Slot 0, VIC 2, port 0

Configuration Auto-Download Information
=====
Current version-id: 1656382409-a3b8c0de-95a3-487e-9c5b-b11ccd370b21
Last config-downloaded:00:00:00
Current state: Waiting for commands
Configuration Download statistics:
Download Attempted : 11
```

- show isdn status

```
copi-voip-voicegw09#sho isdn status
Global ISDN Switchtype = primary-net5

%Q.931 is backhauled to CCM MANAGER 0x0003 on DSL 0. Layer 3 output may not apply

ISDN Serial0/2/0:15 interface
***** Network side configuration *****
dsl 0, interface ISDN Switchtype = primary-qsig
**** Master side configuration ****
L2 Protocol = Q.921 0x0000 L3 Protocol(s) = CCM MANAGER 0x0003
Layer 1 Status:
  ACTIVE
Layer 2 Status:
  TEI = 0, Ces = 1, SAPI = 0, State = MULTIPLE_FRAME_ESTABLISHED
Layer 3 Status:
  0 Active Layer 3 Call(s)
Active dsl 0 CCBS = 0
The Free Channel Mask: 0xFFFF7FFF
Number of L2 Discards = 0, L2 Session ID = 225

%Q.931 is backhauled to CCM MANAGER 0x0003 on DSL 1. Layer 3 output may not apply

ISDN Serial0/2/1:15 interface
***** Network side configuration *****
dsl 1, interface ISDN Switchtype = primary-qsig
**** Master side configuration ****
L2 Protocol = Q.921 0x0000 L3 Protocol(s) = CCM MANAGER 0x0003
Layer 1 Status:
  DEACTIVATED
Layer 2 Status:
  TEI = 0, Ces = 1, SAPI = 0, State = TEI_ASSIGNED
Layer 3 Status:
  0 Active Layer 3 Call(s)
Active dsl 1 CCBS = 0
The Free Channel Mask: 0x00000000
Number of L2 Discards = 27, L2 Session ID = 58
Total Allocated ISDN CCBS = 0
copi-voip-voicegw09#
```

- show isdn active

```
copi-voip-voicegw09#show isdn active
-----
                        ISDN ACTIVE CALLS
-----
Call    Calling    Called    Remote  Seconds  Seconds  Seconds  Charges
Type   Number     Number    Name    Used     Left     Idle     Units/Currency
-----
copi-voip-voicegw09#
```

- show voice call status

```
copi-voip-voicegw09#show voice call status
CallID      CID  ccVdb      Port      Slot/Bay/DSP:Ch  Called #   Codec   MLPP Dial-peers
No active calls found
copi-voip-voicegw09#
```



ศูนย์เทคโนโลยีสารสนเทศและการสื่อสาร ส.ป.ม.ท.  
Information and Communication Technology Center.

**SAMART**

Thanks and Regards.

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