配置呼叫管理器與具有Unity語音郵件整合的Avaya S8700/G650之間的Q.SIG PRI中繼

目錄

簡介

本文檔的目標是向思科客戶和業務合作夥伴提供在Cisco Call Manager和Avaya S8700/G650之間配置Q.SIG PRI中繼的步驟。此外，本文檔還詳細介紹了如何在Cisco Call Manager平台上新增Cisco Unity的步驟，以便為Cisco和Avaya IP電話提供語音郵件支援。在需要IP-PBX互操作性和語音郵件整合的情況下，這一點尤其重要。Avaya配置螢幕捕獲是使用標準模擬工具建立的。或者，您也可以使用Avaya Site Administration(ASA)工具在Avaya S8700/G650上執行配置任務。兩種情況下的輸出顯示相同。此IP-PBX互操作性和語音郵件整合文檔僅供外部使用。

必要條件

需求

本文件沒有特定需求。

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- 使用的Avaya IP-PBX系統是運行Avaya Communication Manager 2.0的Avaya S8700/G650。Q.SIG功能集隨此軟體版本一起提供。
- 本文檔中使用的Avaya IP電話是運行電話韌體版本2.01的4610SW和4620。
- 使用Cisco Call Manager 4.1.(2)控制NM-HDV模組的3745媒體閘道控制通訊協定(MGCP)閘道，執行Cisco IOS®版本12.2.15ZJ3。也使用Cisco IOS®版本12.3.8.T5重複測試。
- 運行版本4.0(4)SR1的Cisco Unity用於語音郵件整合測試。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

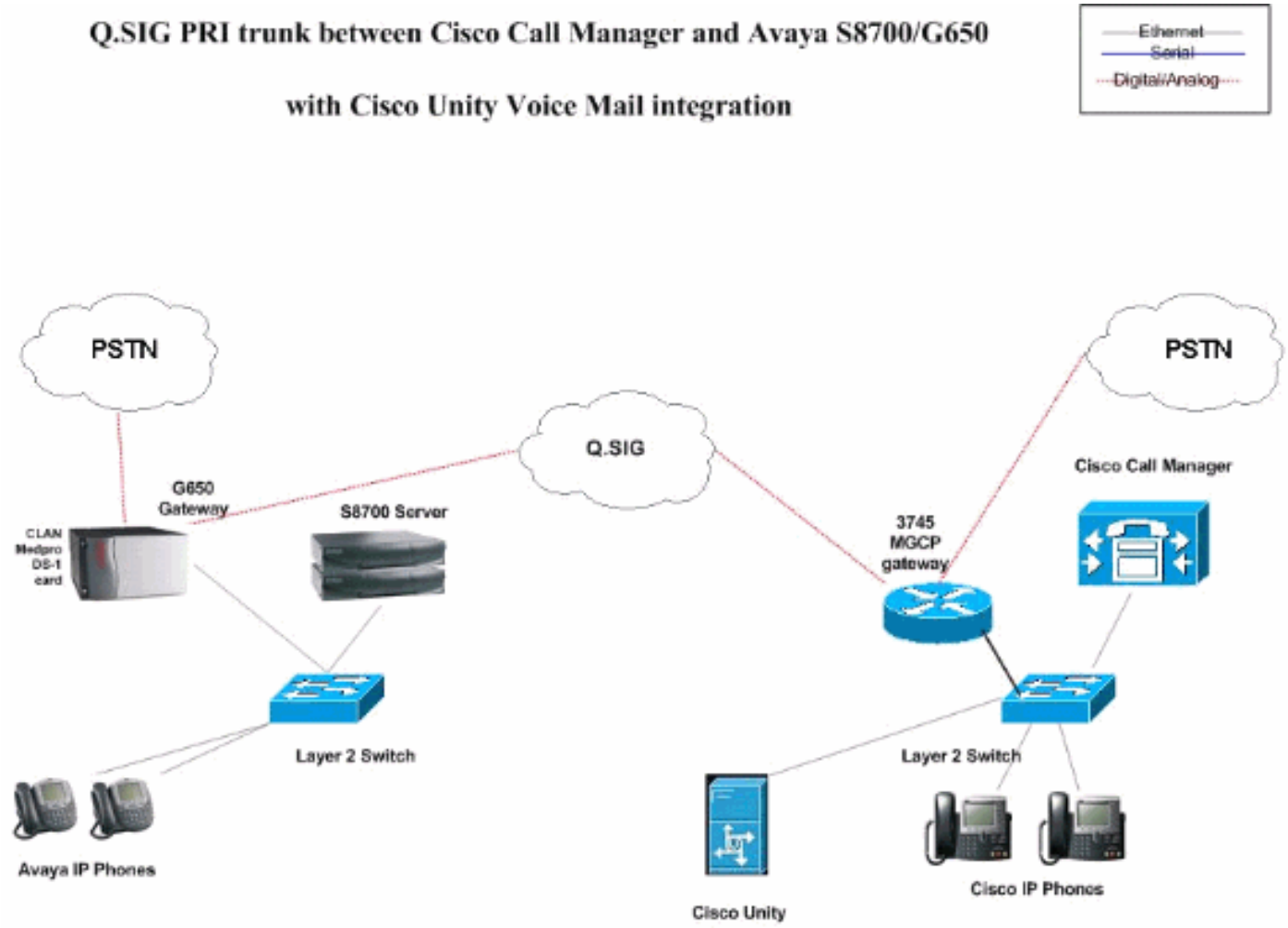
慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

測試設定

使用的Avaya IP-PBX系統是運行Avaya Communication Manager 2.0的Avaya S8700/G650。Q.SIG功能集隨此軟體版本一起提供。使用的AvayaIP電話是運行電話韌體版本2.01的4610SW和4620。在思科端，使用Cisco Call Manager 4.1.2控制NM-HDV模組的3745 MGCP網關，運行Cisco IOS®版本12.2.15ZJ3。使用Cisco IOS®版本12.3.8.T5也重複測試。運行4.0(4)SR1的Cisco Unity用於語音郵件整合測試。

測試拓撲



思科和Avaya IP-PBX系統之間的互操作性

接下來的部分提供過程和螢幕截圖，幫助您配置運行Avaya Communication Manager 2.0的Avaya S8700/G650與運行Call Manager 4.1(2)版的Cisco Call Manager平台之間的Q.SIG中繼，該平台的Cisco 3745 MGCP裝置提供與Avaya S8700/G650的物理ISDN PRI連線。

Avaya S8700/G650 IP-PBX系統的步驟

請完成以下步驟：

1. 登入到S8700伺服器。運行**display system-parameters customer**命令以確保在S8700伺服器上啟用所有必要的Q.SIG功能。

```
cancel | refresh | enter | clear | help | go to page | next page | prev page

display system-parameters customer-options                    Page   8 of  11
                            QSIG OPTIONAL FEATURES

                                        Basic Call Setup? y
                                Basic Supplementary Services? y
                                       Centralized Attendant? y
                                       Interworking with DCS? y
                          Supplementary Services with Rerouting? y
                                 Transfer into QSIG Voice Mail? y
                                       Value-Added (VALU)? y

          (NOTE: You must logoff & login to effect the permission changes.)
```

2. 為Q.SIG PRI配置DS-1卡。

```
cancel | refresh | enter | clear | help | go to page | next page | prev page

display ds1 01A09                                             Page   1 of   2
                              DS1 CIRCUIT PACK

            Location: 01A09                          Name: QSIG
            Bit Rate: 1.544                   Line Coding: b8zs
   Line Compensation: 1                      Framing Mode: esf
      Signaling Mode: isdn-pri
             Connect: pbx                        Interface: peer-master
   TN-C7 Long Timers? n                     Peer Protocol: Q-SIG
Interworking Message: PROGress                       Side: a
Interface Companding: mulaw                           CRC? n
           Idle Code: 11111111
                              DCP/Analog Bearer Capability: 3.1kHz



      Slip Detection? n                  Near-end CSU Type: other

   Echo Cancellation? n
```

3. 配置中繼組。鍵入**add trunk-group #**，其中#是所需的中繼。接下來的三個螢幕截圖與中繼配置有關。建立中繼組後，將23個DS0通道新增到該組中。以下是連線埠分配的範例：01A0901表示：網關# 1、機櫃A、插槽# 9、DS0通道# group1。


cancel
refresh
enter
clear
help
go to page
next page
prev page
display trunk-group 1 Page 1 of 22
TRUNK GROUP
Group Number: 1 Group Type: isdn CDR Reports: n
Group Name: QSIG TRUNKING COR: 90 TN: 1 TAC: *01
Direction: two-way Outgoing Display? y Carrier Medium: PRI/BRI
Dial Access? y Busy Threshold: 99 Night Service:
Queue Length: 0
Service Type: tie Auth Code? n TestCall ITC: rest
Far End Test Line No:
TestCall BCC: 4
TRUNK PARAMETERS
Codeset to Send Display: 0 Codeset to Send National IEs: 6
Max Message Size to Send: 260
Supplementary Service Protocol: b Digit Handling (in/out): enbloc/enbloc
Trunk Hunt: ascend QSIG Value-Added? y
Digital Loss Group: 13
Calling Number - Delete: Insert: Numbering Format: pub-unk
Bit Rate: 1200 Synchronization: async Duplex: full
Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0
display trunk-group 1 Page 2 of 22
TRUNK FEATURES
ACA Assignment? n Measured: internal Wideband Support? n
Internal Alert? n Maintenance Tests? y
Data Restriction? n NCA-TSC Trunk Member: 10
Send Name: y Send Calling Number: y
Used for DCS? n Hop Dgt? y
Suppress # Outpulsing? n Numbering Format: public
Outgoing Channel ID Encoding: exclusive UUI IE Treatment: service-provider
Replace Restricted Numbers? n
Replace Unavailable Numbers? n
Send Called/Busy/Connected Number: y
Send UUI IE? y
Send UCID? y
Send Codeset 6/7 LAI IE? y Ds1 Echo Cancellation? n
Path Replacement with Retention? y
SBS? n Network (Japan) Needs Connect Before Disconnect? y

```
display trunk-group 1                                    Page   6 of  22
                                TRUNK GROUP
                                     Administered Members (min/max):   1/23
GROUP MEMBER ASSIGNMENTS                  Total Administered Members:  23

      Port    Code Sfx Name        Night            Sig Grp
  1: 01A0901  TN464  G                                 1
  2: 01A0902  TN464  G                                 1
  3: 01A0903  TN464  G                                 1
  4: 01A0904  TN464  G                                 1
  5: 01A0905  TN464  G                                 1
  6: 01A0906  TN464  G                                 1
  7: 01A0907  TN464  G                                 1
  8: 01A0908  TN464  G                                 1
  9: 01A0909  TN464  G                                 1
 10: 01A0910  TN464  G                                 1
 11: 01A0911  TN464  G                                 1
 12: 01A0912  TN464  G                                 1
 13: 01A0913  TN464  G                                 1
 14: 01A0914  TN464  G                                 1
 15: 01A0915  TN464  G                                 1
```

4. 新增信令組並指向之前建立的中繼組。

```
display signaling-group 1
                              SIGNALING GROUP

 Group Number: 1                Group Type: isdn-pri
                    Associated Signaling? y          Max number of NCA TSC: 10
                       Primary D-Channel: 01A0924     Max number of CA TSC: 10
                                                    Trunk Group for NCA TSC: 1
       Trunk Group for Channel Selection: 1       X-Mobility/Wireless Type: NONE
          Supplementary Service Protocol: b         Network Call Transfer? n

Command:
```

5. 新增路由模式並將其指向信令組。在本示例中，路由模式4指向步驟4中建立的信令組# 1。

```
cancel | refresh | enter | clear | help | go to page | next page | prev page

display route-pattern 4                                    Page   1 of   3
                   Pattern Number: 4   Pattern Name: isdn test
                                         Secure SIP? n
   Grp FRL NPA Pfx Hop Toll No.  Inserted                          DCS/ IXC
   No          Mrk Lmt List Del  Digits                          QSIG
                             Dgts                                Intw
1: 1    0  408     4                                             n    user
2:                                                               n    user
3:                                                               n    user
4:                                                               n    user
5:                                                               n    user
6:                                                               n    user

    BCC VALUE  TSC CA-TSC    ITC BCIE Service/Feature BAND  No. Numbering LAR
   0 1 2 3 4 W     Request                                  Dgts Format
                                                         Subaddress
1: y y y y y n  y  as-needed rest                              pub-unk   none
2: y y y y y n  n            rest                                        none
3: y y y y y n  n            rest                                        none
4: y y y y y n  n            rest                                        none
5: y y y y y n  n            rest                                        none
6: y y y y y n  n            rest                                        none
```

6. 在AAR表中新增一個條目，以便使用您建立的路由模式來路由呼叫。在本示例中，對Cisco IP電話分機4XXX的呼叫使用以4開頭的AAR表條目，該條目又指向路由模式# 4。

```
display aar analysis 4                                     Page   1 of   2
                        AAR DIGIT ANALYSIS TABLE
                                                      Percent Full:    2

      Dialed          Total      Route    Call    Node  ANI
      String         Min  Max   Pattern  Type    Num   Reqd
   4                  4    4     20       aar           y
   4                  7    7     999      aar           n
   4001               4    4     4        aar           y
   4008               4    4     4        aar           y
   4015               4    4     4        aar           n
   44                 4    4     4        aar           y
   5                  4    4     10       aar           n
   5                  7    7     999      aar           n
   5001               4    4     25       aar           n
   5050               4    4     10       aar           n
   555                7    7     4        aar           n
   7                  7    7     999      aar           n
   70007950           8    8     45       aar           n
   8                  7    7     999      aar           n
   88001              5    5     65       aar           n
```

7. 確保在每個IP電話上啟用呼叫方ID以傳送呼叫方名稱。

```
display station 7007                                        Page   2 of   4
                                    STATION
FEATURE OPTIONS
           LWC Reception: spe              Auto Select Any Idle Appearance? n
          LWC Activation? y                      Coverage Msg Retrieval? y
  LWC Log External Calls? n                                Auto Answer: none
            CDR Privacy? n                           Data Restriction? n
   Redirect Notification? y                  Idle Appearance Preference? n
 Per Button Ring Control? n
   Bridged Call Alerting? n                    Restrict Last Appearance? y
  Active Station Ringing: continuous

        H.320 Conversion? y          Per Station CPN - Send Calling Number? y
      Service Link Mode: as-needed
       Multimedia Mode: enhanced                  Audible Message Waiting? n
    MWI Served User Type: qsig-mwi             Display Client Redirection? n
                                              Select Last Used Appearance? n
                                               Coverage After Forwarding? s
                                                 Multimedia Early Answer? n
                                              Direct IP-IP Audio Connections? y
 Emergency Location Ext: 7007                        IP Audio Hairpinning? y
```

Cisco Call Manager上的步驟

請完成以下步驟：

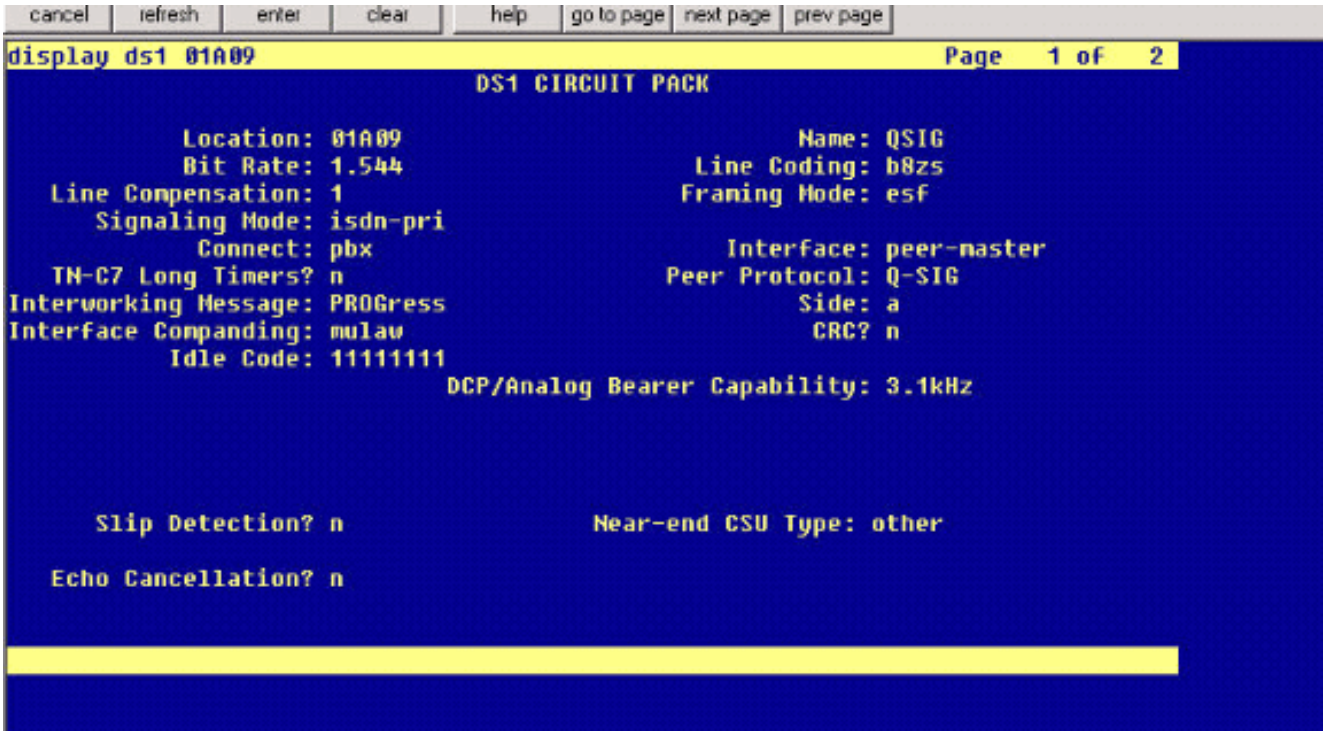
1. 在「Service parameters（服務引數）」下，確保「Start Path Replacement Minimum（開始路徑替換最小值）」和「Maximum time（最大時間）」值設定正確，以防止出現任何問題（如頭髮固定問題）。接下來的兩個螢幕截圖與Q.SIG服務引數設定相關：

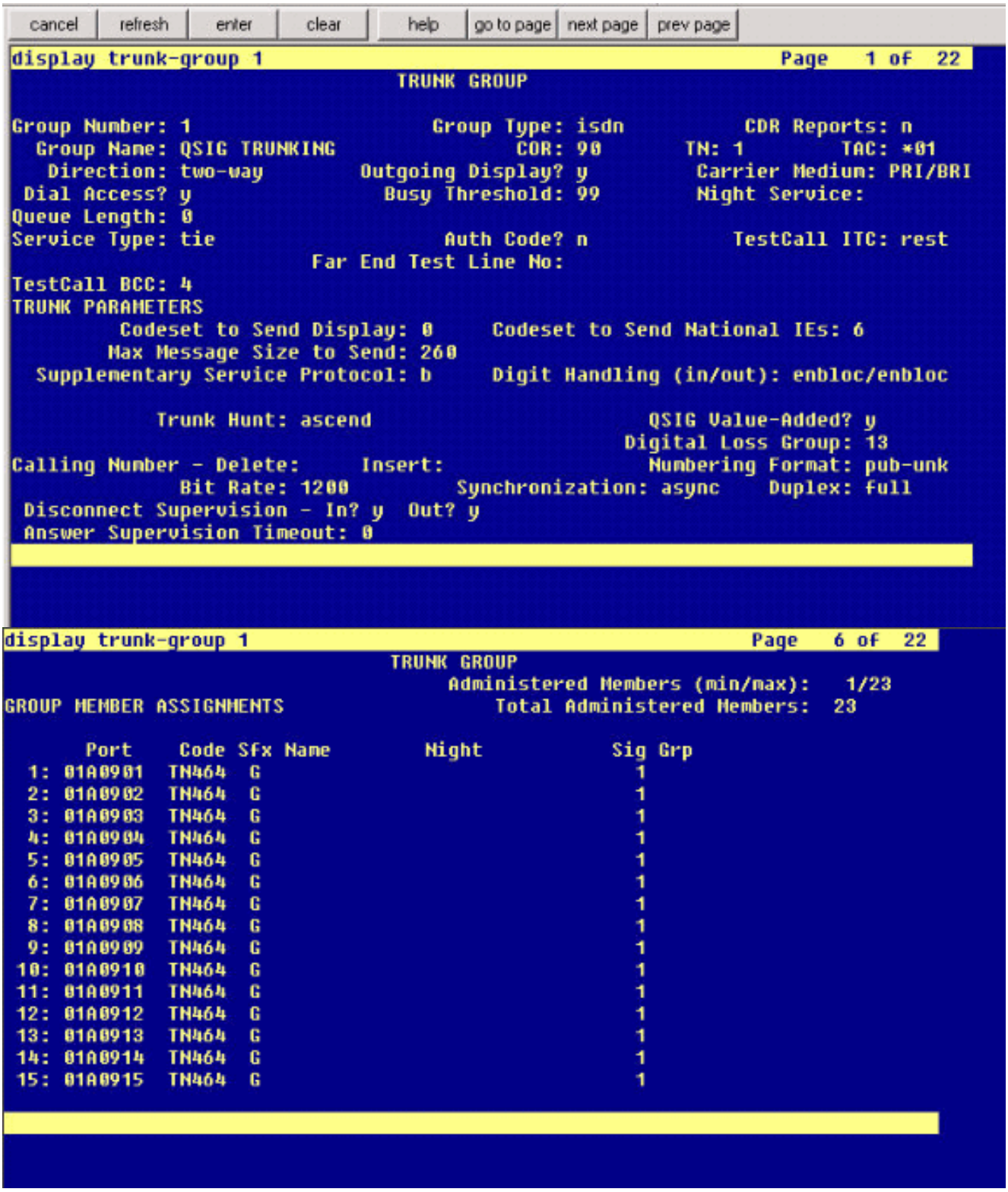
Clusterwide Parameters (Feature - Path Replacement)

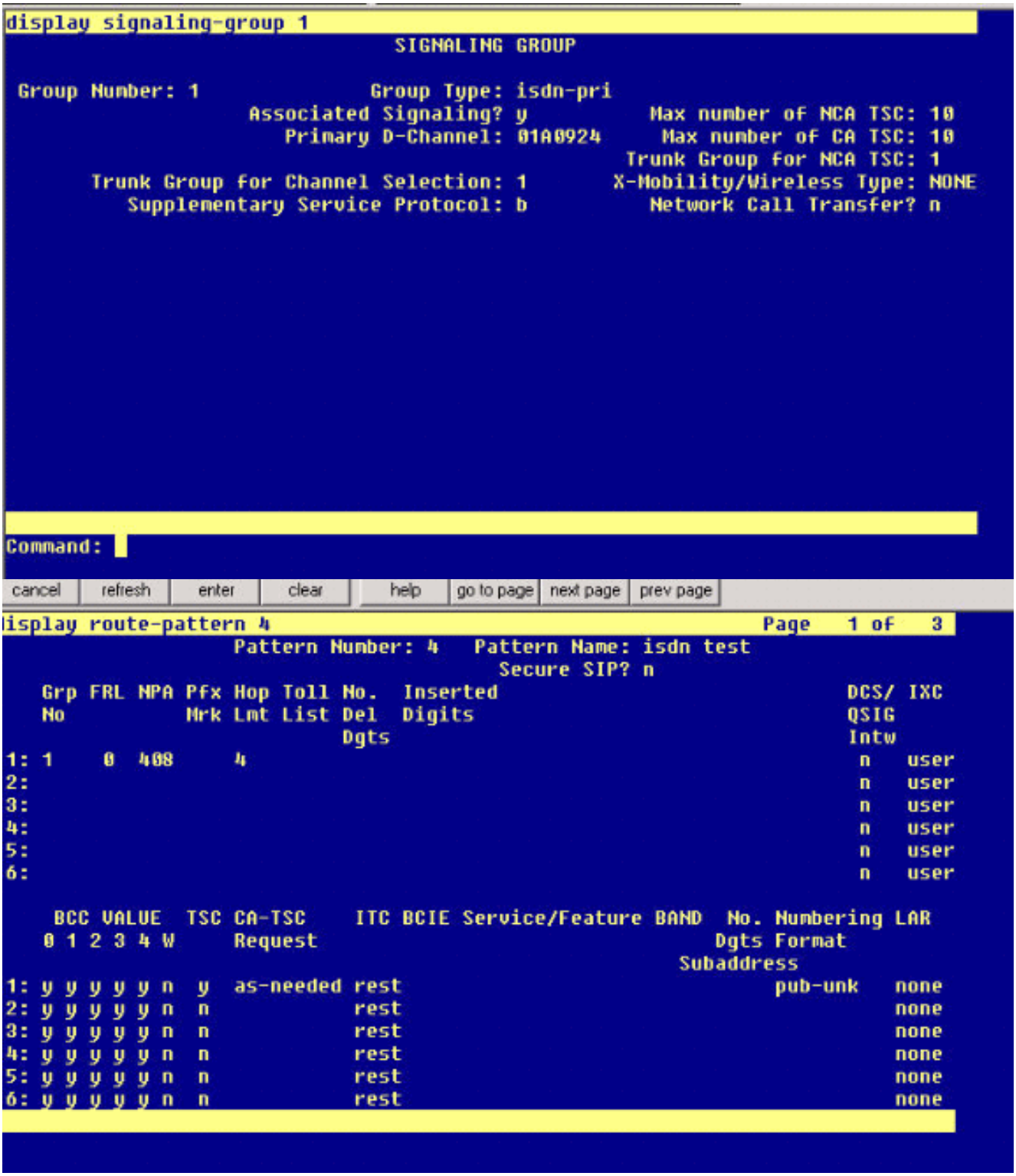
Parameter Name	Parameter Value	Suggested Value
Path Replacement Enabled*	True	False
Path Replacement on Tromboned Calls*	True	True
Start Path Replacement Minimum Delay Time (sec)*	5	0
Start Path Replacement Maximum Delay Time (sec)*	10	0
Path Replacement T1 Timer (sec)*	30	30
Path Replacement T2 Timer (sec)*	15	15

Start Path Replacement Minimum Delay Time (sec)*	5	0
Start Path Replacement Maximum Delay Time (sec)*	10	0
Path Replacement T1 Timer (sec)*	30	30
Path Replacement T2 Timer (sec)*	15	15
Path Replacement PINX Id	4444	
Path Replacement Calling Search Space	< None >	

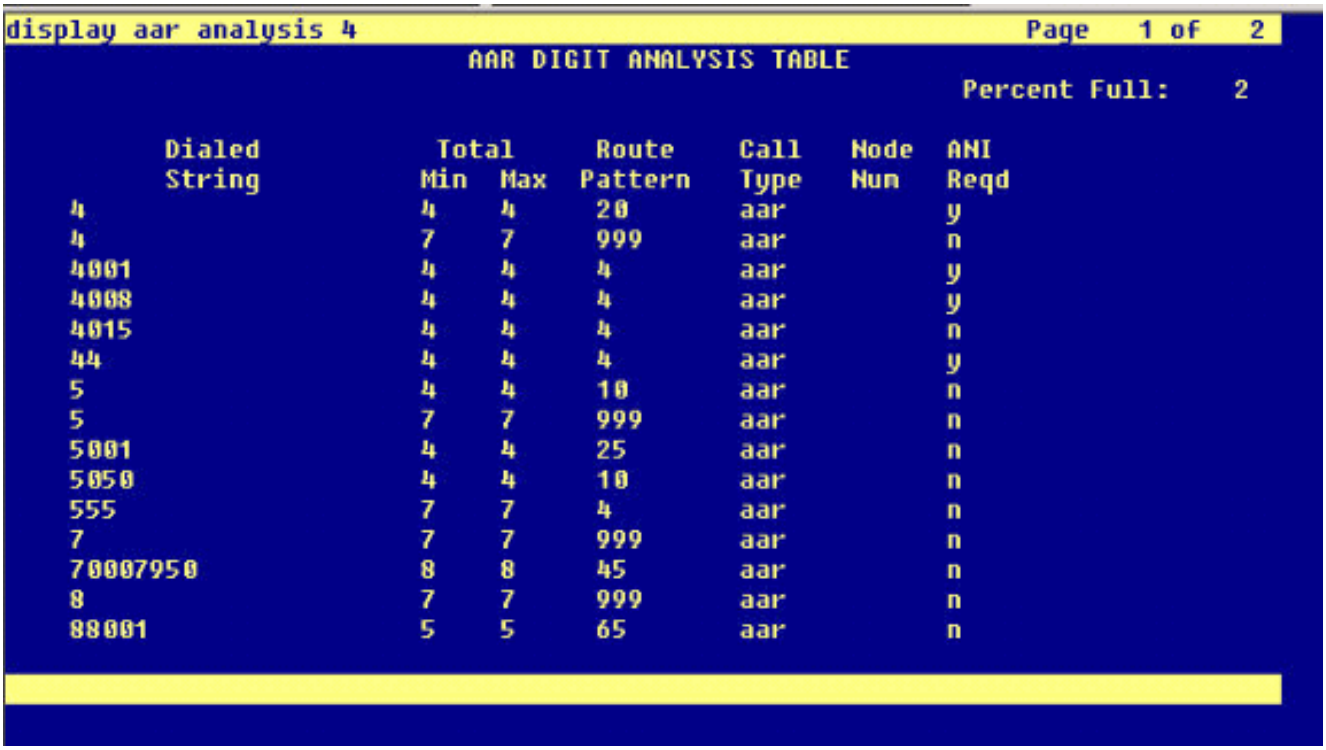
2. 新增Cisco 3745作為MGCP網關，並為Q.SIG PRI配置NM-HDV T-1模組。接下來的五個螢幕截圖與此配置有關：




cancel
refresh
enter
clear
help
go to page
next page
prev page
display trunk-group 1 Page 1 of 22
TRUNK GROUP
Group Number: 1 Group Type: isdn CDR Reports: n
Group Name: QSIG TRUNKING COR: 90 TN: 1 TAC: *01
Direction: two-way Outgoing Display? y Carrier Medium: PRI/BRI
Dial Access? y Busy Threshold: 99 Night Service:
Queue Length: 0
Service Type: tie Auth Code? n TestCall ITC: rest
Far End Test Line No:
TestCall BCC: 4
TRUNK PARAMETERS
Codeset to Send Display: 0 Codeset to Send National IEs: 6
Max Message Size to Send: 260
Supplementary Service Protocol: b Digit Handling (in/out): enbloc/enbloc
Trunk Hunt: ascend QSIG Value-Added? y
Digital Loss Group: 13
Calling Number - Delete: Insert: Numbering Format: pub-unk
Bit Rate: 1200 Synchronization: async Duplex: full
Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0
display trunk-group 1 Page 6 of 22
TRUNK GROUP
Administered Members (min/max): 1/23
GROUP MEMBER ASSIGNMENTS Total Administered Members: 23
Port Code Sfx Name Night Sig Grp
1: 01A0901 TN464 G 1
2: 01A0902 TN464 G 1
3: 01A0903 TN464 G 1
4: 01A0904 TN464 G 1
5: 01A0905 TN464 G 1
6: 01A0906 TN464 G 1
7: 01A0907 TN464 G 1
8: 01A0908 TN464 G 1
9: 01A0909 TN464 G 1
10: 01A0910 TN464 G 1
11: 01A0911 TN464 G 1
12: 01A0912 TN464 G 1
13: 01A0913 TN464 G 1
14: 01A0914 TN464 G 1
15: 01A0915 TN464 G 1

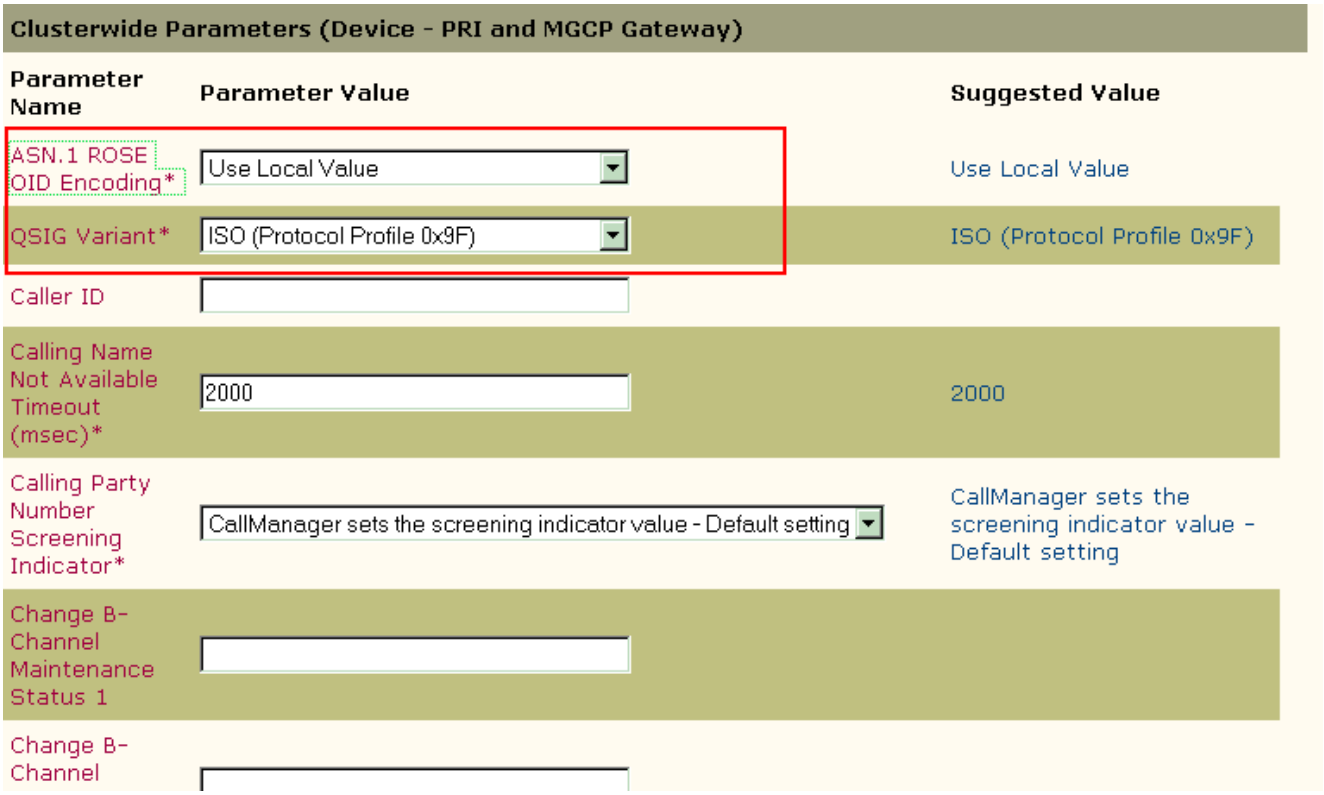


3. 最後一步是建立Cisco Call Manager代答組，以便為PBX提供路徑建議擴展。確保呼叫代答號碼也輸入到Path PINX Replacement ID Service引數中（請參見步驟# 1）。 此外，Avaya系統需要路由模式才能路由到代答組。



```
display aar analysis 4                                    Page   1 of   2
                        AAR DIGIT ANALYSIS TABLE
                                                          Percent Full:   2

      Dialed          Total      Route    Call    Node   ANI
      String         Min  Max   Pattern  Type    Num    Reqd
   4                  4    4     20       aar             y
   4                  7    7     999      aar             n
   4001               4    4     4        aar             y
   4008               4    4     4        aar             y
   4015               4    4     4        aar             n
   44                 4    4     4        aar             y
   5                  4    4     10       aar             n
   5                  7    7     999      aar             n
   5001               4    4     25       aar             n
   5050               4    4     10       aar             n
   555                7    7     4        aar             n
   7                  7    7     999      aar             n
   70007950           8    8     45       aar             n
   8                  7    7     999      aar             n
   88001              5    5     65       aar             n
```

注意：確保Cisco CallManager Service Parameters(Advanced)下的這兩個集群範圍引數（**裝置 — PRI和MGCP網關）與PBX中的Q.SIG配置匹配。**所有PBX中繼的配置必須與這些Cisco CallManager引數完全相同。**ASN.1 ROSE OID編碼**:此引數指定如何為遠端操作服務元素(ROSE)編碼呼叫對象ID(OID)。 除非思科支援工程師另有指示，否則將此引數設定為預設值。這是必填欄位，預設值為**使用本地值**。以下是此引數的有效值：**使用Local Value**，大多數電話系統都支援它，並且當Q.SIG Variant服務引數設定為ISO（協定配置檔案0x9F）時必須使用該值。**使用全域性值(ISO)**，僅當連線的PBX不支援使用本地值時使用。**使用全域性值(ECMA)，如果**Q.SIG變型服務引數設定為ECMA（協定配置檔案0x91），則必須使用全域性值。**Q.SIG變體**:此引數指定在為Q.SIG配置中繼時出站Q.SIG設施資訊元素中傳送的協定配置檔案。除非思科支援工程師另有指示，否則將此引數設定為預設值。這是必填欄位，預設值為**ISO（協定配置檔案0x9F）**。以下是此引數的可用值：**ECMA（協定配置檔案0x91），通常用於**ECMA PBX，並且只能使用協定配置檔案0x91。如果此服務引數設定為ECMA（協定配置檔案0x91），則必須將ASN.1 Rose OID Encoding服務引數設定為使用全域性值(ECMA)。**ISO(協定配置檔案0x9F)**，這是當前的ISO建議。如果此引數設定為ISO（協定配置檔案0x9F），則必須將ASN.1 Rose OID Encoding服務引數設定為Use Local Value。**警告：**使用集群間中繼時，Cisco CallManager不支援ECMA，在CallManager管理中的Trunk Configuration視窗中，Tunneled Protocol欄位設定為Q.SIG。如果將此服務引數設定為ECMA（協定配置檔案0x91），則所有集群間中繼都必須將Tunneled Protocol欄位設定為None。



Clusterwide Parameters (Device - PRI and MGCP Gateway)		
Parameter Name	Parameter Value	Suggested Value
ASN.1 ROSE OID Encoding*	Use Local Value	Use Local Value
QSIG Variant*	ISO (Protocol Profile 0x9F)	ISO (Protocol Profile 0x9F)
Caller ID		
Calling Name Not Available Timeout (msec)*	2000	2000
Calling Party Number Screening Indicator*	CallManager sets the screening indicator value - Default setting	CallManager sets the screening indicator value - Default setting
Change B-Channel Maintenance Status 1		
Change B-Channel		

思科3745配置

這是Cisco 3745 MGCP裝置上的**show version**和**show running-configuration**命令輸出。Cisco 3745上的控制器T1 1/0連線到Avaya S8700/G650 DS1 PRI卡。Q.SIG信令在Cisco 3745和Avaya S8700/G650之間的PRI鏈路上配置。

```
CCME_CUE_3745# sh vers
Cisco Internetwork Operating System Software
IOS (tm) 3700 Software (C3745-IS-M), Version 12.2(15)ZJ3, EARLY DEPLOYMENT RELEASE SOFTWARE
(fc2)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Thu 25-Sep-03 22:25 by eaarmas
Image text-base: 0x60008954, data-base: 0x61C2C000

ROM: System Bootstrap, Version 12.2(8r)T2, RELEASE SOFTWARE (fc1)
ROM: 3700 Software (C3745-IS-M), Version 12.2(15)ZJ3, EARLY DEPLOYMENT RELEASE SOFTWARE (fc2)

CCME_CUE_3745 uptime is 39 minutes
System returned to ROM by reload
System image file is "flash:c3745-is-mz.122-15.ZJ3.bin"

cisco 3745 (R7000) processor (revision 2.0) with 246784K/15360K bytes of memory.
Processor board ID JMX0814L3E2
R7000 CPU at 350Mhz, Implementation 39, Rev 3.3, 256KB L2, 2048KB L3 Cache
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
Primary Rate ISDN software, Version 1.1.
2 FastEthernet/IEEE 802.3 interface(s)
25 Serial network interface(s)
1 terminal line(s)
2 Channelized T1/PRI port(s)
1 ATM AIM(s)
```

```
2 Voice FXS interface(s)
2 Voice E & M interface(s)
1 cisco service engine(s)
DRAM configuration is 64 bits wide with parity disabled.
151K bytes of non-volatile configuration memory.
125184K bytes of ATA System CompactFlash (Read/Write)
Configuration register is 0x2102

CCME_CUE_3745# sh run
Building configuration...

Current configuration : 3291 bytes
!
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CCME_CUE_3745
!
logging queue-limit 100
!
voice-card 1
 dspfarm
!
voice-card 5
 dspfarm
!
ip subnet-zero
!
!
no ip domain lookup
!
isdn switch-type primary-qsig
!
no voice hpi capture buffer
no voice hpi capture destination
!
!
ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server 172.28.221.18
ccm-manager config
mta receive maximum-recipients 0
!
!
controller T1 1/0
 framing esf
 linecode b8zs
 pri-group timeslots 1-24 service mgcp
!
controller T1 1/1
 framing sf
 linecode ami
!
!
!
interface FastEthernet0/0
 description CCME-CUE-3745_to_cat3550
 no ip address
 duplex auto
 speed auto
!
interface FastEthernet0/0.1
```

```
 encapsulation dot1Q 99
!
interface FastEthernet0/0.2
 description NEW_S8700_G650
 encapsulation dot1Q 300
 ip address 172.28.221.49 255.255.255.240
 ip helper-address 172.28.221.19
 h323-gateway voip bind srcaddr 172.28.221.49
!
interface FastEthernet0/0.3
 description MODULAR_MESSAGING_SOLUTION
 encapsulation dot1Q 900
 ip address 172.28.221.129 255.255.255.240
 ip helper-address 172.28.221.19
!
interface FastEthernet0/0.4
 encapsulation dot1Q 301
 ip address 10.1.3.1 255.255.255.128
 ip helper-address 172.28.221.19
!
interface FastEthernet0/0.5
 encapsulation dot1Q 302
 ip address 10.1.3.129 255.255.255.128
 ip helper-address 172.28.221.19
!
interface FastEthernet0/0.6
 encapsulation dot1Q 90
 ip address 90.1.1.254 255.255.255.0
 ip helper-address 172.28.221.19
!
interface Serial0/0
 description CCME-CUE-3745_to_3600
 ip address 25.0.0.1 255.0.0.0
 clockrate 256000
 no fair-queue
!
interface Serial1/0:23
 no ip address
 no logging event link-status
 isdn switch-type primary-qsig
 isdn incoming-voice voice
 isdn bind-l3 ccm-manager
 isdn bchan-number-order ascending
 no cdp enable
!
interface Service-Engine2/0
 no ip address
 shutdown
!
router eigrp 100
 network 10.0.0.0
 network 25.0.0.0
 network 90.0.0.0
 network 172.28.0.0
 auto-summary
!
ip http server
ip classless
!
call rsvp-sync
!
voice-port 1/0:23
!
voice-port 4/0/0
```

```
!
voice-port 4/0/1
!
voice-port 4/1/0
!
voice-port 4/1/1
!
mgcp
mgcp call-agent 172.28.221.18 2427 service-type mgcp version 0.1
mgcp dtmf-relay voip codec all mode out-of-band
mgcp rtp unreachable timeout 1000 action notify
mgcp package-capability rtp-package
no mgcp package-capability res-package
mgcp package-capability sst-package
no mgcp timer receive-rtcp
mgcp sdp simple
mgcp fax t38 inhibit
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
!
!
dial-peer cor custom
!
dial-peer voice 1 pots
 application mgcpapp
 port 1/0:23
!
dial-peer voice 999410 pots
 application mgcpapp
 port 4/1/0
!
!
line con 0
 password cisco
 login
line 65
 flush-at-activation
 no activation-character
 no exec
 transport preferred none
 transport input all
line aux 0
line vty 0 4
 password cisco
 login
!
end
```

針對思科和Avaya IP-PBX系統之間的互操作性測試的功能

本節提供在Cisco Call Manager 4.1(2)平台和運行Communication Manager 2.0的Avaya S8700/G650之間通過Q.SIG PRI中繼所測試的功能的清單：

- 名稱和編號顯示（雙向）
- 來電轉駁
- 兩個系統之間的電話會議

整合Cisco Unity Voice Mail以支援Cisco和Avaya IP電話

此時，可以使用Q.SIG中繼在運行Avaya Communication Manager 2.0的Avaya S8700/G650與運行Call Manager版本4.1(2)的Cisco Call Manager平台之間進行呼叫，Cisco 3745 MGCP裝置提供與Avaya S8700/G650的物理ISDN PRI連線。可以在Cisco Call Manager平台上新增Cisco Unity伺服器以便為兩者提供語音郵件支援Cisco和Avaya IP電話。要啟用此功能，管理員需要在Cisco Call Manager平台上配置Cisco Unity。本節包含有關如何在Cisco Call Manager Administration management頁面上配置Cisco Unity的螢幕截圖的過程。

附註： 大多數配置是在「思科語音郵件埠嚮導」上執行的。

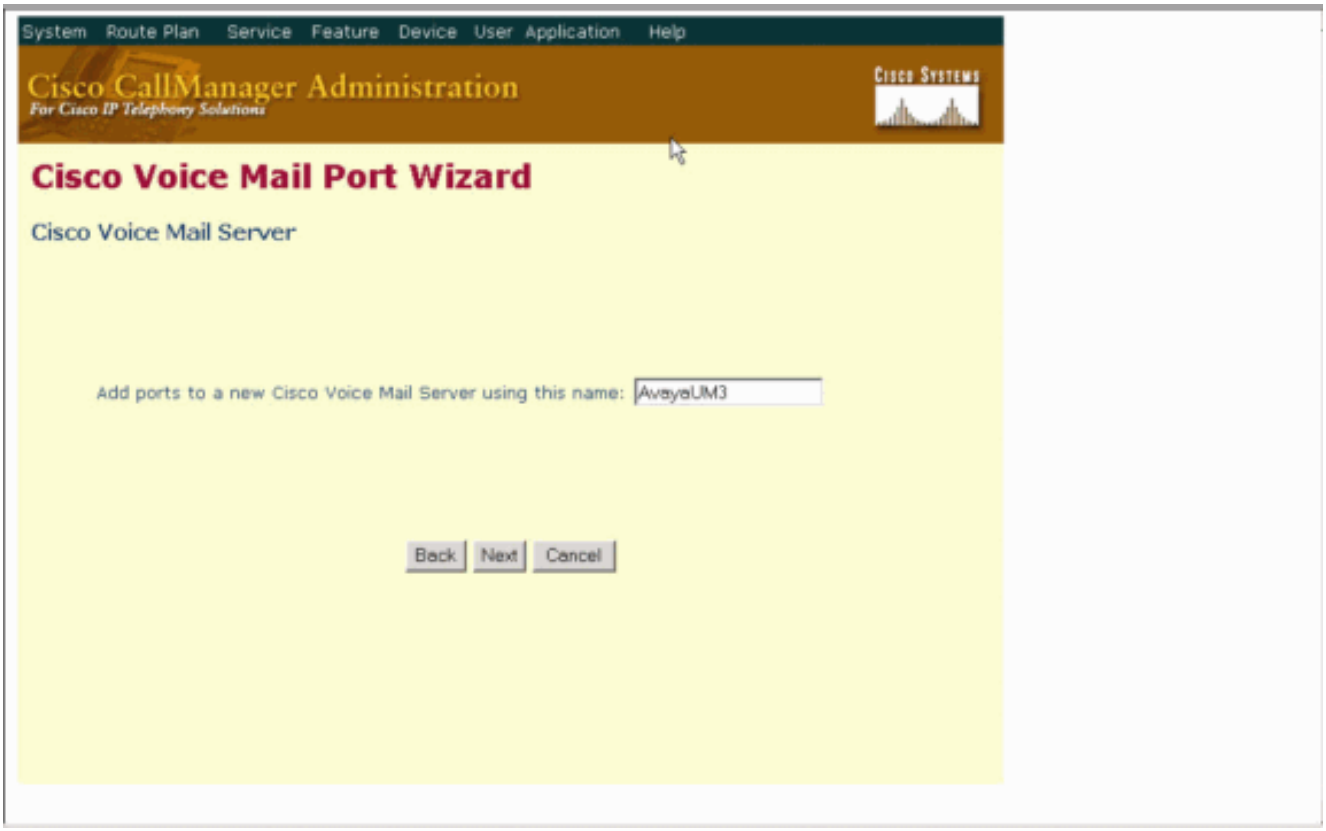
將Cisco Unity新增到Cisco Call Manager

請完成以下步驟：

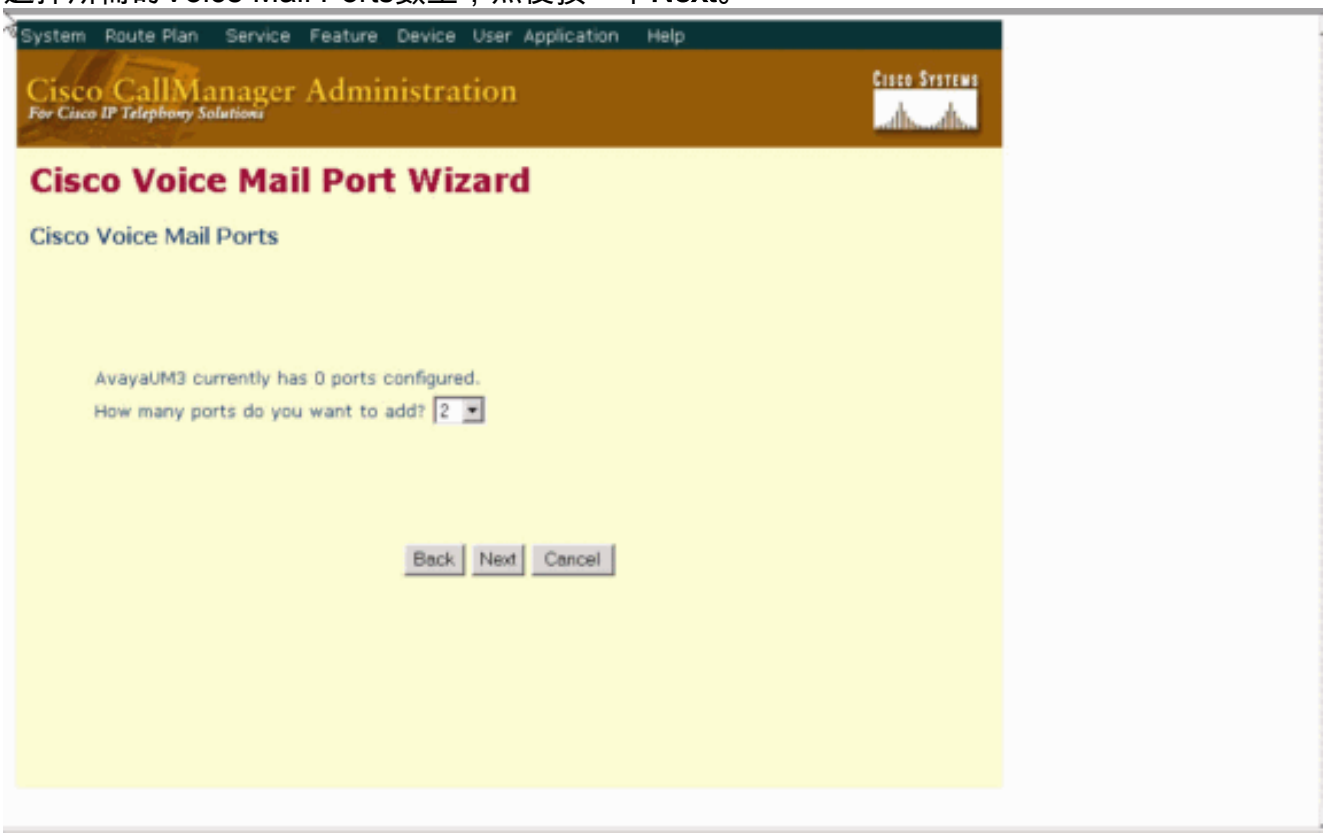
1. 在「功能」下，選擇**「語音郵件」>「語音郵件埠嚮導」**。選擇**Create a new voice mail server**並向其中新增埠，然後按一下**Next**。

```
display station 7007                                    Page   2 of   4
                                  STATION
FEATURE OPTIONS
          LWC Reception: spe              Auto Select Any Idle Appearance? n
         LWC Activation? y                      Coverage Msg Retrieval? y
  LWC Log External Calls? n                               Auto Answer: none
            CDR Privacy? n                          Data Restriction? n
   Redirect Notification? y                 Idle Appearance Preference? n
 Per Button Ring Control? n
   Bridged Call Alerting? n                   Restrict Last Appearance? y
  Active Station Ringing: continuous

       H.320 Conversion? y          Per Station CPN - Send Calling Number? y
      Service Link Mode: as-needed
       Multimedia Mode: enhanced                Audible Message Waiting? n
    MWI Served User Type: qsig-mwi            Display Client Redirection? n
                                             Select Last Used Appearance? n
                                               Coverage After Forwarding? s
                                                Multimedia Early Answer? n
                                             Direct IP-IP Audio Connections? y
 Emergency Location Ext: 7007                      IP Audio Hairpinning? y
```

2. 輸入思科語音郵件伺服器名稱（例如AvayaUM3），然後點選**下一步**。



3. 選擇所需的Voice Mail Ports數量，然後按一下**Next**。



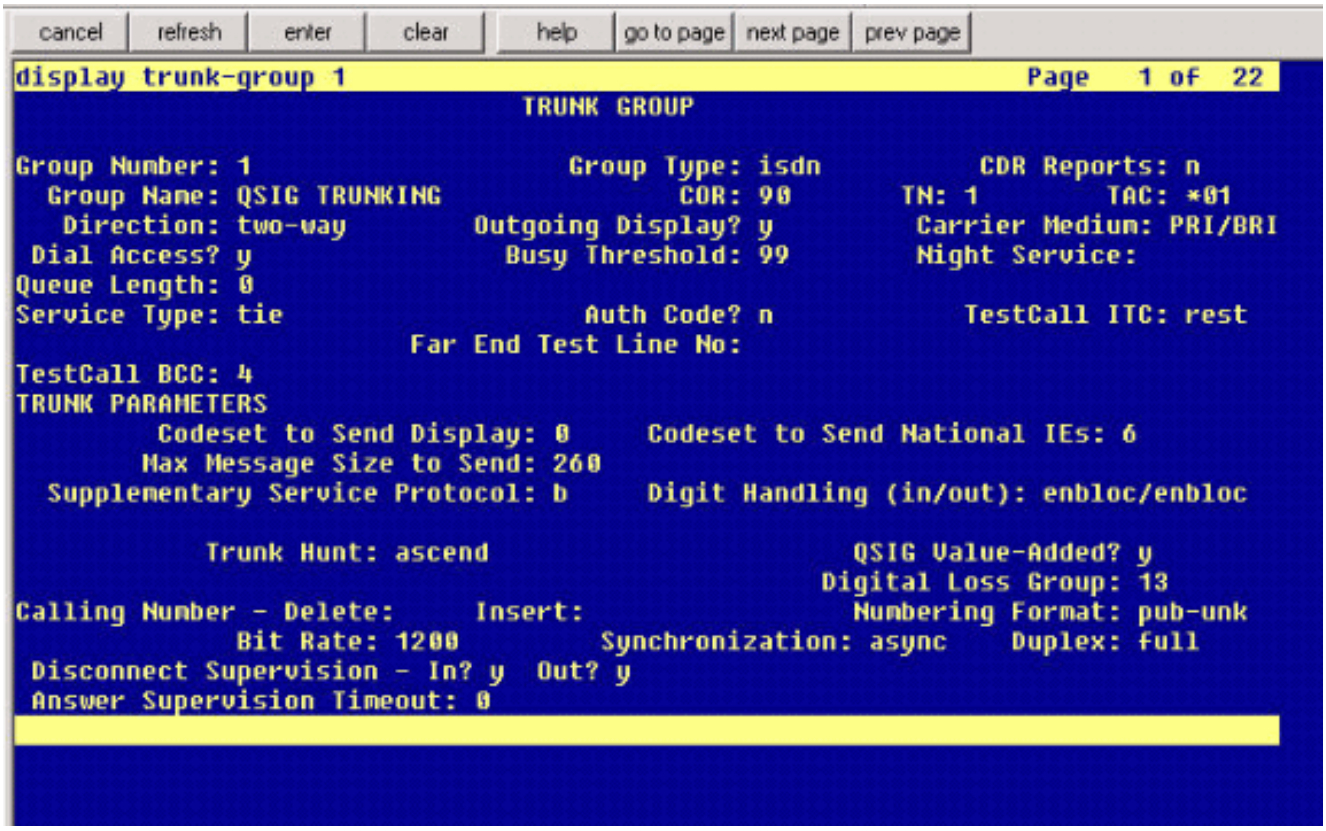
4. 輸入語音郵件埠的說明和裝置池。在示例配置中，輸入Avaya VMailPorts作為說明，輸入Default作為裝置池。

```
display trunk-group 1                                        Page   2 of  22
TRUNK FEATURES
         ACA Assignment? n           Measured: internal  Wideband Support? n
                                Internal Alert? n        Maintenance Tests? y
                              Data Restriction? n     NCA-TSC Trunk Member: 10
                                    Send Name: y      Send Calling Number: y
           Used for DCS? n            Hop Dgt? y
  Suppress # Outpulsing? n    Numbering Format: public
 Outgoing Channel ID Encoding: exclusive     UUI IE Treatment: service-provider

                                                 Replace Restricted Numbers? n
                                                Replace Unavailable Numbers? n
                                          Send Called/Busy/Connected Number: y

            Send UUI IE? y
              Send UCID? y
 Send Codeset 6/7 LAI IE? y                        Ds1 Echo Cancellation? n

 Path Replacement with Retention? y

                    SBS? n  Network (Japan) Needs Connect Before Disconnect? y
```

5. 輸入Beginning Directory Number（如4406）和Display（如Voice Mail），然後按一下**Next**。

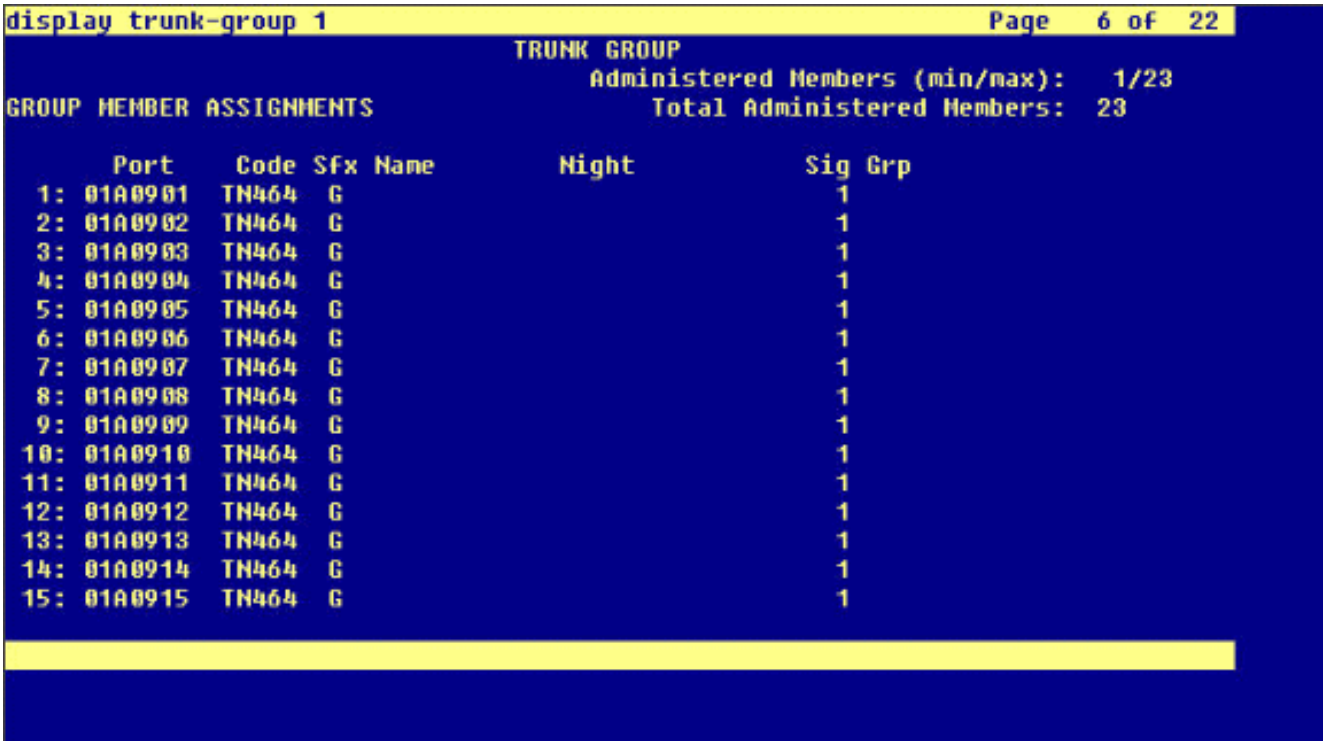
```
cancel | refresh | enter | clear | help | go to page | next page | prev page
display ds1 01A09                                            Page   1 of   2
                              DS1 CIRCUIT PACK

           Location: 01A09                          Name: QSIG
           Bit Rate: 1.544                   Line Coding: b8zs
   Line Compensation: 1                     Framing Mode: esf
      Signaling Mode: isdn-pri
             Connect: pbx                       Interface: peer-master
   TN-C7 Long Timers? n                   Peer Protocol: Q-SIG
Interworking Message: PROGress                      Side: a
Interface Companding: mulaw                          CRC? n
           Idle Code: 11111111
                           DCP/Analog Bearer Capability: 3.1kHz




     Slip Detection? n                  Near-end CSU Type: other

   Echo Cancellation? n
```

6. 下一個螢幕詢問，「Do you want to add these directory numbers to a Line Group？（是否要將這些目錄號碼新增到線路組中？）」 選擇**Yes**。將目錄號碼新增到新的線路組，然後按一下**下一步**。

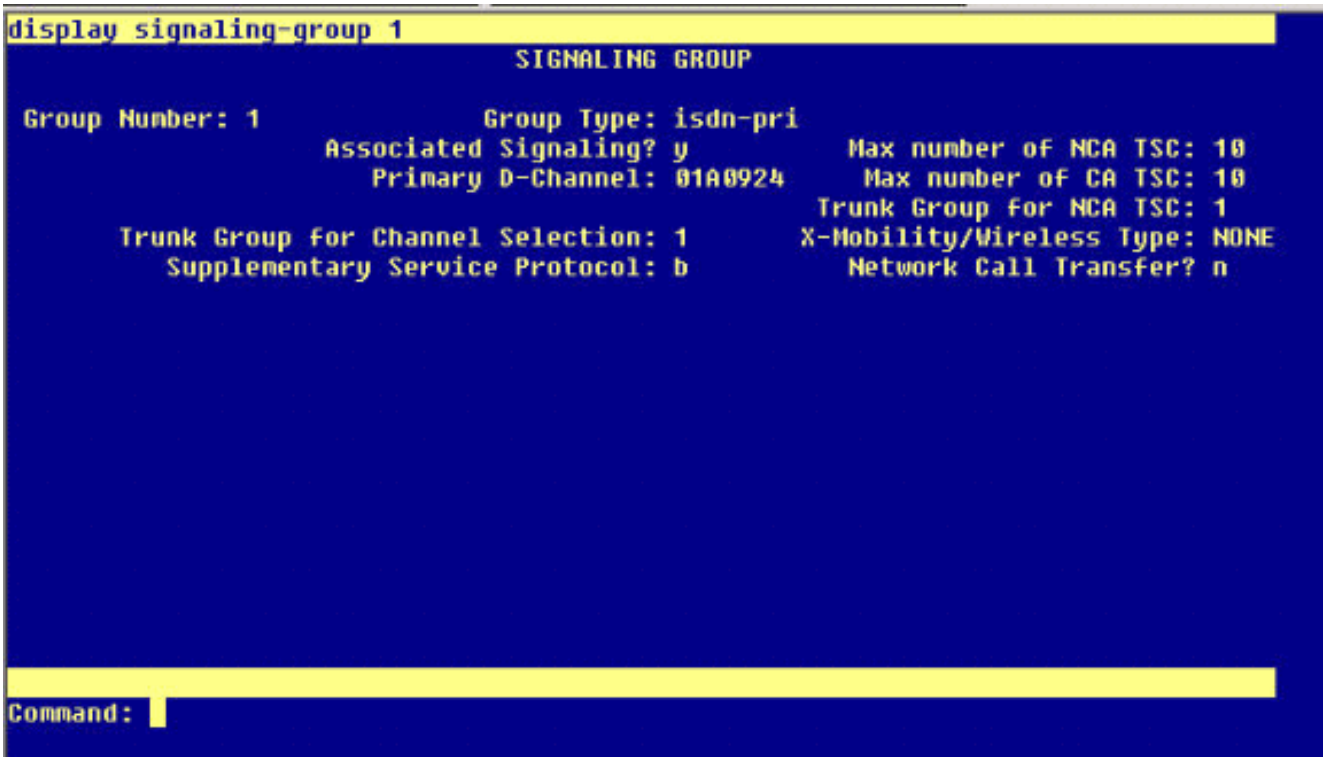


7. 輸入與之前輸入的語音郵件伺服器匹配的線路組名稱，例如AvayaUM3。

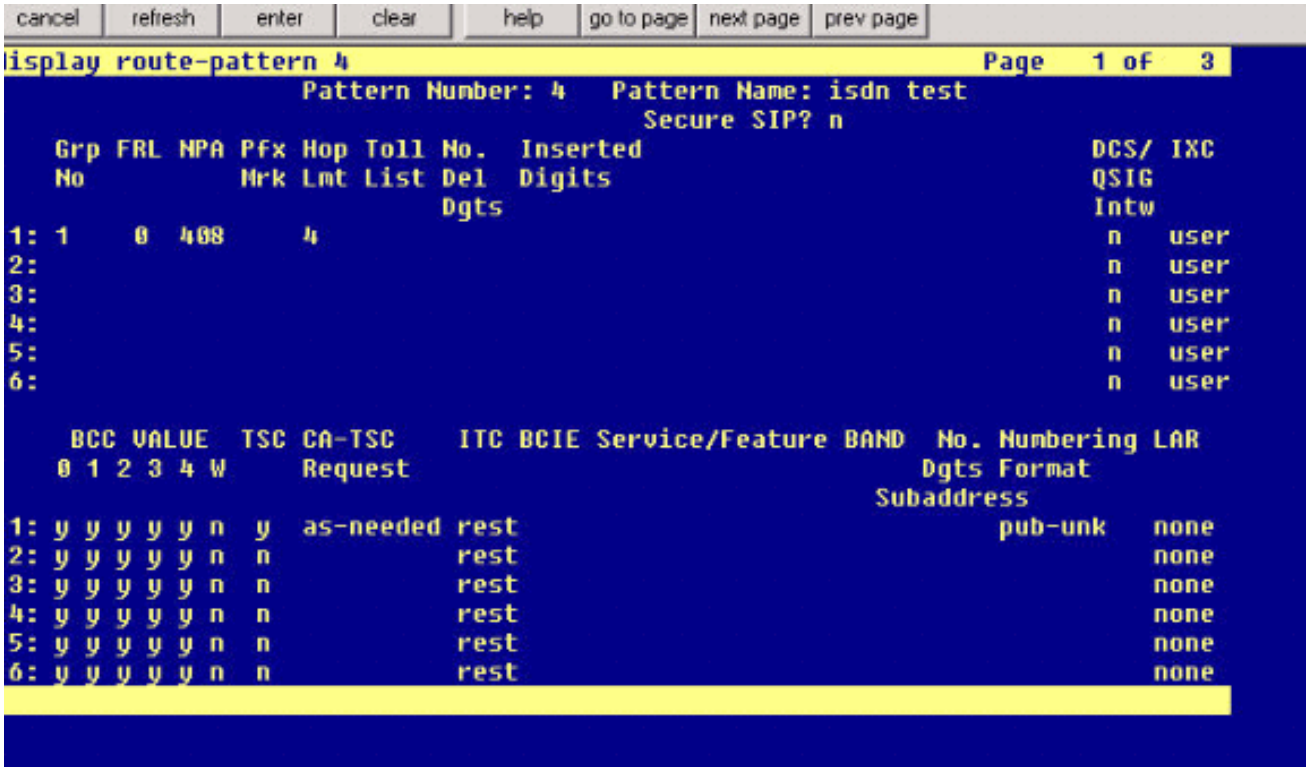
8. 下一個畫面會顯示到目前為止輸入的組態。如果配置沒有更改，請按一下**Finish**。



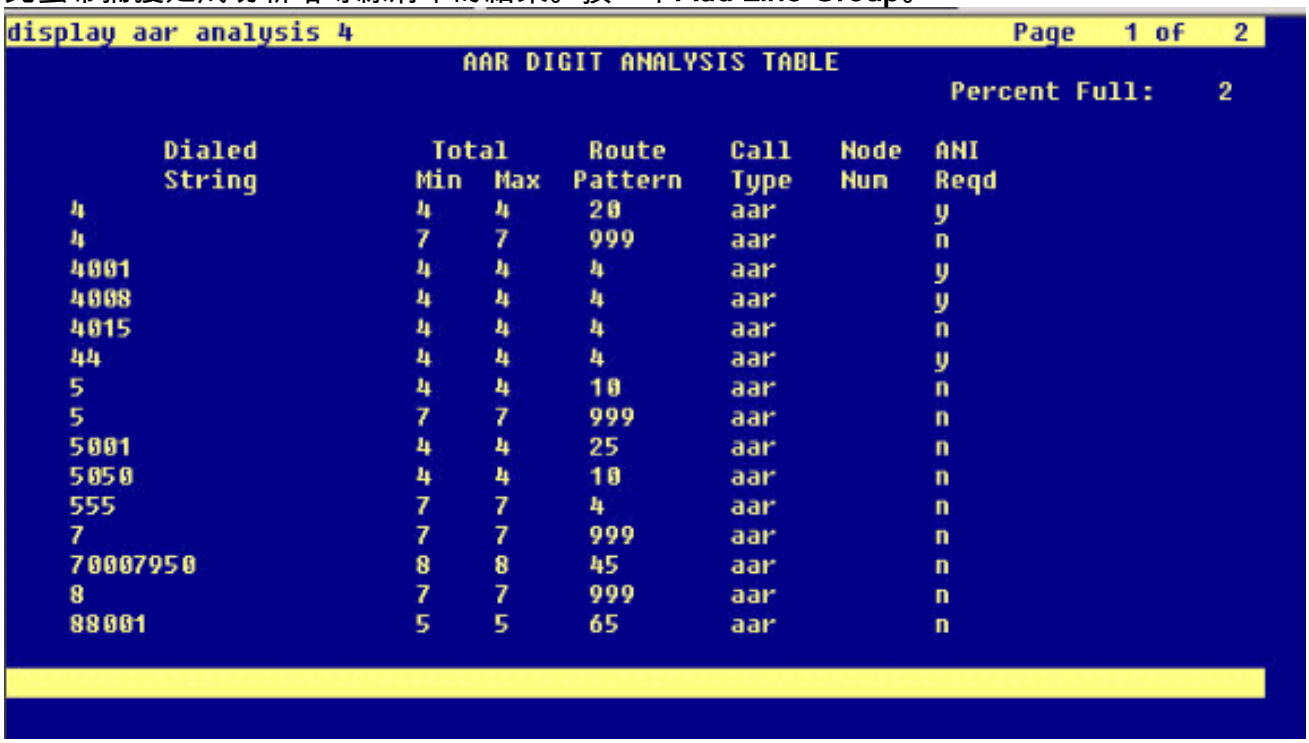
9. 在Hunt List Administration網頁上按一下**Add a New Hunt List**。



10. 輸入尋線清單名稱和說明，例如Avaya VMailHL。此外，為Cisco Call Manager組選擇**Default**。



11. 此螢幕捕獲是成功新增尋線清單的結果。按一下Add Line Group。

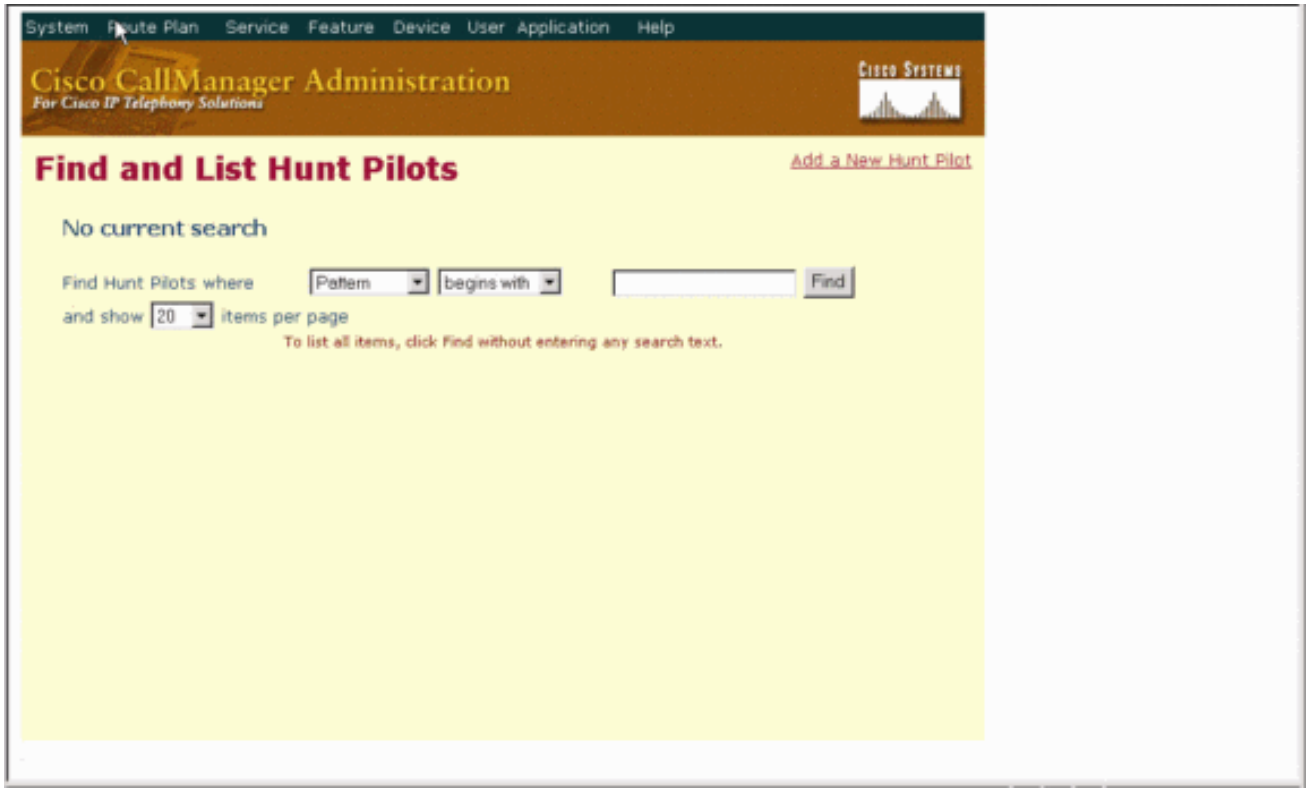


12. 選擇以前配置的線路組。在本例中，它是AvayaUM3。

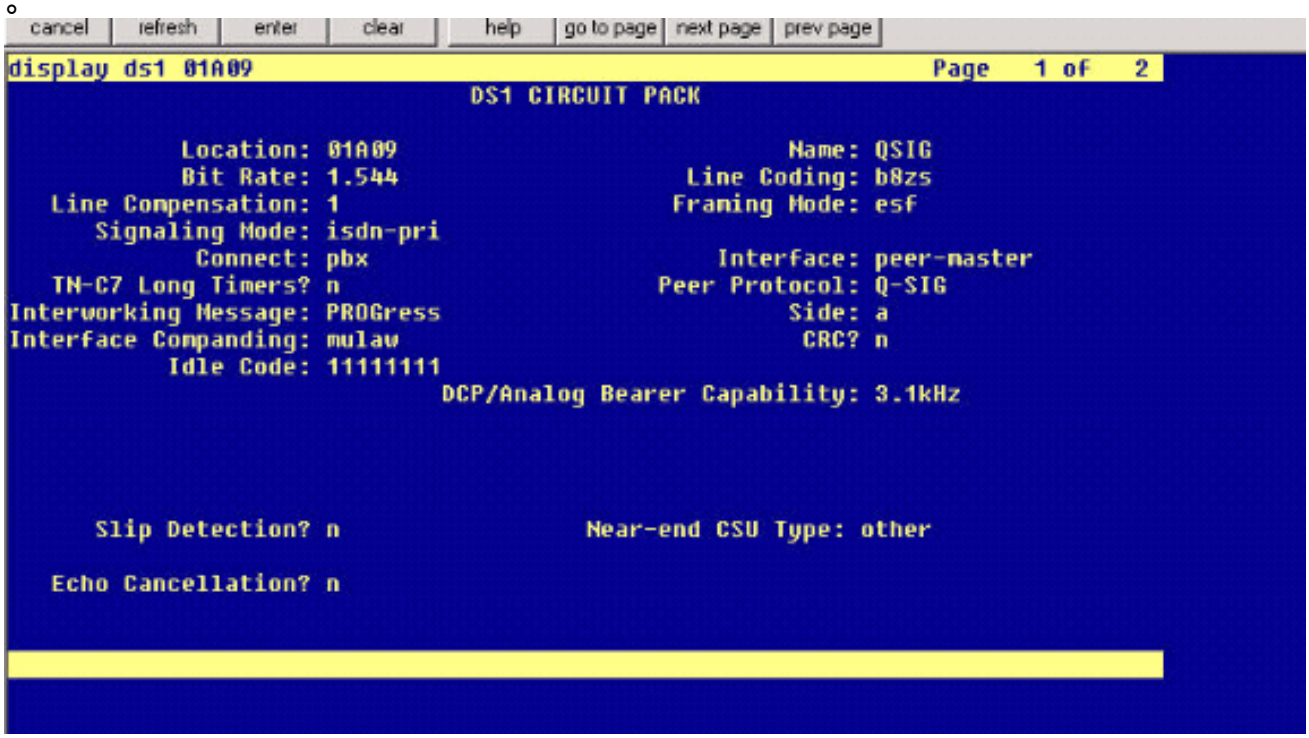
```
display station 7007                                    Page   2 of   4
                                    STATION
FEATURE OPTIONS
          LWC Reception: spe              Auto Select Any Idle Appearance? n
         LWC Activation? y                        Coverage Msg Retrieval? y
  LWC Log External Calls? n                                 Auto Answer: none
            CDR Privacy? n                              Data Restriction? n
   Redirect Notification? y                   Idle Appearance Preference? n
 Per Button Ring Control? n
   Bridged Call Alerting? n                     Restrict Last Appearance? y
  Active Station Ringing: continuous

       H.320 Conversion? y          Per Station CPN - Send Calling Number? y
      Service Link Mode: as-needed
        Multimedia Mode: enhanced                 Audible Message Waiting? n
    MWI Served User Type: qsig-mwi              Display Client Redirection? n
                                               Select Last Used Appearance? n
                                                 Coverage After Forwarding? s
                                                   Multimedia Early Answer? n
                                               Direct IP-IP Audio Connections? y
 Emergency Location Ext: 7007                        IP Audio Hairpinning? y
```

13. 下一個螢幕截圖顯示了成功插入線路組的結果。

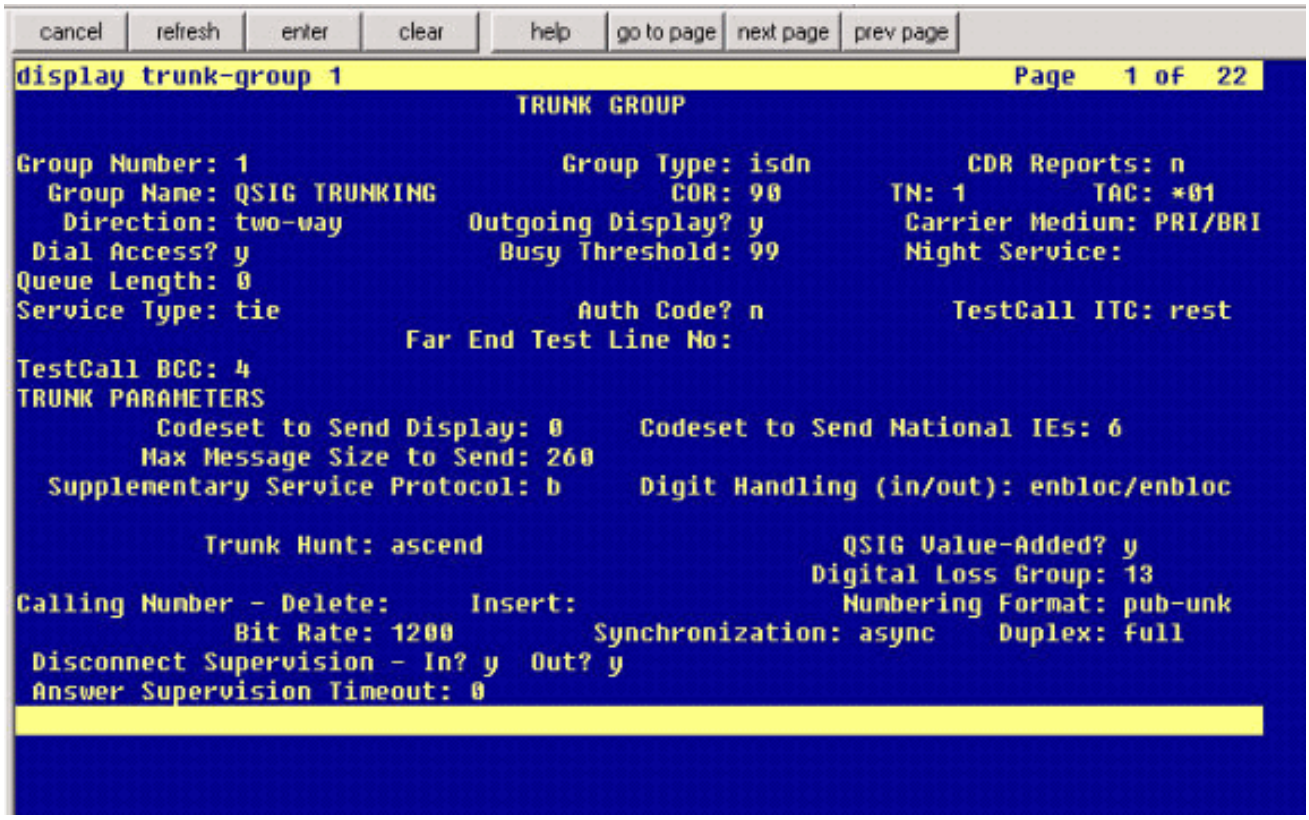
14. 轉至**Route Plan > Route/Hunt > Hunt Pilot**。從出現結果的Hunt Pilot螢幕中按一下**Add a New Hunt Pilot**。



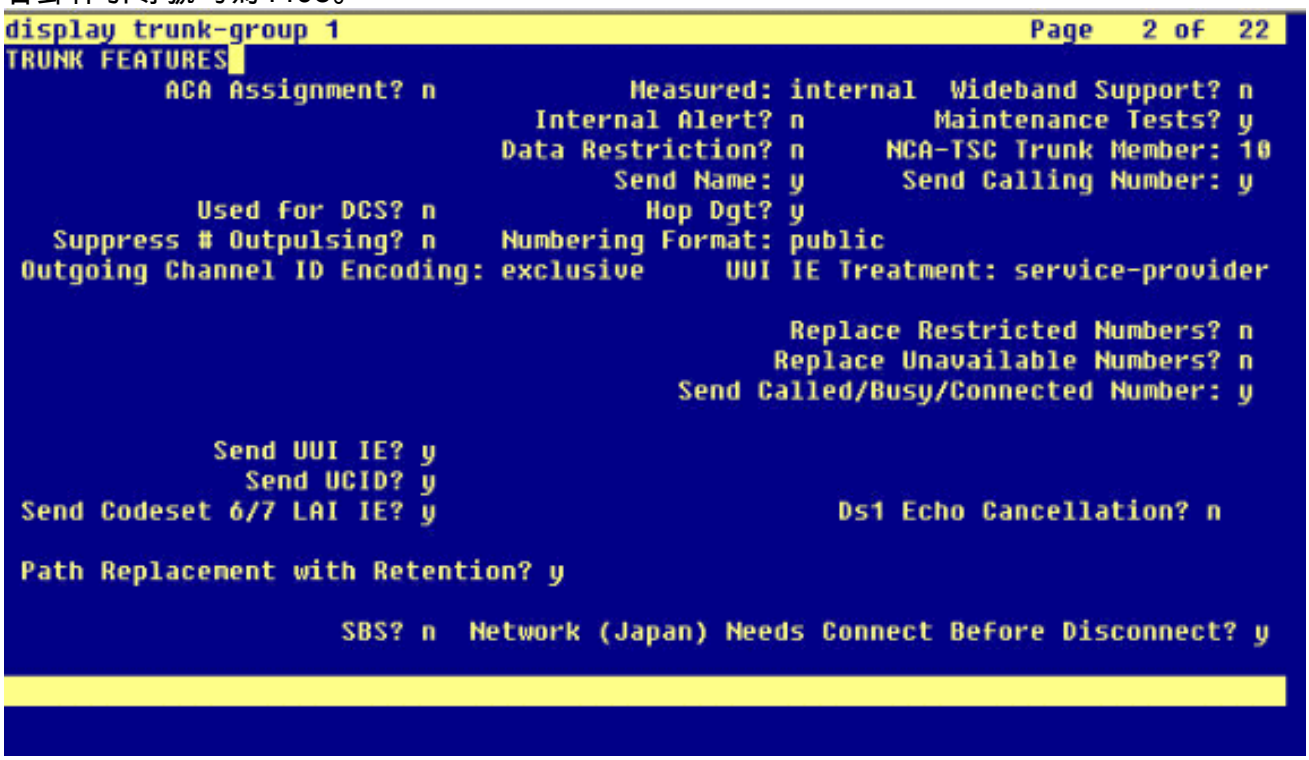
15. 輸入尋線引導（例如4408），然後選擇尋線清單（例如Avaya VMail HL），然後按一下**插入**。



16. 轉到**功能>語音郵件>語音郵件引導**，然後在出現結果的螢幕上按一下**新增新語音郵件引導**。



17. 輸入與之前配置的尋線引導號碼匹配的語音郵件引導號碼。在這種情況下，尋線引導號和語音郵件引導號均為4408。



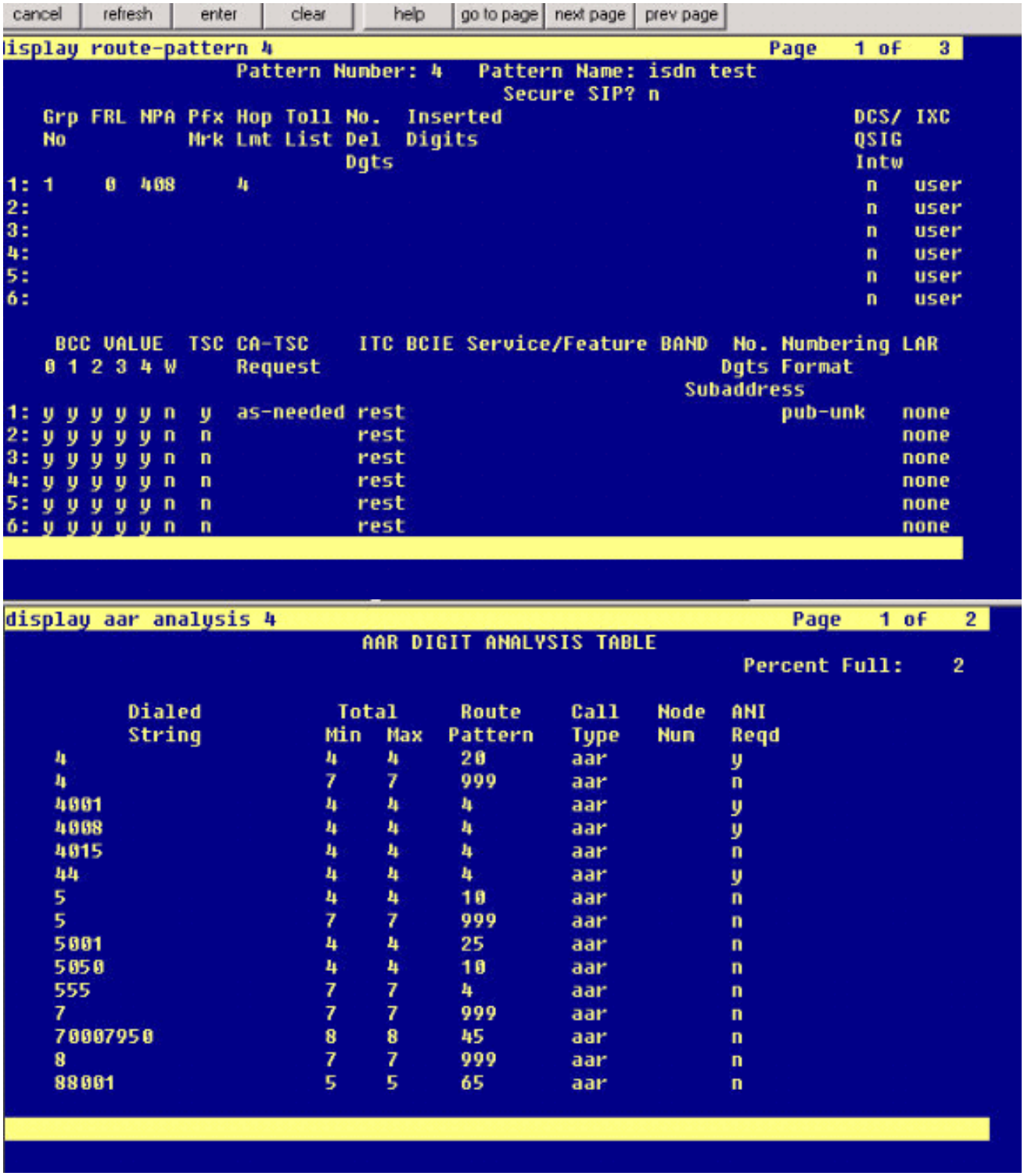
18. 轉至**功能>語音郵件>語音郵件配置檔案**，然後按一下**新增新語音郵件配置檔案**。

```
display trunk-group 1                                    Page   6 of  22
                                TRUNK GROUP
                                     Administered Members (min/max):   1/23
GROUP MEMBER ASSIGNMENTS                  Total Administered Members:  23

      Port    Code Sfx Name        Night           Sig Grp
  1: 01A0901  TN464  G                              1
  2: 01A0902  TN464  G                              1
  3: 01A0903  TN464  G                              1
  4: 01A0904  TN464  G                              1
  5: 01A0905  TN464  G                              1
  6: 01A0906  TN464  G                              1
  7: 01A0907  TN464  G                              1
  8: 01A0908  TN464  G                              1
  9: 01A0909  TN464  G                              1
 10: 01A0910  TN464  G                              1
 11: 01A0911  TN464  G                              1
 12: 01A0912  TN464  G                              1
 13: 01A0913  TN464  G                              1
 14: 01A0914  TN464  G                              1
 15: 01A0915  TN464  G                              1
```

19. 輸入語音郵件配置檔名稱和說明（如AvayaVMailProfile），然後在步驟17中選擇語音郵件引導號。在這種情況下，語音郵件引導號為4408。

```
display signaling-group 1
                              SIGNALING GROUP

 Group Number: 1                Group Type: isdn-pri
                   Associated Signaling? y          Max number of NCA TSC: 10
                      Primary D-Channel: 01A0924     Max number of CA TSC: 10
                                                   Trunk Group for NCA TSC: 1
       Trunk Group for Channel Selection: 1       X-Mobility/Wireless Type: NONE
          Supplementary Service Protocol: b         Network Call Transfer? n

Command:
```

20. 按一下**Features > Voice Mail > Message Waiting Indicator > Add a New Message Waiting Number**以新增Message Waiting Indicator(MWI)On/Off號碼。此處包含兩個消息等待指示器開/關號的螢幕截圖。



Cisco Unity Voice Mail功能已測試

以下是經過Avaya IP電話測試的Cisco Unity Voice Mail功能清單，這些電話用於通過Cisco Call Manager 4.1(2)平台與運行Communication Manager 2.0的Avaya S8700/G650之間的Q.SIG PRI中繼訪問Cisco Unity Voice Mail:

- 內部問候語
- 忙線問候語
- MWI
- 輕鬆訪問消息

相關資訊

- 語音技術支援
- 語音和整合通訊產品支援
- Cisco IP電話故障排除
- 技術支援與文件 - Cisco Systems