



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring *Callmedia* and Avaya Communication Manager 5.0 – Issue 1.0

Abstract

These Application Notes describe the steps to configure *Callmedia*, Avaya Communication Manager, and Avaya Application Enablement Services to allow the *Callmedia* contact center software to be used with Avaya Communication Manager.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

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1. Introduction

The *Callmedia* program suite together with Avaya Communication Manager serves as a contact center. The *Callmedia* server programs consist of the following individual components:

- *Callmedia* Server
- *Callmedia* Enterprise
- *Callmedia* Scheduler
- *Callmedia* Log Viewer
- *Callmedia* Dialer

The *Callmedia* Dialer was not tested, and is not covered by these Application Notes.

In addition to the server components, the *Callmedia* Desktop runs on a desktop PC, enabling contact center agents to accept incoming calls or control outbound calling campaigns.

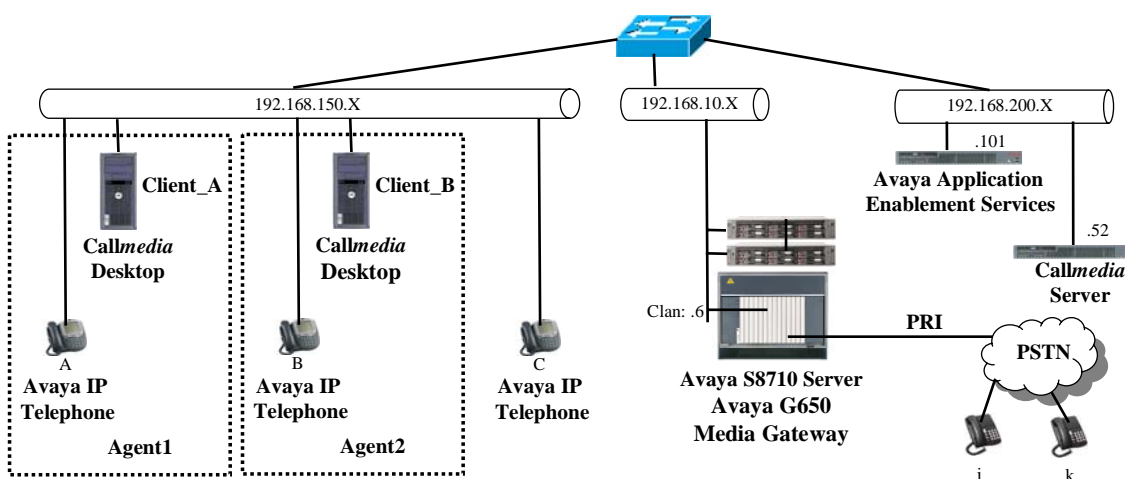


Figure 1: Test Configuration

The following table contains additional information about each of the telephones contained in the above diagram. Note that the entire number is not shown, for security reasons.

Phone	Agent	Extn.	PSTN.
A	Agent1	10113	
B	Agent2	10114	
C	Overflow	10126	
j			069 xxxx 6645
k			069 xxxx 6630
VDN		11037	069 9073 xxxx 11037

Table 1: Extensions Used for Testing

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Software Component	Version
Avaya Communication Manager Avaya S8710 Server	5.0(R015x.00.0.825.4)
Avaya TN2312BP IP Server Interface	HW11 / FW042
Avaya TN799DP Control LAN Interface	HW01 / FW026
Avaya TN2302AP Media Processor Interface	HW20 / FW117
Avaya Application Enablement Services	4.1(R4-1-0-31-2-0)
Avaya 4610SW IP Telephone	2.887
Callmedia Enterprise	2.3.20.45
Callmedia Server	3.6.1.4082
CMLucent.dll	4.0.1.319
Callmedia Scheduler	2.7.20.618
Callmedia Log	2.6.1.199
Callmedia Client	4.3.7.336
Microsoft Windows XP Pro (clients)	SP3
Microsoft Windows 2003 SP 2 (Callmedia server)	5.2.3790
Microsoft Internet Explorer SP 2	6.0.3790.3959
Microsoft .NET Framework	2.0.50727.42
Microsoft SQL Server 2005 Express Edition	9.00.3042.00
Microsoft SQL Server Management Studio Express	9.00.3042.00

Table 2: Equipment and Software Validated

Note that the Microsoft .NET package was installed as a requirement for the Microsoft SQL Server 2005 Express Edition, and is not otherwise required by the *Callmedia* server components. If another SQL package is chosen instead, the .NET package may not be required.

The server PC which was used for testing is an IBM X-Series 306M with an Intel Pentium 4 CPU with 1GM of RAM running at 3GHz.

3. Configure System Components

The configuration sequence described in this section includes the following steps:

1. Configure Avaya Communication Manager
2. Configure Avaya Application Enablement Services
3. Install the AES TSAPI Client on the *Callmedia* Server
4. Configure SQL databases used by *Callmedia*

5. Configure Callmedia Server components
6. Install Callmedia Client on agent desktop PCs

3.1. Configure Avaya Communication Manager

The Avaya Communication Manager configuration was performed using the System Access Terminal (SAT).

3.1.1. Verify system-parameters customer-options

Use the **display system-parameters customer-options** command to verify that Avaya Communication Manager is licensed to meet the minimum requirements to interoperate with the Callmedia. Those items shown in bold indicate required values or minimum capacity requirements. If these are not met in the configuration, please contact an Avaya representative for further assistance.

Verify that the parameters are set as shown in the following table:

Parameter	Usage
Maximum Concurrently Registered IP Stations (p.2)	This parameter must be large enough to support the number of IP stations to be attached.
Enhanced EC500? (p.4)	This parameter must be set to “y”.
ARS/AAR Dialing without FAC? (p.3)	This parameter must be set to “y”.
Extended Cvg/Fwd Admin? (p.4)	This parameter must be set to “y”.
IP Trunks? (p.4)	This parameter must be set to “y”.
Private Netorking? (p.5)	This parameter must be set to “y”.
Tenant Partitioning? (p.5)	This parameter must be set to “y”.

Table 3: System-Parameters Customer-Options Parameters

display system-parameters customer-options		Page 2 of 10
OPTIONAL FEATURES		
IP PORT CAPACITIES		USED
Maximum Administered H.323 Trunks: 0		0
Maximum Concurrently Registered IP Stations: 12		0
Maximum Administered Remote Office Trunks: 0		0
Maximum Concurrently Registered Remote Office Stations: 0		0
Maximum Concurrently Registered IP eCons: 0		0
Max Concur Registered Unauthenticated H.323 Stations: 0		0
Maximum Video Capable H.323 Stations: 0		0
Maximum Video Capable IP Softphones: 0		0
Maximum Administered SIP Trunks: 10		0
Maximum Administered Ad-hoc Video Conferencing Ports: 0		0
Maximum Number of DS1 Boards with Echo Cancellation: 0		0
Maximum TN2501 VAL Boards: 10		0
Maximum Media Gateway VAL Sources: 0		0
Maximum TN2602 Boards with 80 VoIP Channels: 0		0
Maximum TN2602 Boards with 320 VoIP Channels: 0		0
Maximum Number of Expanded Meet-me Conference Ports: 0		0

Figure 2: CM System-Parameters Customers-Options Form

3.1.2. Set system-parameters features

Use the **change system-parameters features** command to set the parameters as shown in the following table:

Parameter	Usage
Trunk-to-Trunk Transfer (p.1)	Set this value to “all”.
Station Tone Forward Disconnect (p.10)	Set this value to “silence”.
Call Classification After Answer Supervision? (p.13)	Set this value to “y”.
Two-Digit Aux Work Reason Codes? (p.14)	Set this value to “y”.

Table 4: System-Parameters Features Parameters

```
change system-parameters features                                     Page 1 of 17
      FEATURE-RELATED SYSTEM PARAMETERS
      Self Station Display Enabled? n
      Trunk-to-Trunk Transfer: all
Automatic Callback - No Answer Timeout Interval (rings): 3
      Call Park Timeout Interval (minutes): 10
      Off-Premises Tone Detect Timeout Interval (seconds): 20
      AAR/ARS Dial Tone Required? y
      Music/Tone on Hold: none
      Music (or Silence) on Transferred Trunk Calls? no
      DID/Tie/ISDN/SIP Intercept Treatment: attd
Internal Auto-Answer of Attd-Extended/Transferred Calls: transferred
      Automatic Circuit Assurance (ACA) Enabled? n

Abbreviated Dial Programming by Assigned Lists? n
Auto Abbreviated/Delayed Transition Interval (rings): 2
      Protocol for Caller ID Analog Terminals: Bellcore
Display Calling Number for Room to Room Caller ID Calls? n
```

Figure 3: CM System-Parameters Features Form, Page 1

```
change system-parameters features                                     Page 10 of 17
      FEATURE-RELATED SYSTEM PARAMETERS

      Pull Transfer: n          Update Transferred Ring Pattern? n
      Outpulse Without Tone? y    Wait Answer Supervision Timer? n
      Misoperation Alerting? n      Repetitive Call Waiting Tone? n
      Allow Conference via Flash? y
      Vector Disconnect Timer (min): Network Feedback During Tone Detection? y
      Hear Zip Tone Following VOA? y  System Updates Time On Station Displays? n

      Station Tone Forward Disconnect: silence
      Level Of Tone Detection: precise
      Charge Display Update Frequency (seconds): 30
      Date Format on Terminals: dd/mm/yy
      Onhook Dialing on Terminals? y

ITALIAN DCS PROTOCOL
      Italian Protocol Enabled? n
```

Figure 4: CM System-Parameters Features Form, Page 10

change system-parameters features	Page 13 of 17
FEATURE-RELATED SYSTEM PARAMETERS	
CALL CENTER MISCELLANEOUS	
Clear Callr-info: next-call	
Allow Ringer-off with Auto-Answer? n	
Reporting for PC Non-Predictive Calls? n	
ASAI	
Copy ASAI UII During Conference/Transfer? n	
Call Classification After Answer Supervision? y	
Send UCID to ASAI? n	

Figure 5: CM System-Parameters Features Form, Page 13

change system-parameters features	Page 14 of 17
FEATURE-RELATED SYSTEM PARAMETERS	
REASON CODES	
Aux Work Reason Code Type: none	
Logout Reason Code Type: none	
Two-Digit Aux Work Reason Codes? y	
REDIRECTION ON IP CONNECTIVITY FAILURE	
Switch Hook Query Response Timeout:	
Auto-answer IP Failure Aux Work Reason Code: 0	
FORCED AGENT LOGOUT PARAMETERS	
Maximum Time Agent in ACW before Logout (sec):	
ACW Forced Logout Reason Code: 0	
Clock Time Forced Logout Reason Code: 0	

Figure 6: CM System-Parameters Features Form, Page 14

3.1.3. Configure IP Node Names

Use the **change node-names ip** to assign IP address to meaningful names, as shown in the following table.

Parameter	Usage
clan	Enter the IP address of Control LAN interface.

Table 5: Node-Names Ip Parameters

change node-names ip	Page 1 of 2
IP NODE NAMES	
Name	IP Address
default	0.0.0.0
procr	192.168.31.29
clan	192.168.10.6

Figure 7: CM Node-Names Ip Form

3.1.4. Configure Dial Plan

Use the **change dialplan analysis** command to configure the dial plan as shown in the following table.

Parameter	Usage
Dialed string: “0”	Use a “0” as Facilities Access Code (FAC) to access external telephone numbers, as configured in Table 1 .
Dialed string: “1”	Five digits numbers starting with “1” are allocated to local extensions as shown in Table 1 .
Dialed string: “*9”	The dialed string “*9” is the Trunk Access Code (TAC) shown in Figure 16

Table 6: Dial Plan Analysis Parameters

change dialplan analysis			DIAL PLAN ANALYSIS TABLE			Page 1 of 12		
			Location: all			Percent Full: 0		
Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
0	1	fac						
1	5	ext						
*9	2	dac						

Figure 8: CM Dialplan Analysis Form

3.1.5. Configure Agent Telephone

Use the **add station** command to allocate the agent and overflow telephones shown in **Table 1**. Use the parameters shown in the following table.

Parameter	Usage
Type (p.1)	Enter the type identifier of local telephone.
Security Code (p.1)	Enter the security code to be assigned to the station for security purposes.
Name (p.1)	Enter a name to identify the station or its user.

Table 7: Station Parameters for Agent Telephones

change station 60113		Page 1 of 5
STATION		
Extension: 60113	Lock Messages? n	BCC: 0
Type: 4610	Security Code: 31106	TN: 1
Port: S00101	Coverage Path 1: 1	COR: 1
Name: extn 60113	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 19	Time of Day Lock Table:	
Speakerphone: 2-way	Personalized Ringing Pattern: 1	
Display Language: english	Message Lamp Ext: 60113	
Survivable GK Node Name:	Mute Button Enabled? y	
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? n	
	Customizable Labels? y	

Figure 9: CM Station Form for Agent Telephone, p. 1

3.1.6. Configure Interface to Avaya AES

The Avaya Application Enablement Services server TSAPI interface provides *Callmedia* with a means of communicating with Avaya Communication Manager to perform telephony operations. Avaya Communication Manager requires the configuration parameters shown in this section.

Use the **add ip-interface** command to allocate a call control interface. The slot value specified should be the Clan interface. The value used as “Node Name” must be one of the names from the list defined by the **change node-names ip** command. The “Subnet Mask” and “Gateway Address” should be assigned to the values used by the Ethernet network to which the Control LAN interface is attached.

```
add ip-interface 01a02                                     Page 1 of 1

                                IP INTERFACES

                                Type: C-LAN
                                Slot: 01A02
                                Code/Suffix: TN799 D
                                Node Name: clan
                                IP Address: 192.168.10.6
                                Subnet Mask: 255.255.255.0
                                Gateway Address: 192.168.10.254
                                Enable Ethernet Port? y
                                Network Region: 1
                                VLAN: n
                                Link:
                                Allow H.323 Endpoints? y
                                Allow H.248 Gateways? y
                                Gatekeeper Priority: 5

Target socket load and Warning level: 400
Receive Buffer TCP Window Size: 8320
                                ETHERNET OPTIONS
                                Auto? y
```

Figure 10: CM Add Ip-Interface Form

Use the **change ip-services** command to set the parameters for AESVCS service as shown below for the C-LAN which was defined above to serve as the interface to the Avaya AES server.

```
change ip-services                                         Page 1 of 3

                                IP SERVICES
Service   Enabled   Local   Local   Remote   Remote
Type      y         clan   Port   Node    Port
AESVCS    y         clan   8765
```

Figure 11: CM Change Ip-Services Form, page 1

An entry for the Avaya AES server must be made in the list in the screen shown below. The name assigned to the Avaya AES server when it was installed must be entered in the “AE Services Server” field for that entry. The “Password” entry must be the same as was assigned to the switch connection, as shown in **Figure 40** of this document.

change ip-services					Page 3 of 3
AE Services Administration					
Server ID	AE Services Server	Password	Enabled	Status	
1:	aes-server1	xxxxxxx	y	idle	

Figure 12: CM Change Ip-Services Form, page 2

Use the **add cti-link** command to add a CTI link for use by TSAPI. The link number can be any value between 1 and 64 which is not currently assigned to another link. The link number specified must be the same value that is used in the “Add / Edit TSAPI Links” configuration screen shown in **Figure 43**. Use an unused extension as the value for the “Extension” parameter. The value chosen for the “Name” parameter is a matter of personal preference. Specify a “Type” of “ADJ-IP”, as required for a TSAPI link.

Add cti-link 4		Page 1 of 3
CTI LINK		
CTI Link: 4		
Extension: 19996		
Type: ADJ-IP		
COR: 1		
Name: AES-devcon223-tsapi		

Figure 13: CM Add Cti-Link Form

Use the **add data-module <x>** command, where <x> is an unassigned extension, to allocate an extension to be used as the data interface for the clan module. The value used as “extension” can be any free extension. The “Name” value is only used for identification purposes. The “Type” field must be “ethernet”. The “Port” should be assigned to port 17 of the Clan interface. The “Link” number should be assigned a value between 1 and 99.

add data-module 10000		Page 1 of 1
DATA MODULE		
Data Extension: 10000	Name: clan	
Type: ethernet		
Port: 01A0217		
Link: 1		
Network uses 1's for Broadcast Addresses? Y		

Figure 14: CM Add Data-Module Form

3.1.7. Configure Interface to PSTN

Use the **add ds1** command to configure a DS1 circuit pack for connection to the PSTN. Set the parameters for this command as shown in **Table 8**.

Parameter	Usage
Name	Choose a name to identify this interface.
Line Coding	Enter “hdb3” for Alternate Mark Inversion with high density bipolar 3-bit substitution.
Signaling Mode	Enter “isdn-pri” Integrated Services Digital Network Primary Rate.
Connect	Enter “network”.
Country Protocol	Enter “etsi” to specify the European Telecommunications Standards Institute standard ISDN protocol.
Interworking Message	Enter “PROGress” to have the public network cut through the B-channel and let the caller hear tones such as ringback or busy tone.
Protocol Version	Enter “b”.
Interface Companding	Enter “alaw” for use in Europe.
CRC?	Enter “y” to enable Cyclical Redundancy Check.
Idle Code	Specify an idle code bit pattern of “01010101”.

Table 8: Configuration Values for DS1 Circuit Pack

```
add ds1 01a06                                     Page 1 of 1
DS1 CIRCUIT PACK
Location: 01A06                                     Name: PSTN
Bit Rate: 2.048                                     Line Coding: hdb3
Signaling Mode: isdn-pri
Connect: network
TN-C7 Long Timers? n                               Country Protocol: etsi
Interworking Message: PROGress                     Protocol Version: b
Interface Companding: alaw                           CRC? y
Idle Code: 01010101
DCP/Analog Bearer Capability: 3.1kHz
T303 Timer(sec): 4
Slip Detection? n                                   Near-end CSU Type: other
```

Figure 15: CM DS1 Circuit Pack Form

Use the **add trunk-group** command to allocate a trunk group for the PSTN. Set the parameters for this command as shown in **Table 9**.

Parameter	Usage
Group Type (p.1)	Enter “isdn” for Integrated Services Digital Network.
Group Name (p.1)	Choose a name to identify this interface.
TAC (p.1)	Select “*9” as the Trunk Access Code to identify this trunk group.
Dial Access? (p.1)	Enter “y” to allow dial access to this trunk group.
Service Type (p.1)	Enter “public-ntwrk”.
Charge Advice (p.2)	Enter “automatic”.
Supplementary Service Protocol (p.2)	Enter “c” for ETSI.
Digit Handling (in/out) (p.2)	Enter “overlap/overlap” to specify overlap digit handling for both sending and receiving.
Digit Treatment (p.2)	Specify “insertion” to have Communication Manager add the digits specified by the following field at the beginning of the incoming digit string.
Digits (p.2)	Specify “0*” as the digits to be added at the beginning of the incoming digit string.
Incoming Calling Number Insert (p.2)	Specify “0” to have these digits prepended to the calling party number. This allows missed calls to be correctly dialed from the call log.
Disconnect Supervision Out? (p.2)	Enter “y” to allow trunk-to-trunk transfers of calls within this group.
Send Calling Number (p.3)	Enter “y” to have the calling party number sent.
Charge Conversion (p.3)	Enter “12” as the value to be multiplied by the number of charge units to compute the currency amount.
Decimal Point (p.3)	Enter “comma”, which is the character used for decimal point in Germany.
Charge Type (p.3)	Enter “units” to specify that calling charges are reported in units.
Send Connected Number (p.3)	Enter “y”.
Send UUI IE? (p.3)	Enter “n”.
Send Codeset 6/7 LAI IE? (p.3)	Enter “n”.
Port (p. 5,6)	Enter port numbers on the DS1 circuit pack to be used as trunks. Port 16 is reversed for signaling.
Sig Group (p. 5,6)	Enter “9” to select the PSTN signaling group as shown in Figure 21 . Note that this value can only be entered after the signaling group has been allocated.

Table 9: Configuration Values for PSTN Routing Pattern

add trunk-group 9		Page 1 of 21
TRUNK GROUP		
Group Number: 9	Group Type: isdn	CDR Reports: y
Group Name: PSTN	COR: 1	TN: 1 TAC: *9
Direction: two-way	Outgoing Display? y	Carrier Medium: PRI/BRI
Dial Access? y	Busy Threshold: 255	Night Service:
Queue Length: 0		
Service Type: public-ntwrk	Auth Code? n	TestCall ITC: rest
	Far End Test Line No:	
TestCall BCC: 4		

Figure 16: CM PSTN Trunk-Group Form, p. 1

add trunk-group 9		Page 2 of 21
Group Type: isdn		
TRUNK PARAMETERS		
Codeset to Send Display: 6	Codeset to Send National IEs: 6	
Max Message Size to Send: 260	Charge Advice: automatic	
Supplementary Service Protocol: c	Digit Handling (in/out): overlap/overlap	
Digit Treatment: insertion	Digits: 0*	
Trunk Hunt: cyclical		
	Digital Loss Group: 13	
Incoming Calling Number - Delete:	Insert: 0	F ormat:
Bit Rate: 1200	Synchronization: async	Duplex: full
Disconnect Supervision - In? y Out? y		
Answer Supervision Timeout: 0		
Administer Timers? N		

Figure 17: CM PSTN Trunk-Group Form, p. 2

add trunk-group 9		Page 3 of 21
TRUNK FEATURES		
ACA Assignment? n	Measured: none	Wideband Support? n
		Maintenance Tests? y
	Data Restriction? n	NCA-TSC Trunk Member:
	Send Name: n	Send Calling Number: y
Used for DCS? n		Send EMU Visitor CPN? n
Suppress # Outpulsing? n	Format: public	
Outgoing Channel ID Encoding: preferred	UII IE Treatment: service-provider	
Charge Conversion: 12		
Decimal Point: comma	Replace Restricted Numbers? n	
Currency Symbol: EUR	Replace Unavailable Numbers? n	
Charge Type: units	Send Connected Number: y	
Network Call Redirection: none	Hold/Unhold Notifications? n	
Send UII IE? n	Modify Tandem Calling Number? n	
Send UCID? n		
Send Codeset 6/7 LAI IE? n	Dsl Echo Cancellation? n	
Apply Local Ringback? n		
Show ANSWERED BY on Display? y		
	Network (Japan) Needs Connect Before Disconnect? N	

Figure 18: CM PSTN Trunk-Group Form, p. 3

add trunk-group 9				Page 5 of 21	
				TRUNK GROUP	
				Administered Members (min/max): 0/0	
GROUP MEMBER ASSIGNMENTS				Total Administered Members: 0	
	Port	Code Sfx	Name	Night	Sig Grp
1:	01a0601	TN2464	C		9
2:	01a0602	TN2464	C		9
3:	01a0603	TN2464	C		9
4:	01a0604	TN2464	C		9
5:	01a0605	TN2464	C		9
6:	01a0606	TN2464	C		9
7:	01a0607	TN2464	C		9
8:	01a0608	TN2464	C		9
9:	01a0609	TN2464	C		9
10:	01a0610	TN2464	C		9
11:	01a0611	TN2464	C		9
12:	01a0612	TN2464	C		9
13:	01a0613	TN2464	C		9
14:	01a0614	TN2464	C		9
15:	01a0615	TN2464	C		9

Figure 19: CM PSTN Trunk-Group Form, p. 5

add trunk-group 9				Page 6 of 21	
				TRUNK GROUP	
				Administered Members (min/max): 0/0	
GROUP MEMBER ASSIGNMENTS				Total Administered Members: 0	
	Port	Code Sfx	Name	Night	Sig Grp
16:	01a0617	TN2464	C		9
17:	01a0618	TN2464	C		9
18:	01a0619	TN2464	C		9
19:	01a0620	TN2464	C		9
20:	01a0621	TN2464	C		9
21:	01a0622	TN2464	C		9
22:	01a0623	TN2464	C		9
23:	01a0624	TN2464	C		9
24:	01a0625	TN2464	C		9
25:	01a0626	TN2464	C		9
26:	01a0627	TN2464	C		9
27:	01a0628	TN2464	C		9
28:	01a0629	TN2464	C		9
29:	01a0630	TN2464	C		9
30:	01a0631	TN2464	C		9

Figure 20: CM PSTN Trunk-Group Form, p. 6

Use the **add signaling-group** command to allocate a signaling group to be used by calls to the PSTN.

Parameter	Usage
Group Type	Specify “isdn-pri” for ISDN Primary Rate.
Max number of NCA TSC	Enter “8”.
Primary D-Channel	Enter the address of port 16 of the DS1 Circuit Pack which is used to connect to the PSTN.
Trunk Group for NCA TSC	Enter “9”.
Trunk Group for Channel Selection	Enter “9”.
TSC Supplementary Service Protocol	Enter “a”.

Table 10: Configuration Parameters IP Telephones

add signaling-group 9		Page 1 of 5
SIGNALING GROUP		
Group Number: 9	Group Type: isdn-pri	
Associated Signaling? y	Max number of NCA TSC: 8	
Primary D-Channel: 01A0616	Max number of CA TSC: 0	
	Trunk Group for NCA TSC: 9	
Trunk Group for Channel Selection: 9		
TSC Supplementary Service Protocol: a		

Figure 21: CM PSTN Signaling-Group Form

3.1.8. Configure Call Routing

Use the **change feature-access-codes** specify that “0” is to be used as the Auto Route Selection (ARS) access code.

```
change feature-access-codes                                     Page 1 of 6

                                FEATURE ACCESS CODE (FAC)
Abbreviated Dialing List1 Access Code:
Abbreviated Dialing List2 Access Code:
Abbreviated Dialing List3 Access Code:
Abbreviated Dial - Prgm Group List Access Code:
Announcement Access Code:
Answer Back Access Code:
Attendant Access Code:
Auto Alternate Routing (AAR) Access Code:
Auto Route Selection (ARS) - Access Code 1: 0      Access Code 2:
Automatic Callback Activation:                      Deactivation:
Call Forwarding Activation Busy/DA:                  All:      Deactivation:
Call Forwarding Enhanced Status:                     Act:      Deactivation:
Call Park Access Code:
Call Pickup Access Code:
CAS Remote Hold/Answer Hold-Unhold Access Code:
CDR Account Code Access Code:
Change COR Access Code:
Change Coverage Access Code:
Contact Closure   Open Code:                        Close Code:
```

Figure 22: CM Feature-Access-Codes Form

Use the **change ars analysis** command to specify that an ARS dialed string of an indeterminate value (“x”) of at least “7” digits, but not exceeding “15” digits is a public (“pubu”) number which should be routed via routing pattern “9”.

```
change ars analysis 0                                         Page 1 of 2

                                ARS DIGIT ANALYSIS TABLE
                                Location: all                  Percent Full: 0

Dialed      Total      Route      Call      Node      ANI
String      Min  Max    Pattern    Type      Num      Req'd
x           7   15     9         pubu      n
```

Figure 23: CM ARS Analysis Form

Use the **change route-pattern** command to specify parameter values to be used for route pattern “9”, which is used for access to the PSTN. Set the parameter values as shown in **Table 8**.

Parameter	Usage
Pattern Name	Choose an appropriate name to be used for descriptive purposes.
Grp No	Specify the Trunk Group number which is used to access the PSTN which is shown in Figure 16 .

Table 11: Configuration Values for PSTN Route Pattern

```

change route-pattern 9                                     Page 1 of 3
      Pattern Number: 9   Pattern Name: PSTN
      SCCAN? n   Secure SIP? n
  Grp FRL NPA Pfx Hop Toll No.   Inserted   DCS/ IXC
  No      Mrk Lmt List Del   Digits   Intw
1: 9      0                                     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 PARM   No. Numbering LAR
      0 1 2 M 4 W       Request       Dgts Format
                                     Subaddress
1: y y y y y n   n               rest               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

```

Figure 24: CM PSTN Route-Pattern Form

Use the **change public-unknown-numbering** command to specify parameter values to be used to transform the Calling Party Number for outgoing calls from local extension numbers to PSTN numbers via Trunk Group 9. Set the parameter values as shown in **Table 12**.

Parameter	Usage
Ext Len	Enter “5” for the length of local extension shown in Figure 8 .
Ext Code	Enter “6” which is the leading digit of local extensions.
Trk Grp	Enter “9” to select the trunk group which connects to the PSTN as shown in Figure 16 .
CPN Prefix	Enter “69907xxxxx” which is the prefix assigned to trunk 9.
CPN Len	Enter “15” as the Calling Party Number Length.

Table 12: Configuration Values Public-Unknown-Numbering

change public-unknown-numbering 5					Page 1 of 2
NUMBERING - PUBLIC/UNKNOWN FORMAT					
Total					
Ext Len	Ext Code	Trk Grp(s)	CPN Prefix	CPN Len	
5	1	9	69907xxxxx	15	Total Administered: 1 Maximum Entries: 9999

Figure 25: CM Public-Unknown-Numbering Form

Use the **change ars digit-conversion** command to specify how the Called Party Number of an incoming call is converted to local extension. Set the parameter values as shown in **Table 13**.

Parameter	Usage
Matching Pattern	Enter “*90739887”, where the “*” matches the character which was inserted by the Trunk Group,.
Min	Enter “9” as the minimum Called Party Number length for an incoming call.
Max	Enter “14” as the maximum Called Party Number length for an incoming call.
Del	Enter “9” to delete all but the local extension or the Topic.
Net	Enter “ext”.

Table 13: Configuration Values for ARS Digit-Conversion

change ars digit-conversion *					Page 1 of 2
ARS DIGIT CONVERSION TABLE					
Location: all					Percent Full: 0
Matching Pattern	Min	Max	Del	Replacement String	Net Conv ANI Req
*90739887	9	14	9		ext n n

Figure 26: CM ARS Digit-Conversion Form

3.1.9. Allocate Stations for Agents

Use the **add station** command to create IP stations for the agent and overflow extensions shown in **Table 1** using the values shown below.

Parameter	Usage
Type	Use a type value which corresponds to the physical station to be used.
Security Code	Assign a string of decimal digits as a Security Code. For convenience, the reverse of the extension is used.
Name	Any alphanumeric string can be assigned as an extension name.

Table 14: Configuration Values Agent Stations

```
add station 10113                                     Page 1 of 5
                                                    STATION
Extension: 10113                                     Lock Messages? n          BCC: 0
  Type: 4610                                           Security Code: 31101      TN: 1
  Port: S00241                                       Coverage Path 1:         COR: 1
  Name: extn 10113                                   Coverage Path 2:         COS: 1
                                                    Hunt-to Station:
STATION OPTIONS
    Loss Group: 19                                     Time of Day Lock Table:
    Speakerphone: 2-way                               Personalized Ringing Pattern: 1
    Display Language: english                         Message Lamp Ext: 10113
Survivable GK Node Name:                               Mute Button Enabled? y
    Survivable COR: internal                           Media Complex Ext:
Survivable Trunk Dest? y                             IP SoftPhone? n
                                                    Customizable Labels? y
```

Figure 27: CM Station Form

3.1.10. Configure Announcements

Announcements are used by *Callmedia* to inform callers of the progress of operations which it performs. To create an announcement, follow the following procedure:

Use the **change cos** command to define one class of service (COS) to have console permission. The selection of a COS value is arbitrary, but should not conflict with existing COS usage.

change cos	Page 1 of 2															
	CLASS OF SERVICE															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Auto Callback	n	y	y	n	y	n	y	n	y	n	y	n	y	n	y	y
Call Fwd-All Calls	n	y	n	y	y	n	n	y	y	n	n	y	y	n	n	y
Data Privacy	n	y	n	n	n	y	y	y	y	n	n	n	n	y	y	y
Priority Calling	n	y	n	n	n	n	n	n	n	y	y	y	y	y	y	y
Console Permissions	n	n	n	n	n	n	n	y	n	n	n	n	n	n	n	y
Off-hook Alert	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Restrict Call Fwd-Off Net	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Call Forwarding Busy/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding All	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding B/DA	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Trk-to-Trk Transfer Override	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
QSIG Call Offer Originations	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Contact Closure Activation	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n

Figure 28: CM Cos Settings for Announcement Recording

Use the **change station** command to set the (COS) value for the station that will be used to record announcements to the value of the above-defined COS.

change station 10126	Page 1 of 4	
STATION		
Extension: 10126	Lock Messages? n	BCC: 0
Type: 4620	Security Code: 62101	TN: 1
Port: S00033	Coverage Path 1:	COR: 1
Name: ext 10126	Coverage Path 2:	COS: 7
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 19	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 10126	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english	Expansion Module? n	
Survivable GK Node Name:		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? n	
	Customizable Labels? Y	

Figure 29: CM Station Setting Changes for Announcement Recording

Use the **change dialplan analysis** command to add a feature access code to the dial plan to be used to initiate the recording of announcements.

change dialplan analysis			DIAL PLAN ANALYSIS TABLE			Page 1 of 12		
						Percent Full: 0		
Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
0	1	fac						
1	5	ext						
*9	2	dac						
*71	3	fac						

Figure 30: CM Dialplan Changes for Announcement Recording

Use the **change feature-access-codes** command to add the facility announcement access code to list of feature-access-codes.

change feature-access-codes		FEATURE ACCESS CODE (FAC)		Page 1 of 7	
Abbreviated Dialing List1 Access Code:					
Abbreviated Dialing List2 Access Code:					
Abbreviated Dialing List3 Access Code:					
Abbreviated Dial - Prgm Group List Access Code:					
		Announcement Access Code: *71			
Answer Back Access Code:					
Attendant Access Code:					
Auto Alternate Routing (AAR) Access Code:					
Auto Route Selection (ARS) - Access Code 1:				Access Code 2:	
Automatic Callback Activation:				Deactivation:	
Call Forwarding Activation Busy/DA:		All:		Deactivation:	
		Call Park Access Code: *12			
		Call Pickup Access Code: *13			
CAS Remote Hold/Answer Hold-Unhold Access Code:					
CDR Account Code Access Code:					
Change COR Access Code:					
Change Coverage Access Code:					
Contact Closure Open Code:				Close Code:	
Contact Closure Pulse Code:					

Figure 31: CM Feature Access Code Changes for Announcement Recording

Use the **change announcements** command to create announcement records on the physical medium, in this case the Avaya TN2501AP VAL interface. The “Ext” value used is the extension which is to be assigned to the announcement. This can be any unused extension. Assign the “Type” to “integrated”. Any text value can be assigned to “Name”, as it is only used for informational purposes. The VAL interface port should be assigned to “Group/Port”.

change announcements						Page 1 of 16					
ANNOUNCEMENTS/AUDIO SOURCES											
Ann.						Group/					
No.	Ext.	Type	COR	TN	Name	Q	QLen	P	Rt	Port	
1	11101	integrated	1	1	WELCOME	n		n	64	01a09	
2	11102	integrated	1	1	BUSY	n		n	64	01a09	
3	11103	integrated	1	1	LATER	n		n	64	01a09	
4	11104	integrated	1	1	MOH	n		n	64	01a09	
5			1	1		n					
6			1	1		n					
7			1	1		n					
8			1	1		n					
9			1	1		n					
10			1	1		n					
11			1	1		n					
12			1	1		n					
13			1	1		n					
14			1	1		n					
15			1	1		n					
16			1	1		n					

Figure 32: CM Announcements Required for Callmedia

Record the required announcements from the station which has the COS with console permission (Ext. 10126) via the following procedure:

- Dial the Announcement feature access code (*71), which was created above.
- Dial the extension of the announcement to be created
- Dial 1
- Speak the announcement
- Dial #

Repeat this procedure for each of the announcements in the following table.

Extension	Announcement
11101	“Welcome to DevConnect”
11102	“All agents are busy”
11103	“Call back later”
11104	“Music on hold”

Table 15: Callmedia Announcements

3.1.11. Configure Vectors and Vector Directory Numbers

Use the **add vdn <extn>** command to allocate the extension which is to be called by incoming callers, where <extn> is the local extension that is to be used.

Parameter	Usage
Name	Use any name that is suitable to identify this item.
Vector Number	This must be the same as the vector number shown in Figure 34 .

Table 16: Incoming Call VDN Parameters

add vdn 11037	Page 1 of 3
VECTOR DIRECTORY NUMBER	
Extension: 11037	
Name*: CM Entry	
Vector Number: 37	
Meet-me Conferencing? n	
Allow VDN Override? n	
COR: 1	
TN*: 1	
Measured: none	
VDN of Origin Annc. Extension*:	
1st Skill*:	
2nd Skill*:	
3rd Skill*:	

Figure 33: CM Incoming Call VDN

Use the **change vector** command to define the steps to be performed for calls which are queued to this vector.

change vector 37	Page 1 of 6
CALL VECTOR	
Number: 37	Name: CM Entry
Basic? y	EAS? y G3V4 Enhanced? y
Prompting? y	ANI/II-Digits? y ASAI Routing? y
Variables? y	LAI? n G3V4 Adv Route? y
01 announcement	11101
02 adjunct	routing link 4
03 wait-time	0 secs hearing ringback
04 wait-time	2 secs hearing silence
05 route-to	number 10126 with cov n if unconditionally
06 stop	

Figure 34: CM Incoming Call Vector

Use the **add vdn <extn>** command to allocate the extension which is to be used for queued calls, where <extn> is the local extension that is to be used.

Parameter	Usage
Name	Use any name that is suitable to identify this item.
Vector Number	This must be the same as the vector number shown in Figure 36 .

Table 17: Incoming Call VDN Parameters

add vdn 11038	Page 1 of 3
VECTOR DIRECTORY NUMBER	
Extension: 11038	
Name*: CM Queue	
Vector Number: 38	
Meet-me Conferencing? n	
Allow VDN Override? n	
COR: 1	
TN*: 1	
Measured: none	
VDN of Origin Annc. Extension*:	
1st Skill*:	
2nd Skill*:	
3rd Skill*:	

Figure 35: CM Queued Call VDN

Use the **change vector** command to define the steps to be performed for calls which are queued to this vector.

change vector 38	Page 1 of 6
CALL VECTOR	
Number: 38	
Name: CM Queue	
Meet-me Conf? n	
Lock? n	
Basic? y	
EAS? y	
G3V4 Enhanced? y	
ANI/II-Digits? y	
ASAI Routing? y	
Prompting? y	
LAI? n	
G3V4 Adv Route? y	
CINFO? y	
BSR? y	
Holidays? y	
Variables? y	
3.0 Enhanced? y	
01 goto step 2 if unconditionally	
02 adjunct routing link 4	
03 wait-time 2 secs hearing silence	
04 announcement 11102	
05 wait-time 2 secs hearing silence	
06 announcement 11104	
07 wait-time 2 secs hearing silence	
08 goto step 4 if unconditionally	

Figure 36: CM Queued Call Vector

3.2. Configure Avaya AES

The AES server is configured via a web browser by accessing the following URL:

`https://<AES server address>:8443/MVAP/`

Once the login screen appears, enter the OAM Admin login ID/password for perform administrative activities on the AES server, and click the “CTI OCM Administration” menu item.

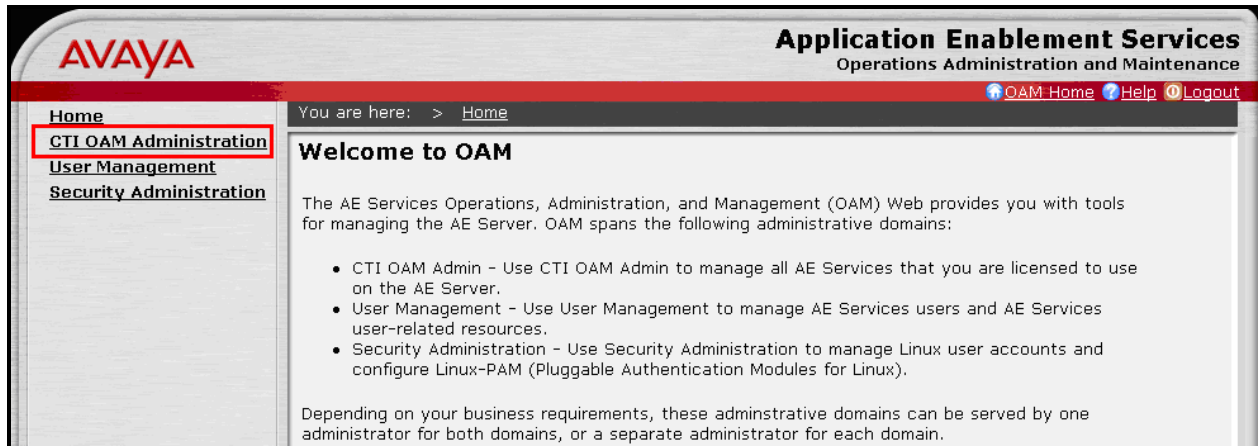


Figure 37: AES OAM Welcome Screen

After logging in with the OAM Admin user ID/password, select “CTI OAM Admin” which displays the following screen. Verify that the AES server installation has a TSAPI service license. If this is not the case, please contact an Avaya representative regarding licensing.

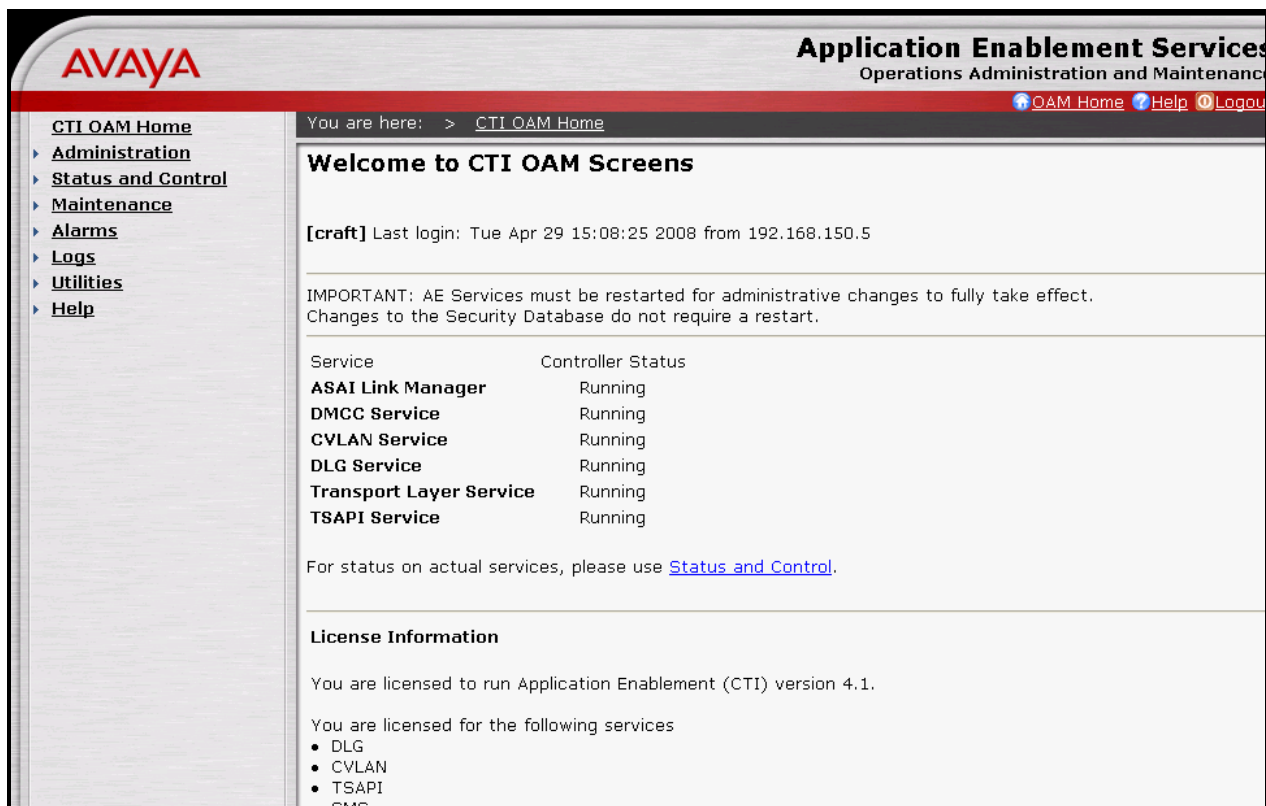


Figure 38: AES CTI OAM Welcome Screen

Navigate to **Administration->Switch Connections**. Enter the name of the Switch Connection to be added, and click on the “Add Connection” button.

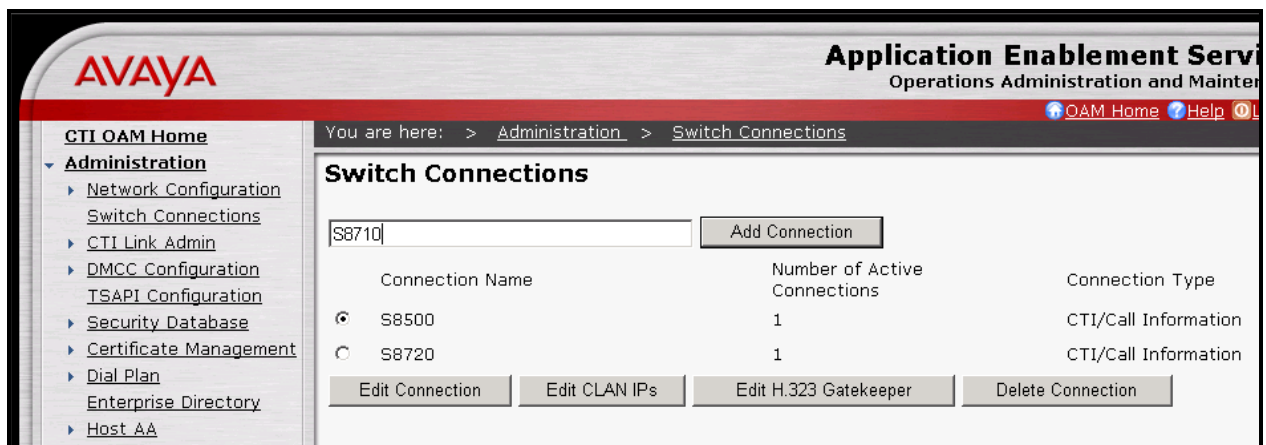


Figure 39: AES Switch Connections Screen

This causes the screen shown below to be presented. At this point, enter the screen fields as described in the following table, and click the “Apply” button.

Parameter	Usage
Switch Password	The Switch Password must be the same as was entered into the Avaya Communication Manager AE Services Administration form via the “change ip-services” command, described in Figure 12 . Passwords must consist of 12 to 16 alphanumeric characters
SSL	SSL (Secure Socket Layer) is enabled by default. Keep the default setting unless you are adding a Switch Connection for a DEFINITY Server CSI.

Table 16: Configuration of Switch Password

The screenshot shows the Avaya CTI OAM Administration interface. The top header features the Avaya logo and the text "Application Operations". Below the header, a breadcrumb trail indicates the current location: "You are here: > Administration > Switch Connections". The left sidebar contains a navigation menu with the following items: "CTI OAM Home", "Administration" (expanded), "Network Configuration", "Switch Connections", "CTI Link Admin", "DMCC Configuration", "TSAPI Configuration", "Security Database", "Certificate Management", "Dial Plan", "Enterprise Directory", "Host AA", "SMS Configuration", and "WebLM Configuration". The main content area is titled "Set Password - S8710" and contains the following text: "Please note the following: * Changing the password affects only new connections, not open connections". Below this text are two input fields for "Switch Password" and "Confirm Switch Password", both masked with dots. There is also a checkbox for "SSL" which is checked. At the bottom of the form are "Apply" and "Cancel" buttons.

Figure 40: AES Set Switch Password Screen

From the **Administration->Switch Connections** screen, click the “Edit CLAN IPs” button to display the screen show below. Enter the IP address of the CLAN with which AES is to use for communication with the switch, and click the “Add Name or IP” button.

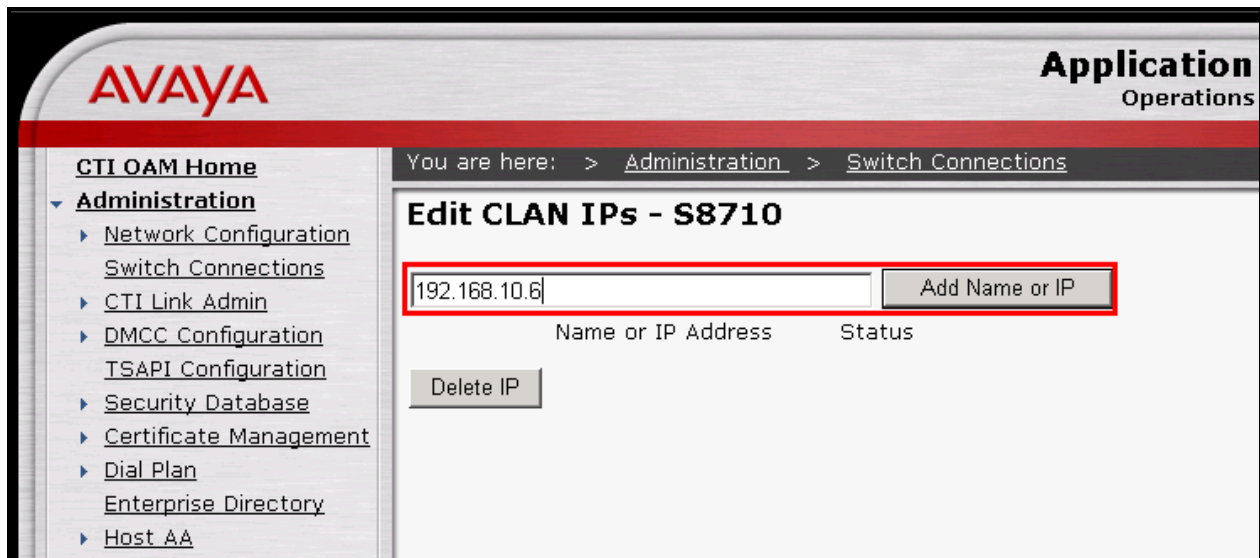


Figure 41: AES Configure PBX IP Interface Screen

On the left margin of the screen, navigate to **Administration->CTI Link Admin->TSAPI Links**. The following screen is displayed. Click the “Add Link” button.

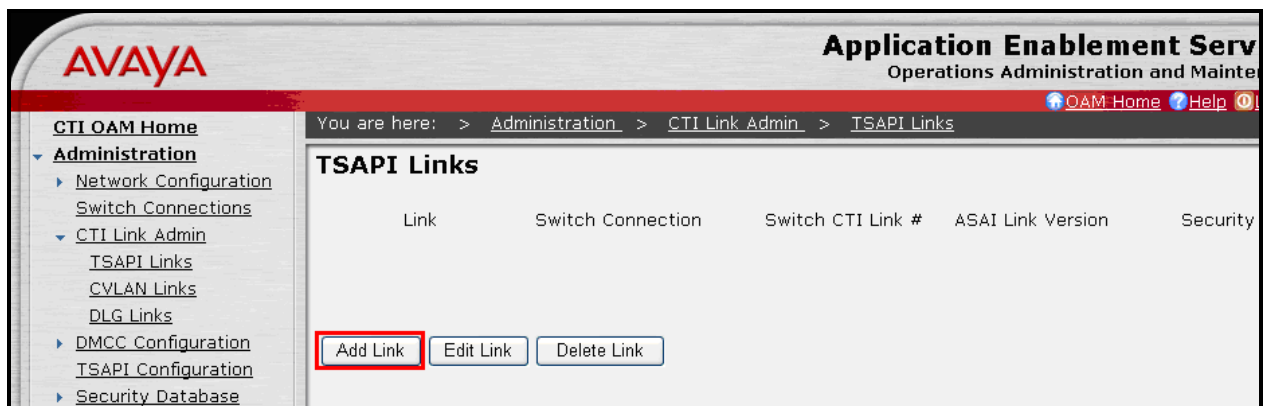


Figure 42: AES TSAPI Links Screen

Fill in the parameters for the link to be added. The “Link” parameter must be a value between 1 and 16 which is not assigned to another link. The “Switch Connection” parameter should be the name of the Avaya Media Server which is to be controlled by this link. The value for the TSAPI “Switch CTI Link Number” must be a value between 1 and 64, and must be the same as was used in the Avaya Communication Manager “add cti-link” configuration command in **Figure 13**. Click the “Apply Changes” button.

AVAYA Application Operations

You are here: > Administration > CTI Link Admin > TSAPI Links

Add / Edit TSAPI Links

Link: 1

Switch Connection: S8710

Switch CTI Link Number: 4

ASAI Link Version: 4

Security: Unencrypted

Apply Changes Cancel Changes

Figure 43: AES Configure TSAPI Link Screen

Log out and log in again with the user administration ID/password, which will cause the “OAM Welcome” screen to be displayed just as after the previous login.

Navigate to “**User Management->Add User**”.

The “CT User” field for this user must be set to “Yes”. In this case, the AES user is the Customer Interaction Express application, which uses AES to monitor stations and initiate switching operations. The values chosen for the “User Id” and “User Password” fields must be the same as those described in **Figure 85**. Upon completion, scroll down and select the “Apply” button.

The screenshot displays the AVAYA AES Add User screen. The top header features the AVAYA logo and the text 'App'. Below the header, a breadcrumb trail indicates the current location: 'You are here: > User Management > Add User'. The main content area is titled 'Add User' and includes a note: 'Fields marked with * can not be empty.' The form contains the following fields:

- * User Id: callmedia
- * Common Name: call
- * Surname: media
- * User Password: [masked]
- * Confirm Password: [masked]
- Admin Note: [empty]
- Avaya Role: userservice.useradmin (dropdown)
- Business Category: [empty]
- Car License: [empty]
- CM Home: [empty]
- Csx Home: [empty]
- CT User: Yes (dropdown)
- Department Number: [empty]
- Display Name: [empty]
- Employee Number: [empty]
- Employee Type: [empty]

A 'Done' button is located at the bottom left of the screen.

Figure 44: AES Add User Screen

Enable AES Unrestricted Access for Callmedia:

Navigate to “**Administration ->Security Database -> CTI Users**”

Edit the user “callmedia”. Click Unrestricted Access “Enable”, and then “Apply Changes”.

The screenshot displays the Avaya Operations Administration web interface. The left sidebar contains a navigation menu with the following items: CTI OAM Home, Administration (expanded), Network Configuration, Switch Connections, CTI Link Admin, DMCC Configuration, TSAPI Configuration, Security Database (expanded), SDB Control, CTI Users (expanded), List All Users, Search Users, Worktops, Devices, Device Groups, Tlinks, Tlink Groups, Certificate Management, Dial Plan, and Enterprise Directory. The main content area is titled 'Edit CTI User' and shows the configuration for the 'callmedia' user. The 'Unrestricted Access' button is highlighted with a red box. Below it, the 'Apply Changes' button is also highlighted with a red box. The 'Call Origination and Termination' dropdown is set to 'None'. The 'Device / Device' dropdown is set to 'None'. The 'Call / Device' dropdown is set to 'None'. The 'Call / Call' checkbox is unchecked. The 'Allow Routing on Listed Device' dropdown is set to 'None'.

AVAYA **Application Enableme**
Operations Administration

You are here: > Administration > Security Database > CTI Users > List All Users

Edit CTI User

User ID: callmedia
Common Name: call
Worktop Name: NONE
Unrestricted Access: **Enable**

Call Origination and Termination: None
Device / Device: None
Call / Device: None
Call / Call: ☐

Allow Routing on Listed Device: None
Apply Changes Cancel

Figure 45: AES Security Settings for CTI User Screen

3.3. Configure Callmedia Server

This section of the document describes the configuration of the Callmedia server application, and the Windows 2003 platform on which it runs.

3.3.1. Assign Server Name

On the Callmedia server desktop, right-click the “My Computer” icon, select “Properties”, select the “Computer Name” tab to set the Computer Name to an appropriate value, as shown below, and reboot. This name is used in various other points within this document.

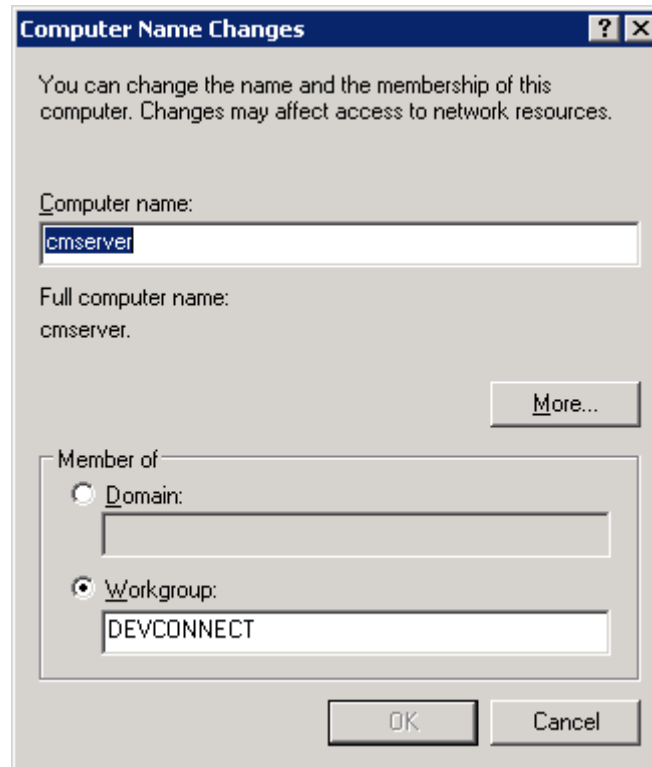


Figure 46: Callmedia Server Assign Server Name Screen

3.3.2. Install AES TSAPI Client on Callmedia Server

Run the Avaya TSAPI Client installation on the Callmedia server. This is available on the Avaya Support website at “<http://support.avaya.com>”, and can be downloaded by clicking “Downloads” -> “Application Enablement Services” -> “Application Enablement Services TSAPI Client MS Windows - Release 4.2.1”. Assign AES server to TSAPI client. Although the Callmedia servers run on this system it acts as a client to the AES Server.

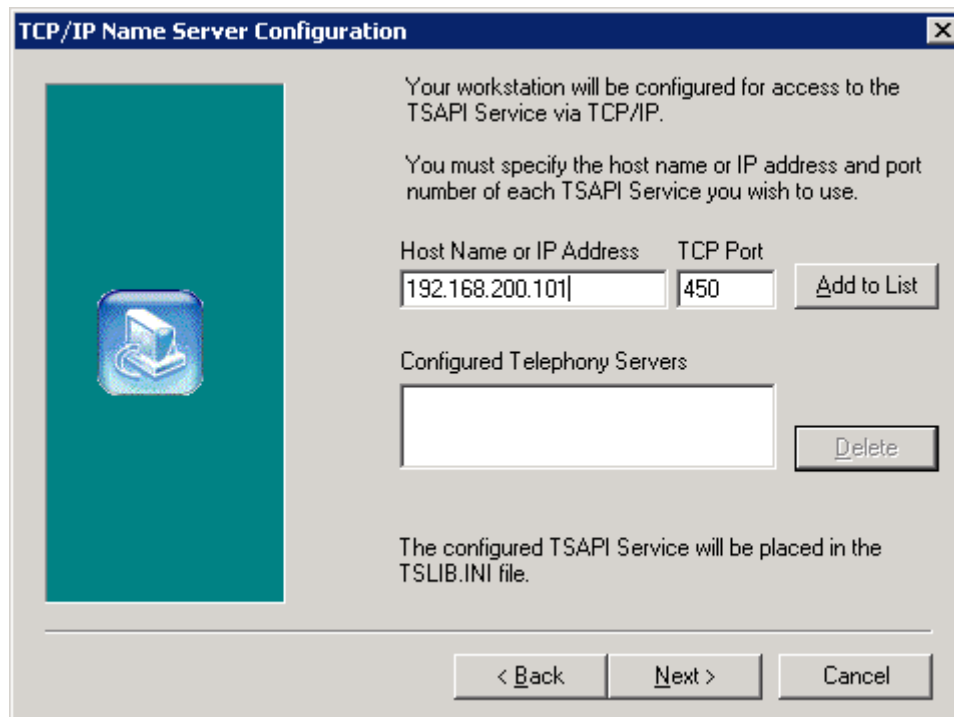


Figure 47: Callmedia Server Assign AES Server to TSAPI Client Screen

After the AES Server has been assigned as the TSAPI client, click “Next”.

TCP/IP Name Server Configuration

Your workstation will be configured for access to the TSAPI Service via TCP/IP.

You must specify the host name or IP address and port number of each TSAPI Service you wish to use.

Host Name or IP Address TCP Port

 450 **Add to List**

Configured Telephony Servers

192.168.200.101=450 **Delete**

The configured TSAPI Service will be placed in the TSLIB.INI file.

< Back Next > Cancel

Figure 48: Callmedia Server AES Server Assigned to TSAPI Client Screen

Click “Finish” to complete the installation.

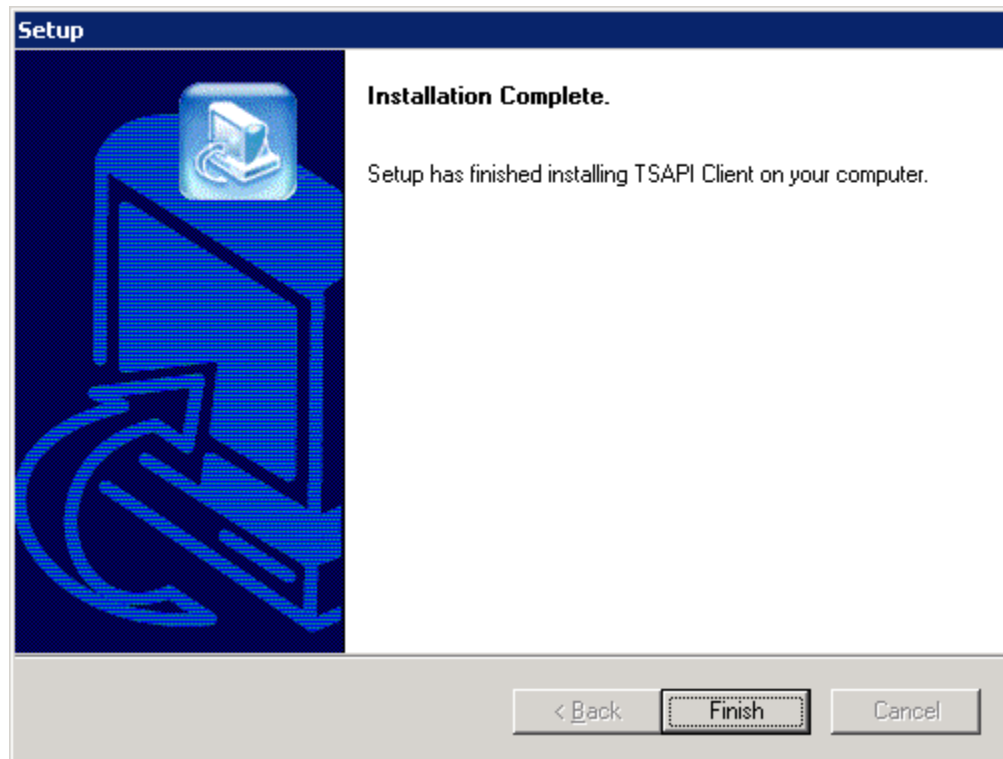


Figure 49: Callmedia Server Finish TSAPI Client Installation Screen

3.3.3. Configure Microsoft SQL Server 2005 Express Edition

The Callmedia server components require SQL services. Various packages can be chosen to fulfill this requirement, depending on the requirements of the operating environment. For the purposes of the conformance tests described within these Application Notes, the Microsoft SQL Server 2005 Express Edition was chosen. This is a free package which can be downloaded from Microsoft. In addition, the Microsoft SQL Server Management Studio Express was used to configure SQL Server 2005 Express, which is also a free package which can be downloaded from Microsoft. Each of these packages was installed with default settings.

3.3.4. Configure Databases

The databases used by Callmedia must be created, configured, and filled with entries before the Callmedia server components can be used. This procedure is outside of the scope of this document. Please refer to the Callmedia documentation references [5] through [11] included on the distribution media for further instructions.

3.3.5. Install Callmedia Server Software

Run the “MenuBox.exe” application from the “\MenuBox” directory of the Callmedia software distribution medium. Click “INSTALL SERVER SOFTWARE”.



Figure 50: Callmedia Software Installer Screen

Click “Next”.

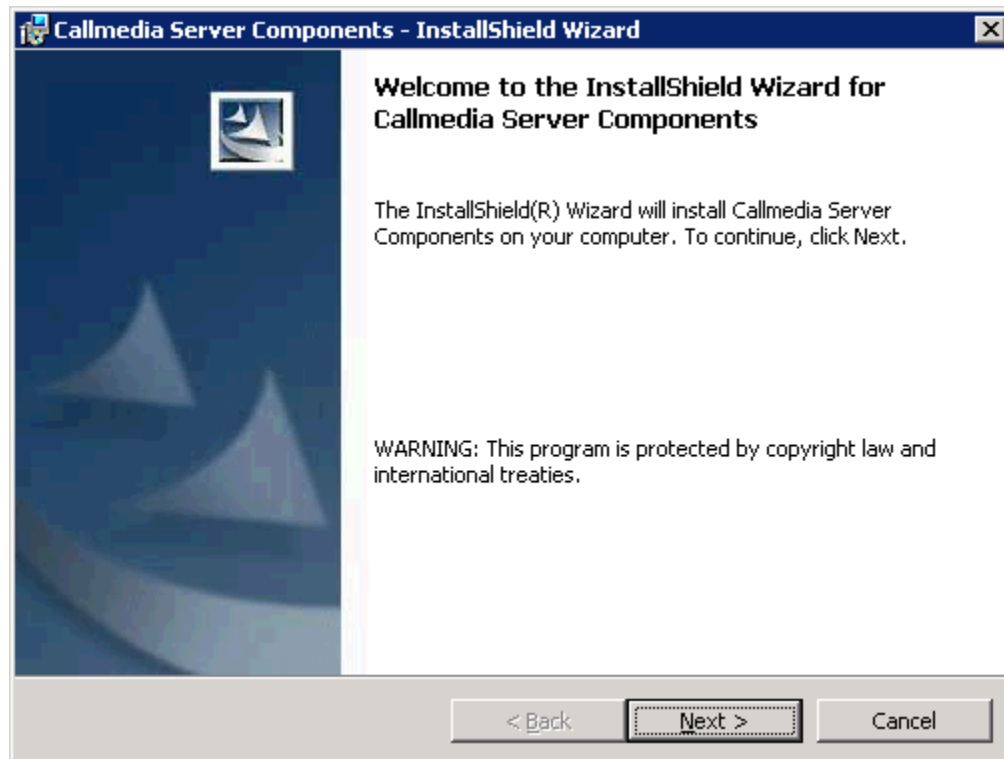


Figure 51: Callmedia Server Installer Welcome Screen

Accept the license terms and click “Next” if the license terms are acceptable.



Figure 52: Callmedia Server Installer License Screen

Click “Next”.

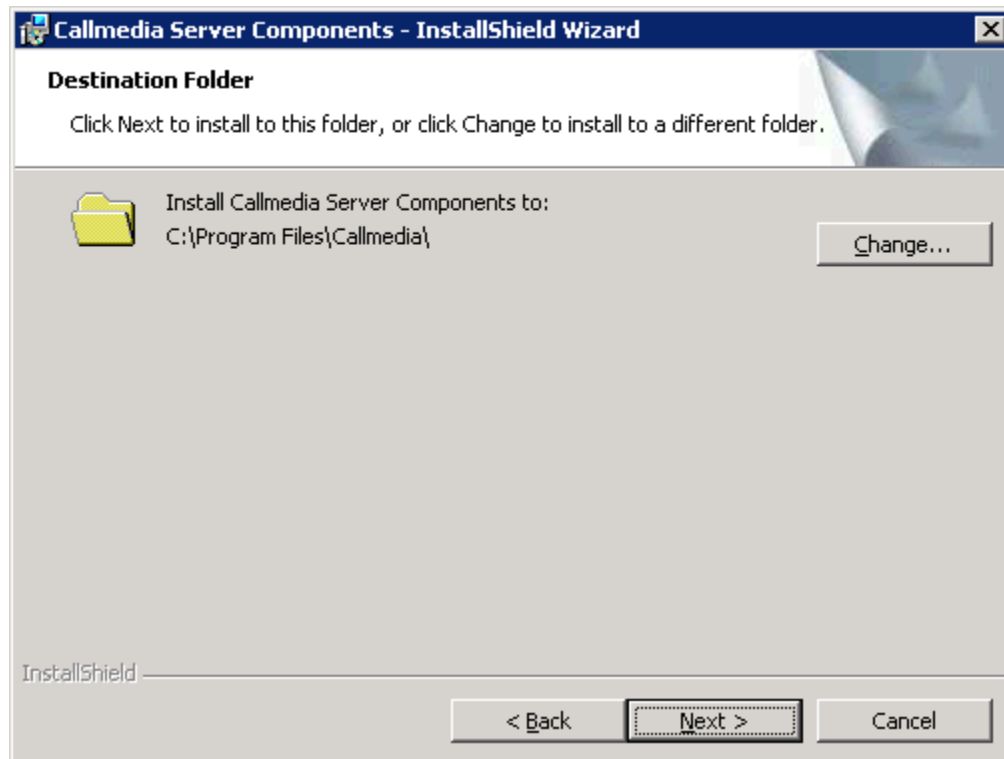


Figure 53: Callmedia Server Installer Destination Screen

Select the “Full Server Install” radio button and click “Next”.

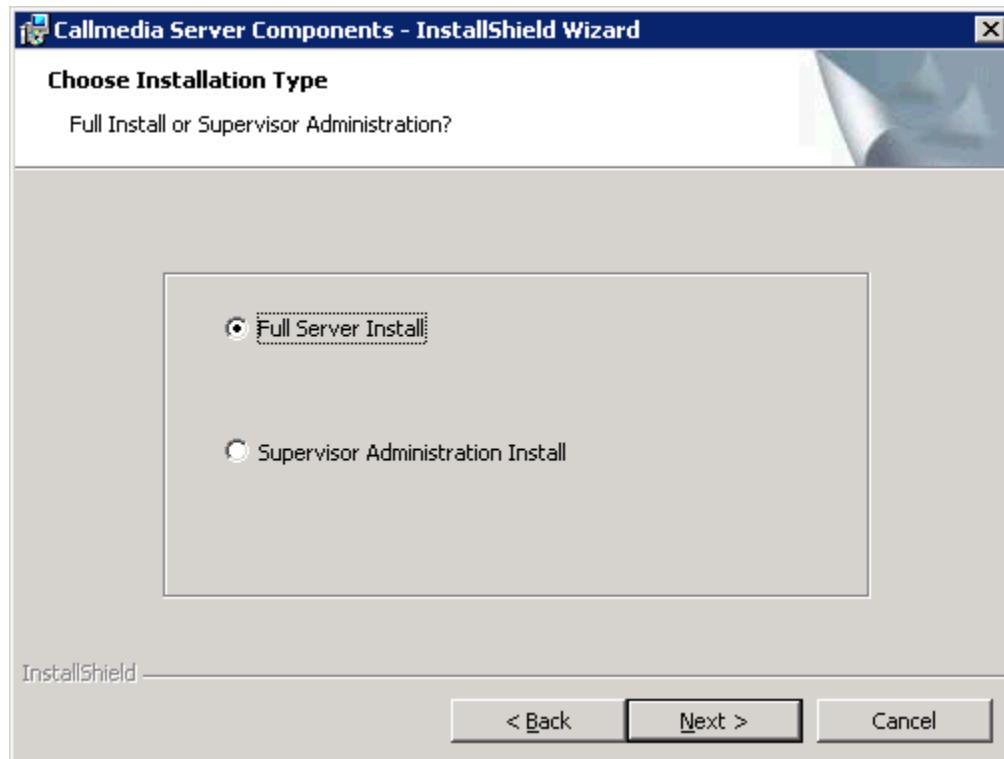


Figure 54: Callmedia Server User Selection Screen

Select “Callmedia Enterprise with Advance”, and click “Next”.

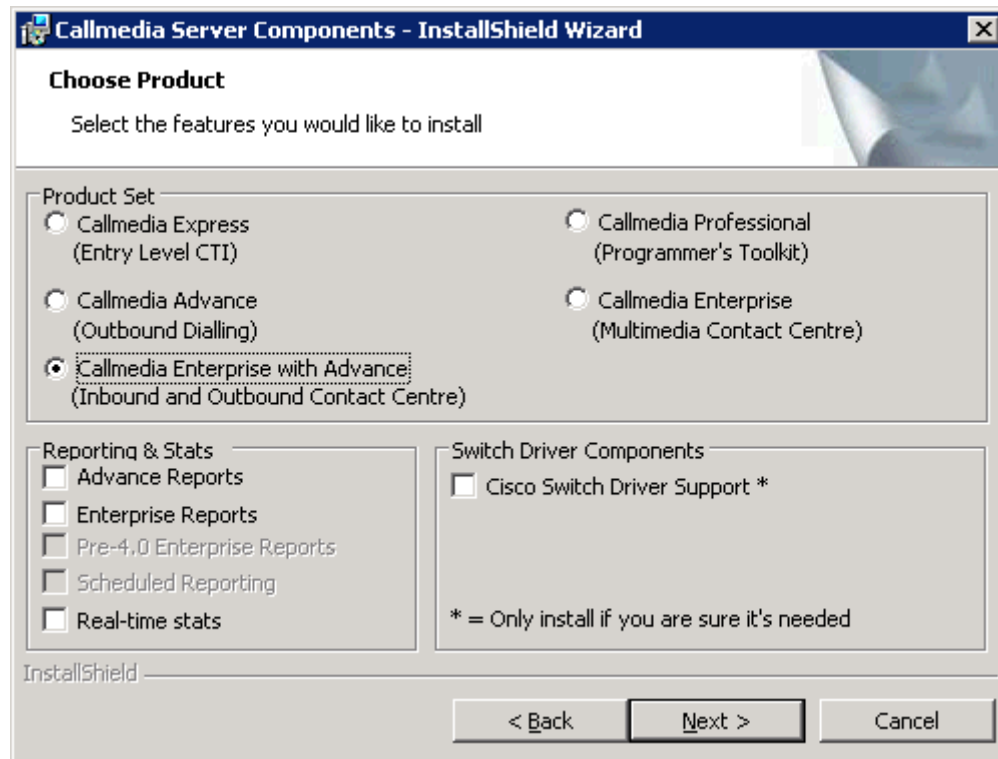
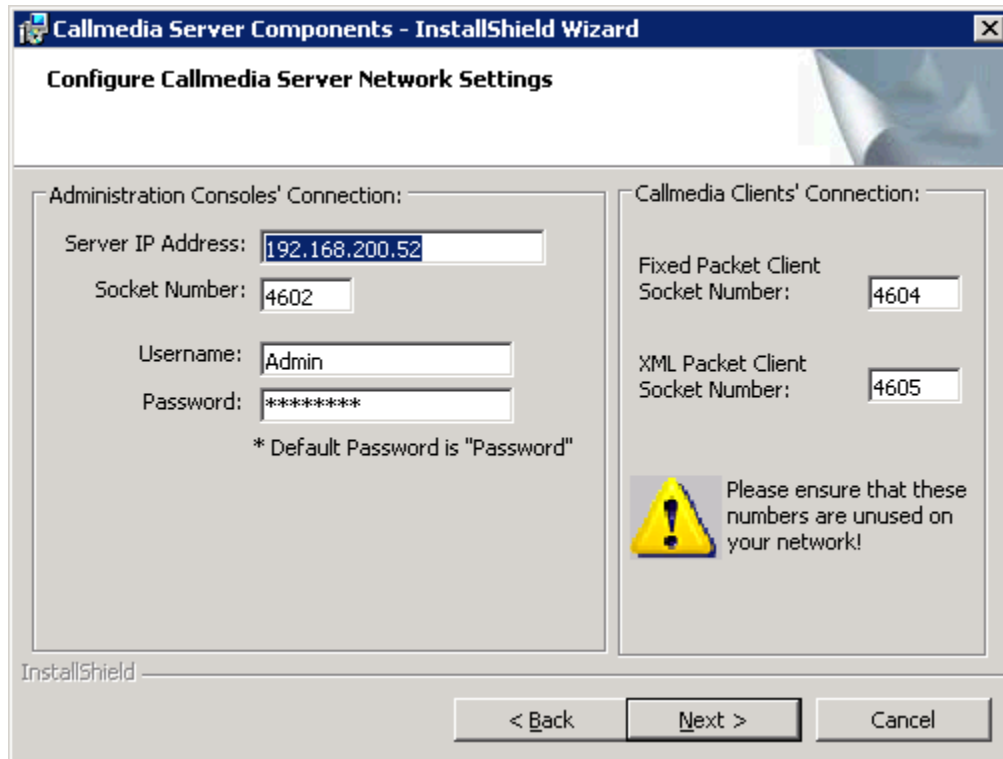


Figure 55: Callmedia Server Component Selection Screen

Set the “Server IP Address” to the address of the current system, enter an appropriate “Username” and “Password”, accept the defaults for the remaining parameters, and click “Next”.

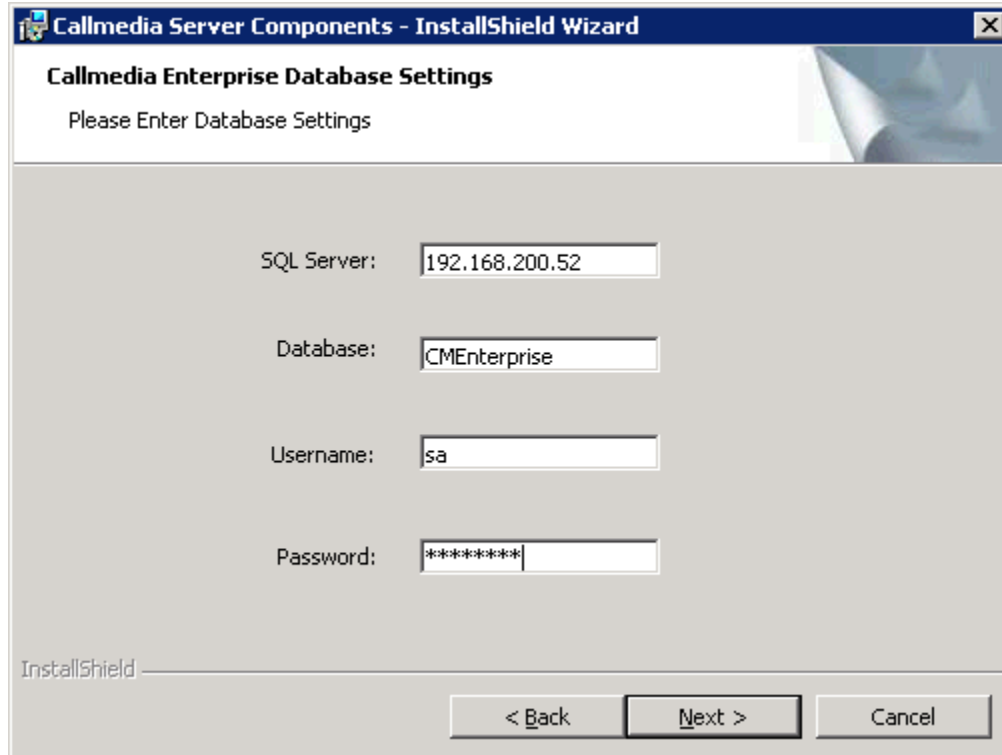


The screenshot shows a Windows-style dialog box titled "Callmedia Server Components - InstallShield Wizard". The main heading is "Configure Callmedia Server Network Settings". The dialog is divided into two main sections: "Administration Consoles' Connection:" and "Callmedia Clients' Connection:". In the "Administration Consoles' Connection:" section, there are four input fields: "Server IP Address:" (containing "192.168.200.52"), "Socket Number:" (containing "4602"), "Username:" (containing "Admin"), and "Password:" (containing "*****"). Below the password field is a note: "* Default Password is 'Password'". In the "Callmedia Clients' Connection:" section, there are two input fields: "Fixed Packet Client Socket Number:" (containing "4604") and "XML Packet Client Socket Number:" (containing "4605"). Below these fields is a warning icon (a yellow triangle with an exclamation mark) and the text: "Please ensure that these numbers are unused on your network!". At the bottom of the dialog, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

Section	Parameter	Value
Administration Consoles' Connection:	Server IP Address:	192.168.200.52
	Socket Number:	4602
	Username:	Admin
	Password:	*****
Callmedia Clients' Connection:	Fixed Packet Client Socket Number:	4604
	XML Packet Client Socket Number:	4605

Figure 56: Callmedia Server Network Settings Screen

Enter the appropriate username and password for CMEnterprise.



The image shows a screenshot of the 'Callmedia Server Components - InstallShield Wizard' window. The title bar is dark blue with the text 'Callmedia Server Components - InstallShield Wizard' and a close button. Below the title bar, the window has a white header area with the text 'Callmedia Enterprise Database Settings' and 'Please Enter Database Settings'. The main area is light gray and contains four labeled text input fields: 'SQL Server:' with the value '192.168.200.52', 'Database:' with the value 'CMEnterprise', 'Username:' with the value 'sa', and 'Password:' with the value '*****'. At the bottom left, the text 'InstallShield' is visible. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 57: Callmedia Server CMEnterprise Database Settings Screen

Enter the username and password for CMAdvance

The image shows a Windows-style dialog box titled "Callmedia Server Components - InstallShield Wizard". The main heading is "Callmedia Advance Database Settings" with a subtitle "Please Enter Database Settings". The dialog contains four text input fields: "SQL Server:" with the value "192.168.200.52", "Database:" with the value "CMAdvance", "Username:" with the value "sa", and "Password:" with the value "*****". Below these fields is a checkbox labeled "Hard Dialler Platform" which is currently unchecked. At the bottom left, the "InstallShield" logo is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is highlighted with a black border.

Figure 58: Callmedia Server CMAdvance Database Settings Screen

Accept the default parameters by clicking “Next”.

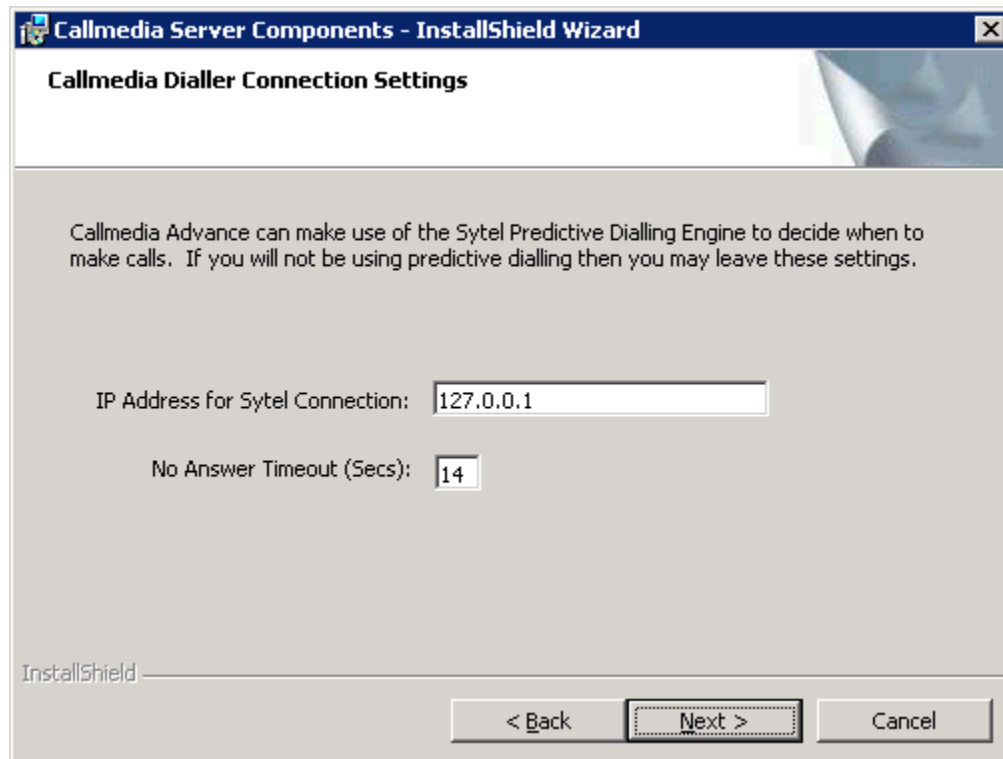


Figure 59: Callmedia Server Dialer Connection Screen

Click “Install”.

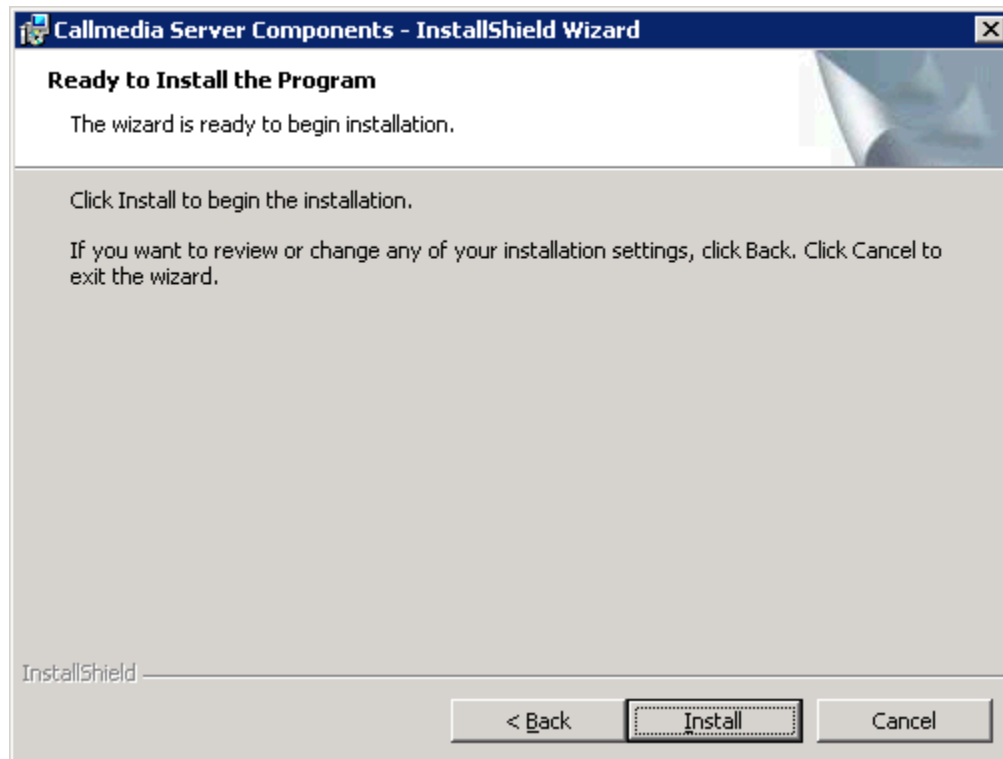


Figure 60: Callmedia Server Installation Initiation Screen

Set the “Start Type” of the *Callmedia* services shown below from the Windows “Services” applet which is reachable from “Start” -> “Control Panel” -> “Administrative Tools” -> “Services”. The “Callmedia Dialer” should have a “Startup Type” of “Manual”, and the remaining “Callmedia ...” services a “Startup Type” of “Automatic”. Reboot the *Callmedia* server and use the Windows “Services” applet to verify that all of the *Callmedia* services have a status of “Started”.

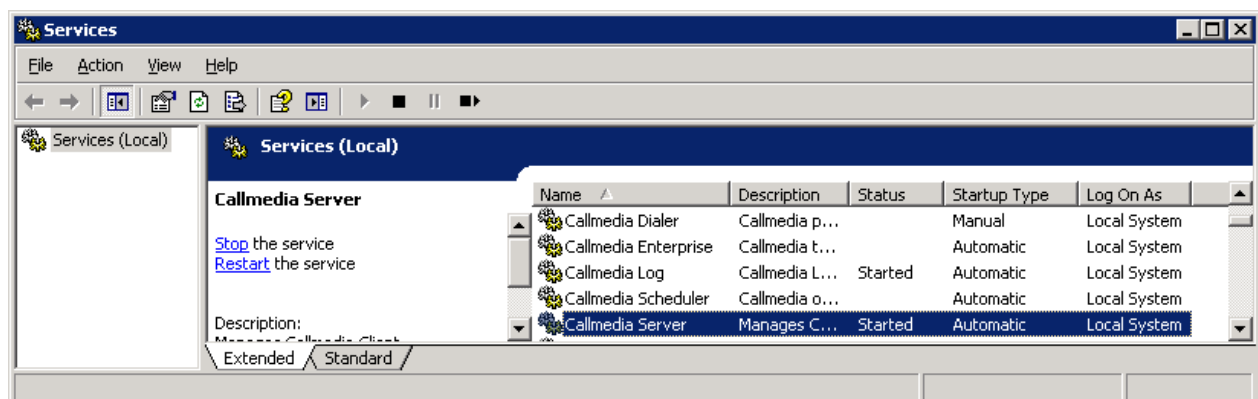


Figure 61: Callmedia Server Initiation Screen

3.3.6. Install Callmedia License

Note that Callmedia license is installed using the user interface offered by the Callmedia Client program. The Callmedia Client can also be installed on the server system to enable administrative actions to be performed on the server even though it is not used by a contact center agent. The instructions for installing the Callmedia Client are contained in **section 3.4**. After the Callmedia Client has been installed, login to the Callmedia Console with an appropriate user name and password.

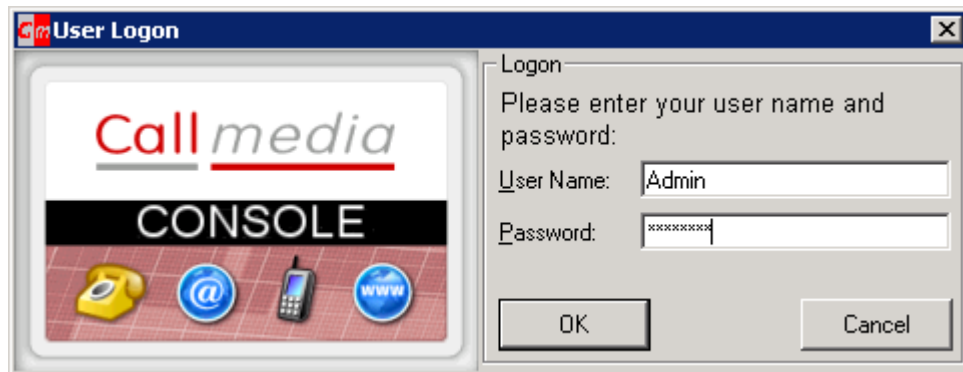


Figure 62: Callmedia License Install via Callmedia Console

Right-click on the “Licenses” icon and click “Modify”.

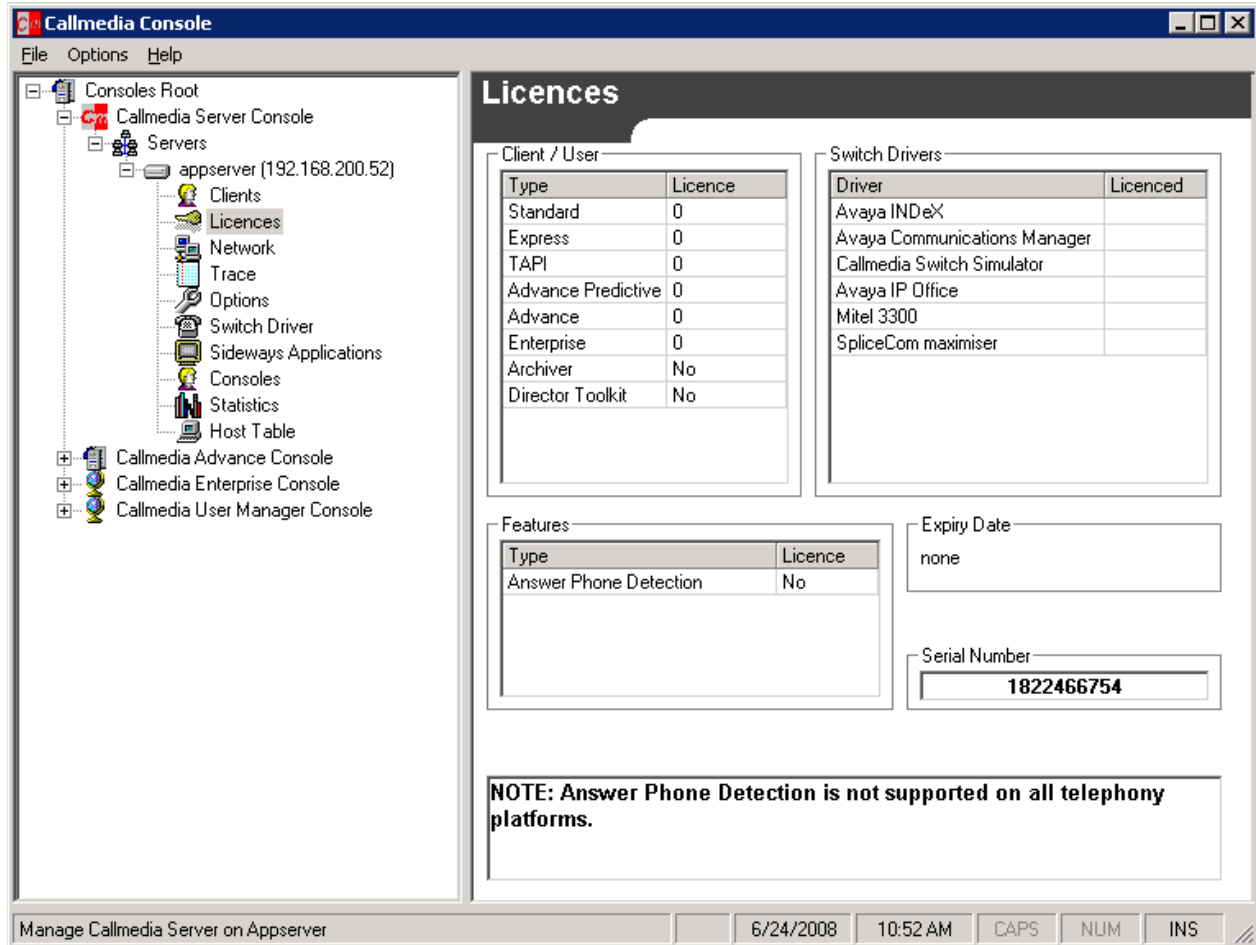


Figure 63: Callmedia License Installation Screen

Click “Yes”.

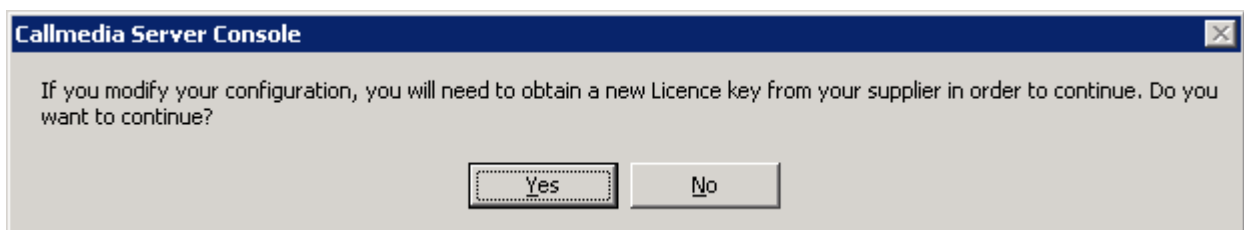


Figure 64: Callmedia License Modification Enquiry Screen

Set the “Client” and “User” counts to those values covered by the license, check the “Avaya Communications Manager” box, enter the “License Key”, and click “Modify”.

Modify Licence

Modify Licence

Client

Standard 10

Express 0

TAPI 0

User

Advance 10

Advance Predictive 0

Enterprise 10

Toolkits

Director Toolkit ☐

Archiver ☐

Switch Drivers

☐ Avaya INDeX

☒ Avaya Communications Manager

☐ Callmedia Switch Simulator

☐ Avaya IP Office

☐ Mitel 3300

☐ SpliceCom maximiser

Features

☐ Answer Phone Detection

Expiry Date

☐ Licence Expiry

No Expiry

Serial Number 1822466754

Enter new Licence Key → 360534630

Modify Cancel

Figure 65: Callmedia License Modification Enquiry Screen

Click “OK”.

Callmedia Server Console

Your licence key has been validated and your details have been updated

OK

Figure 66: Callmedia License Validation Notification Screen

3.3.7. Configure Callmedia Server Components

Use the Callmedia Client to configure the Callmedia Server components. The Callmedia Client can also be installed on the server system to enable administrative actions to be performed on the server even though it is not used by a contact center agent. The instructions for installing the Callmedia Client are contained in **section 3.4**.

Prior to configuring the individual Callmedia server components, execute the “Callmedia Config Tool” program which is installed in the “CMTools” directory during the installation process. From the “Services” branch select the “Enterprise” entry. Enter the address of the Callmedia server in the “Service IP Address” field.

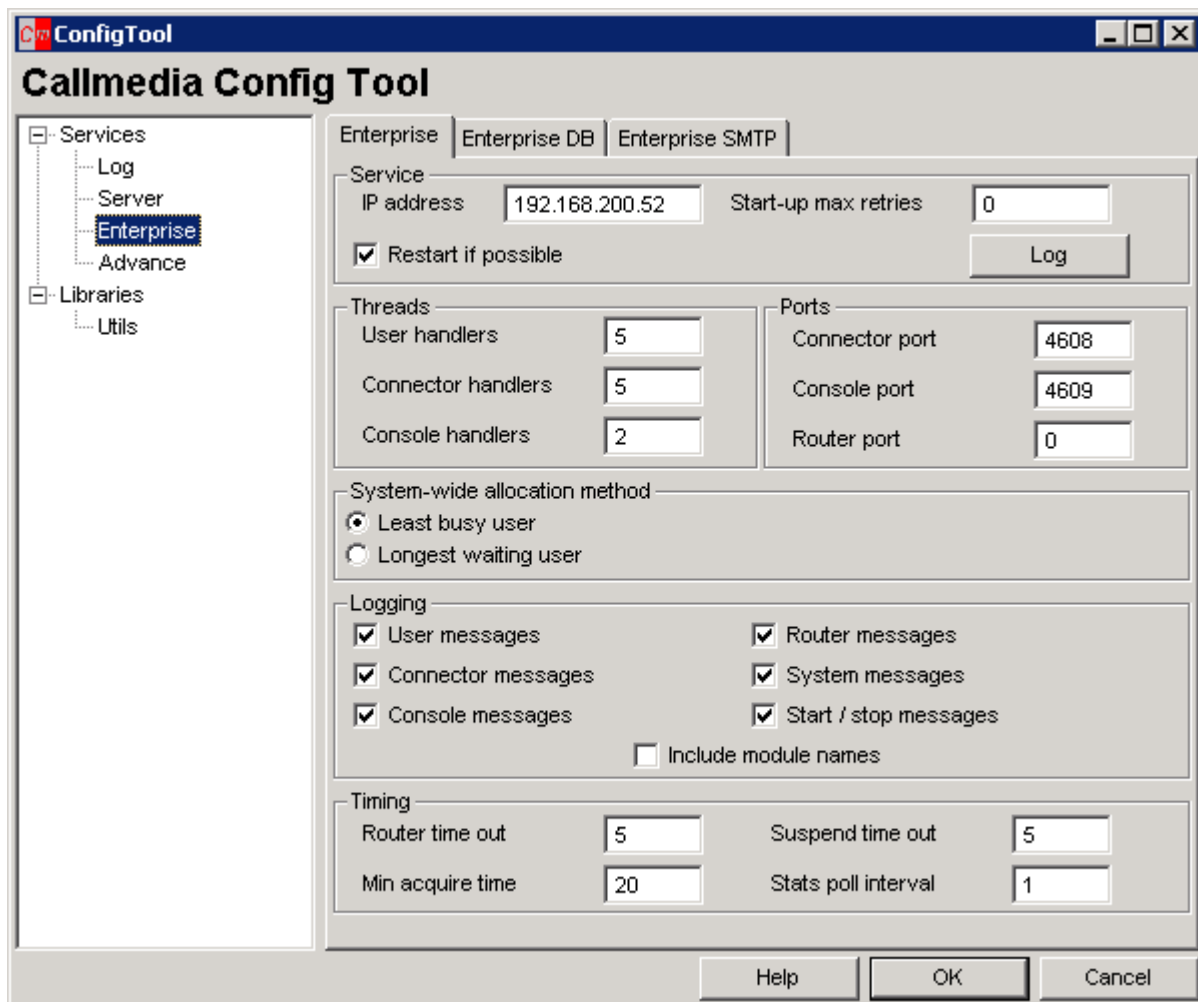


Figure 67: Callmedia Config Tool Enterprise Entry, Enterprise Tab Screen

Select the “Enterprise DB” tab, enter the parameters shown in the following table, and click “OK”.

Parameter	Usage
Server	Enter the name that was assigned to the server in Figure 46 followed by “\SQLEXPRESS” (this will vary if another database server is chosen).
Database	Enter “CMEnterprise”.
User name / Password	Leave these fields blank to use the Windows login instead of the database login.

Table 18: System-Parameters Features Parameters

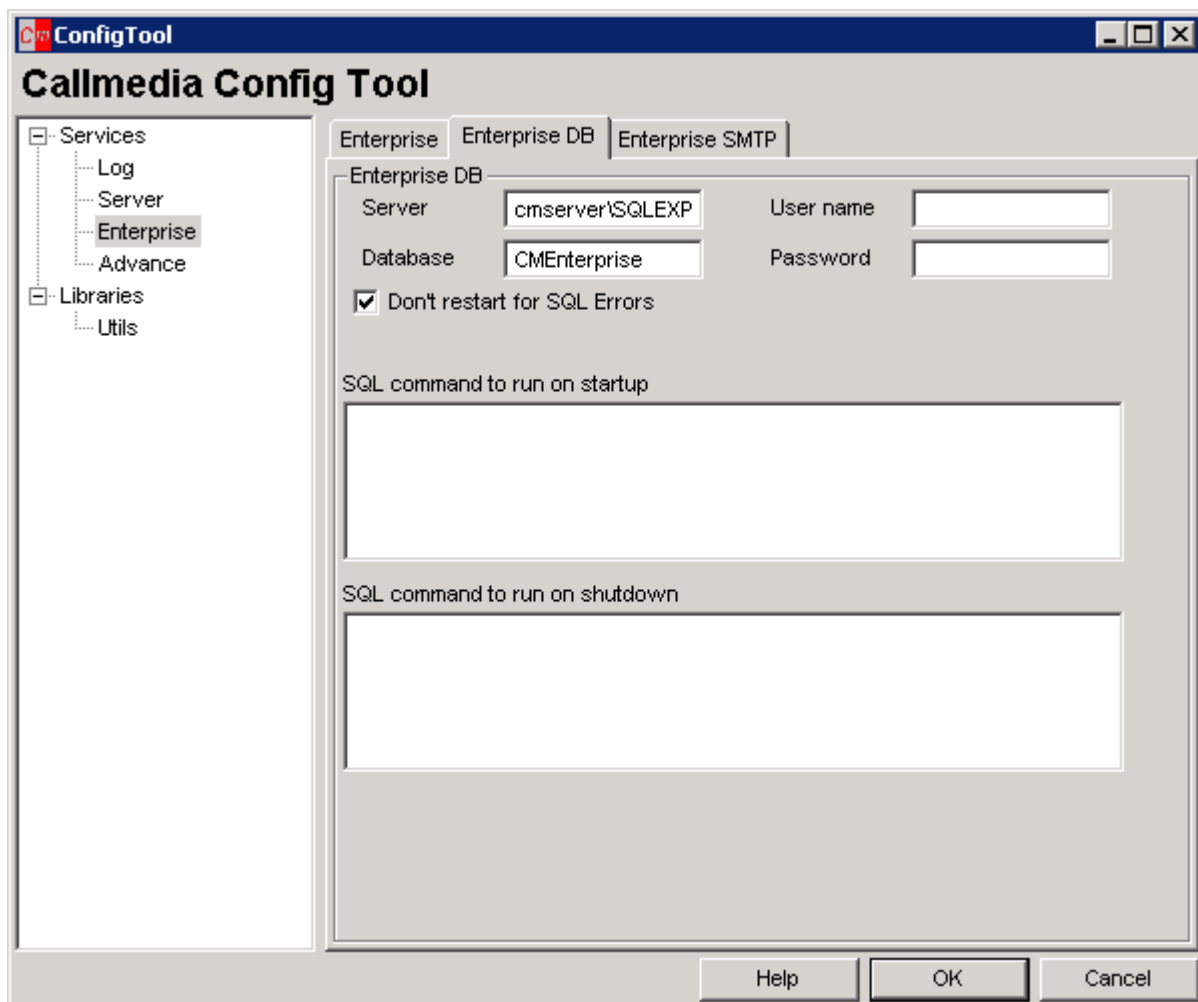


Figure 68: Callmedia Config Tool Enterprise Entry, Enterprise DB Tab Screen

Start the Enterprise server:

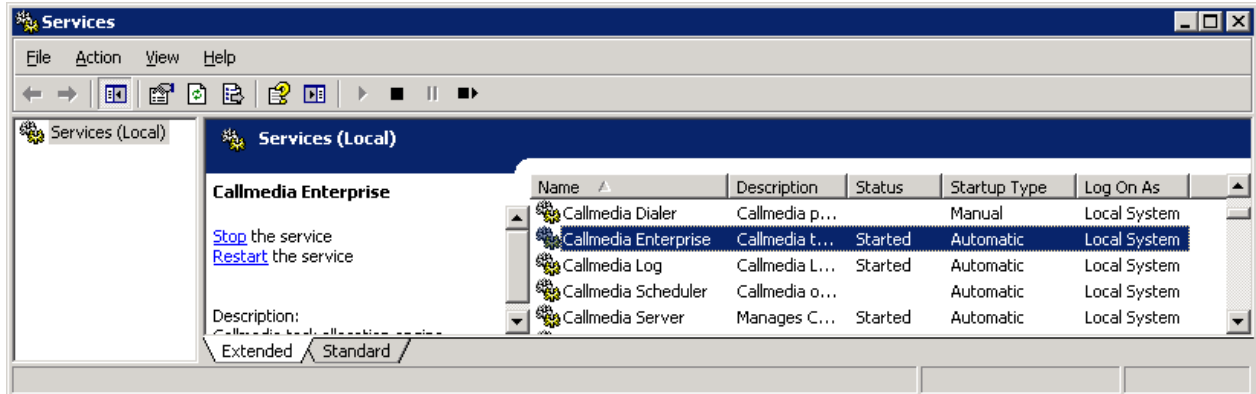


Figure 69: Callmedia Enterprise Server Start Screen

Start the Callmedia Console application from the Windows “Start” icon. Enter an appropriate “User Name” and “Password” and click “OK”.

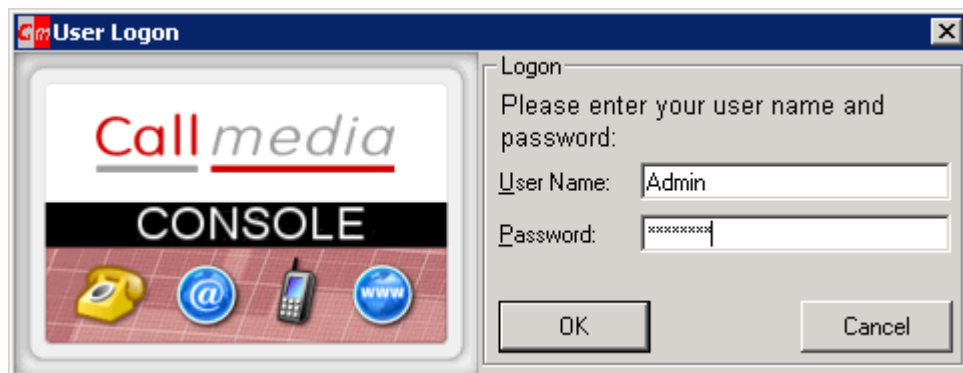


Figure 70: Callmedia Console Start Screen

3.3.7.1 Configure Callmedia Enterprise

Start the “Callmedia Console” program from the Windows “Start” icon. This program is located at "C:\Program Files\Callmedia\CMConsole\CMConsole.exe". Select the IP address of the Callmedia server from the “Callmedia Enterprise Console”. Right-click the “Managed Queues” entry to add the queue “Skill 1” as shown in the subsequent steps. Repeat this for “Skill 2”.

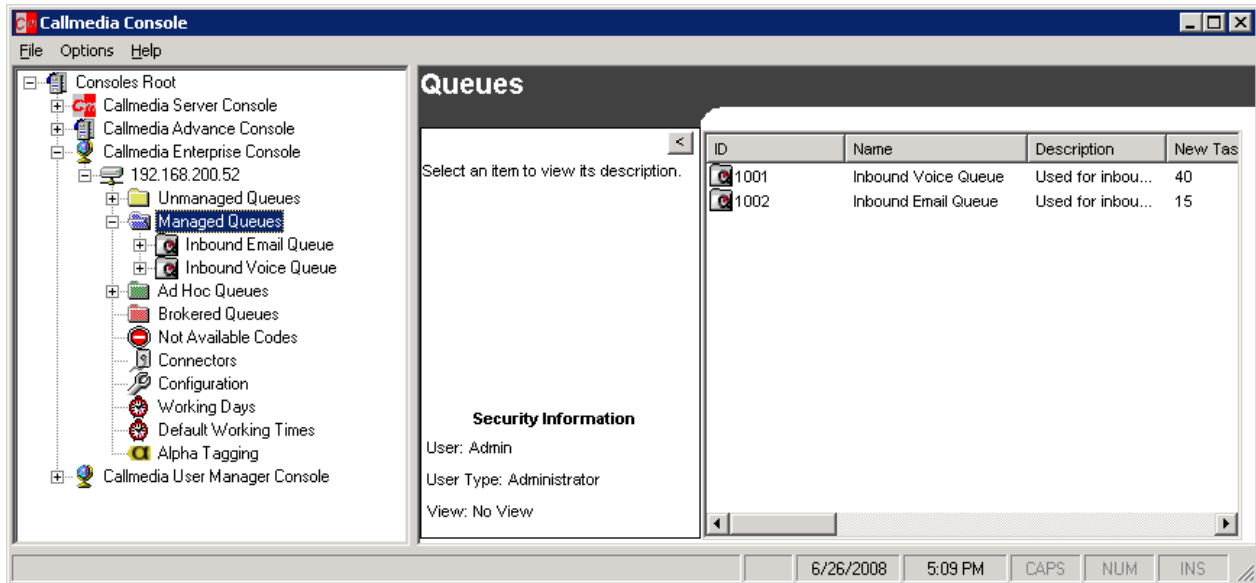
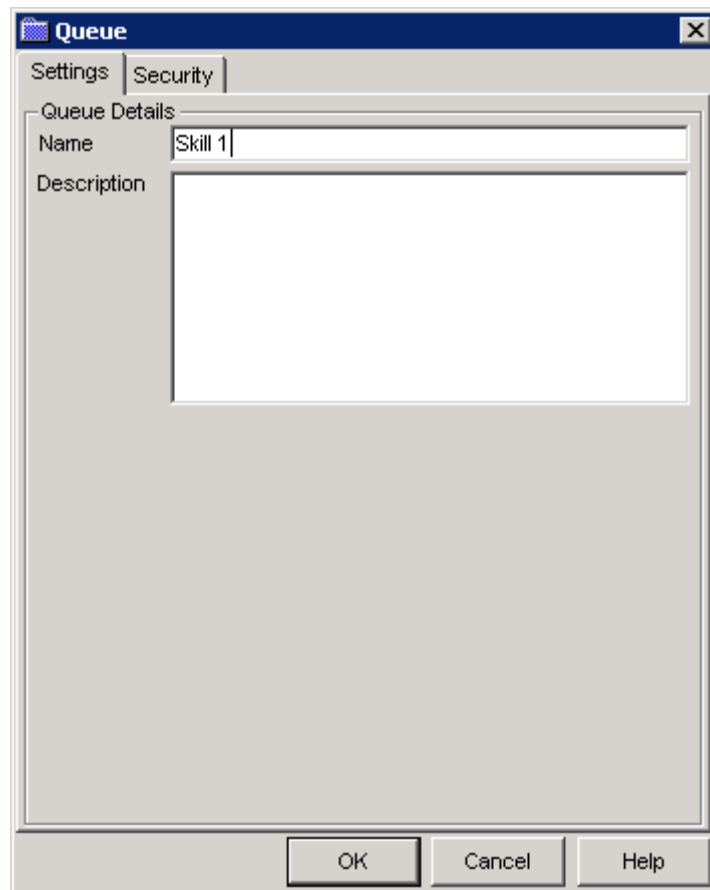


Figure 71: Callmedia Enterprise Managed Queues Screen

Click “New”, and enter the name of a new agent skill “Skill 1”, and click “OK”. This skill can be assigned to a Team of agents, (as shown in **Figure 76**), to be used as a selection criteria for incoming calls.



The image shows a Windows-style dialog box titled "Queue". It has two tabs: "Settings" (selected) and "Security". Under the "Settings" tab, there is a section labeled "Queue Details". This section contains two fields: "Name" and "Description". The "Name" field contains the text "Skill 1". The "Description" field is empty. At the bottom of the dialog box, there are three buttons: "OK", "Cancel", and "Help".

Figure 72: Callmedia Enterprise Managed Queues New Skill Screen

Right-click the “Voice Connector” entry from the “Connectors” menu item, and click “New”.

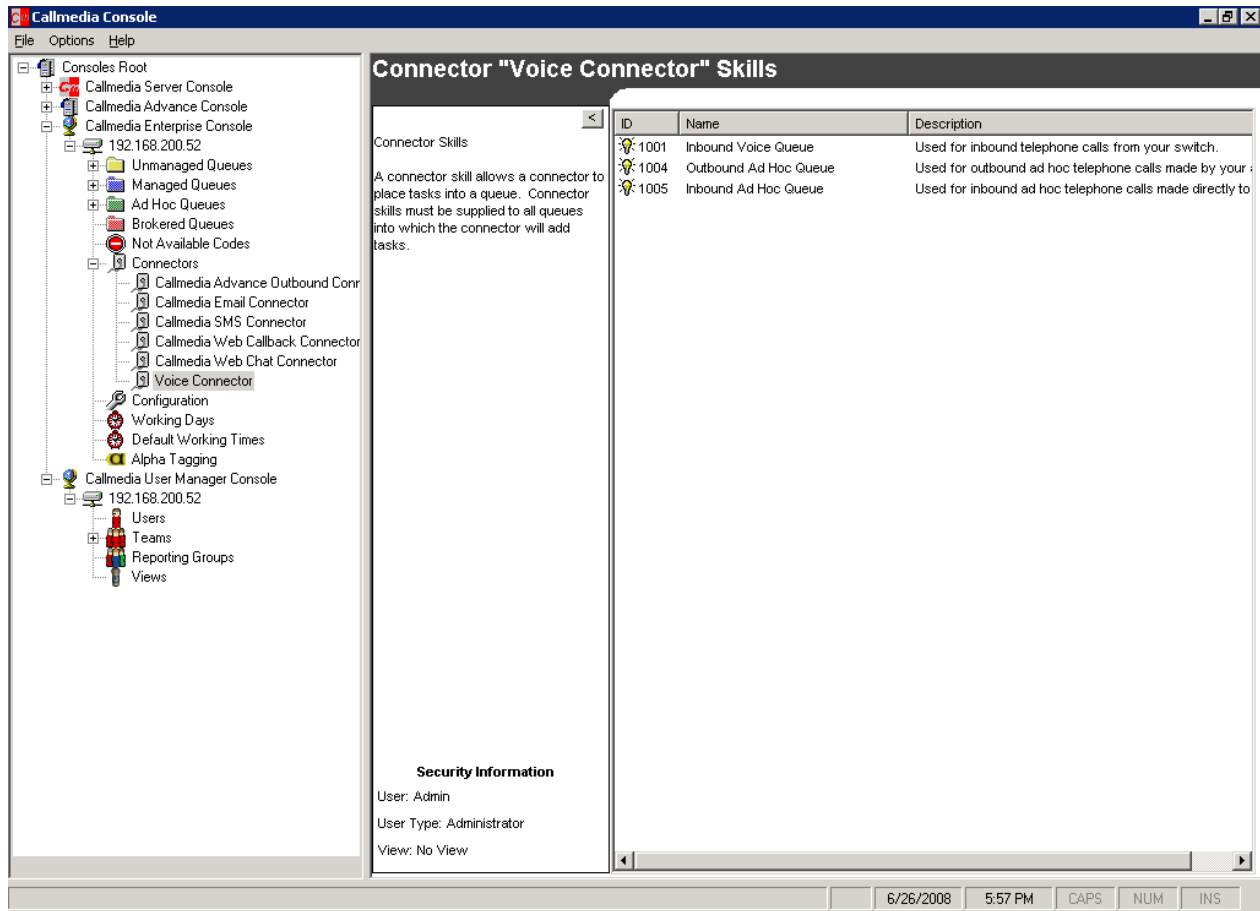


Figure 73: Callmedia Enterprise Voice Connector Screen

Check the boxes which correspond to the queues “Skill 1” and “Skill 2” which were created in **Figure 72**, and click “OK”.

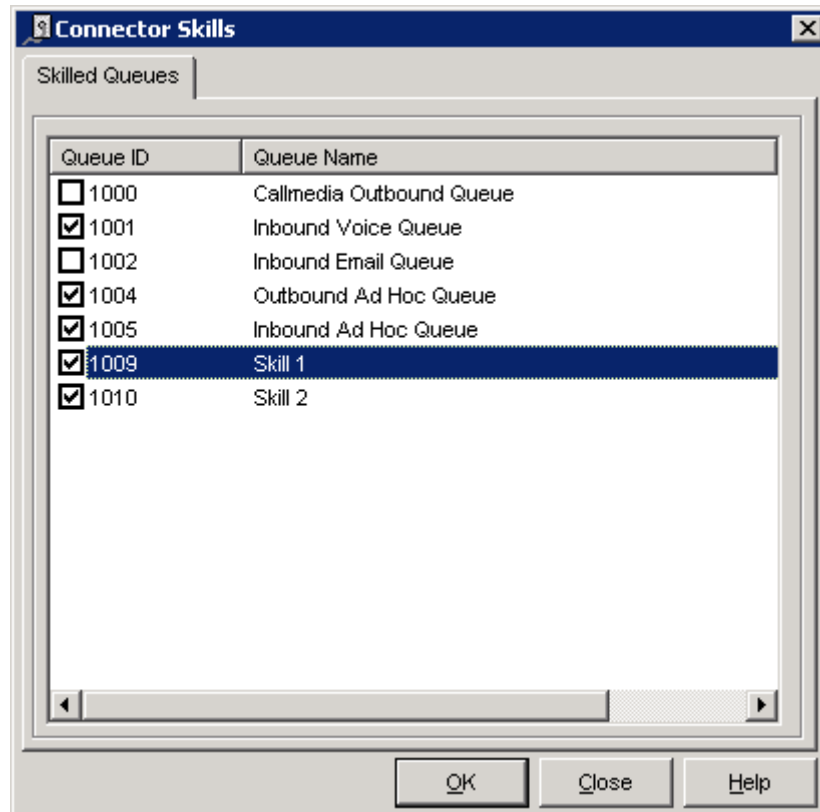


Figure 74: Callmedia Enterprise Connector Skills Screen

The newly created skills are now shown in the “Voice Connector” list.

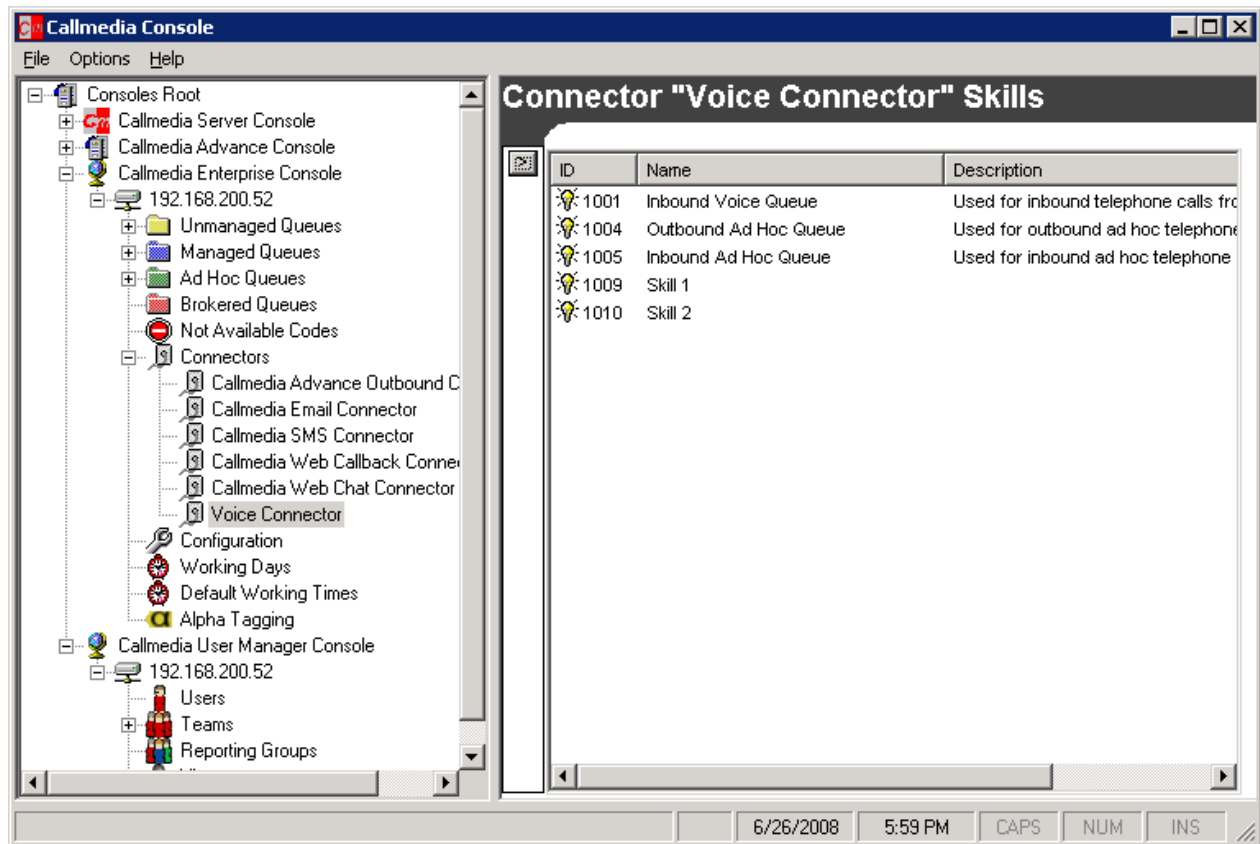


Figure 75: Callmedia Enterprise Voice Connector New Skills Screen

3.3.7.2 Configure Callmedia User Manager

Expand the “Callmedia User Manager Console” item in the left frame. Right-click the “Teams” icon and select “new”.

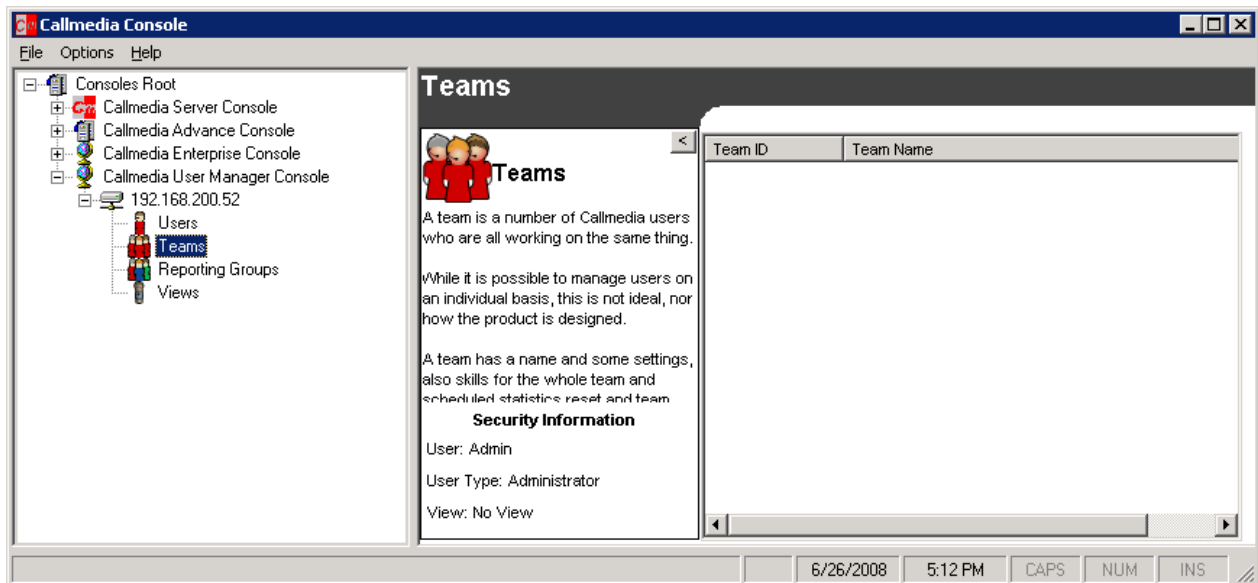


Figure 76: Callmedia Teams Screen

Allocate a new team by entering the parameters shown in the following table.

Parameter	Usage
Team Name	Enter a descriptive name to identify the team.
Team Type	Select “Advance Preview/Progressive” from the drop-down box.

Table 19: System-Parameters Features Parameters

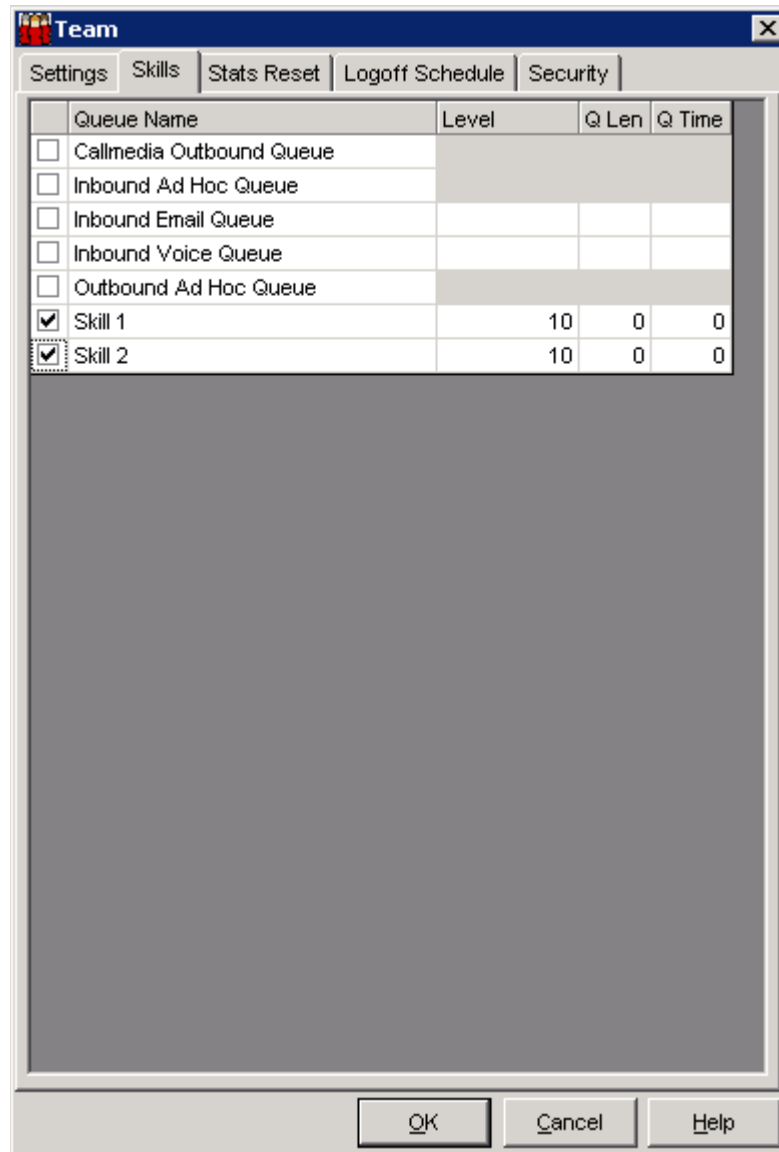
The screenshot displays the 'Team' configuration window with the following sections and values:

- General Settings:**
 - Team Name: Team A
 - ☐ Ignore wrap up timeout
 - ☐ Show recall timeout
- Advance Settings:**
 - Team Type: Advance Preview/Progressive
 - Call Selection Rules: (empty dropdown)
- Dialer Metrics:**
 - Abandoned Call Target: 3 (From 0.0 to 3.0%)
 - Abandoned Call Measurement Criteria: Percentage of live and abandoned calls
 - Abandoned Call Delay: 2 (From 0 to 2 seconds)
 - Estimated Talk Time: 1 (Minutes)

Buttons at the bottom: OK, Cancel, Help.

Figure 77: Callmedia Team Allocation Screen

In the “Skills” tab, check the boxes corresponding to the skills that the members of the team have, and click “OK”.



The screenshot shows a window titled "Team" with a tabbed interface. The "Skills" tab is selected. It contains a table with columns: Queue Name, Level, Q Len, and Q Time. The table lists several queues and two skills. The "Skill 1" and "Skill 2" rows are checked, indicating they are assigned to the team. The "Q Len" and "Q Time" columns show values of 10 and 0 respectively for both skills.

Queue Name	Level	Q Len	Q Time
<input type="checkbox"/> Callmedia Outbound Queue			
<input type="checkbox"/> Inbound Ad Hoc Queue			
<input type="checkbox"/> Inbound Email Queue			
<input type="checkbox"/> Inbound Voice Queue			
<input type="checkbox"/> Outbound Ad Hoc Queue			
<input checked="" type="checkbox"/> Skill 1	10	0	0
<input checked="" type="checkbox"/> Skill 2	10	0	0

At the bottom of the window are three buttons: OK, Cancel, and Help.

Figure 78: Callmedia Team Allocation Screen

Right-click the “Users” icon and click “New”.

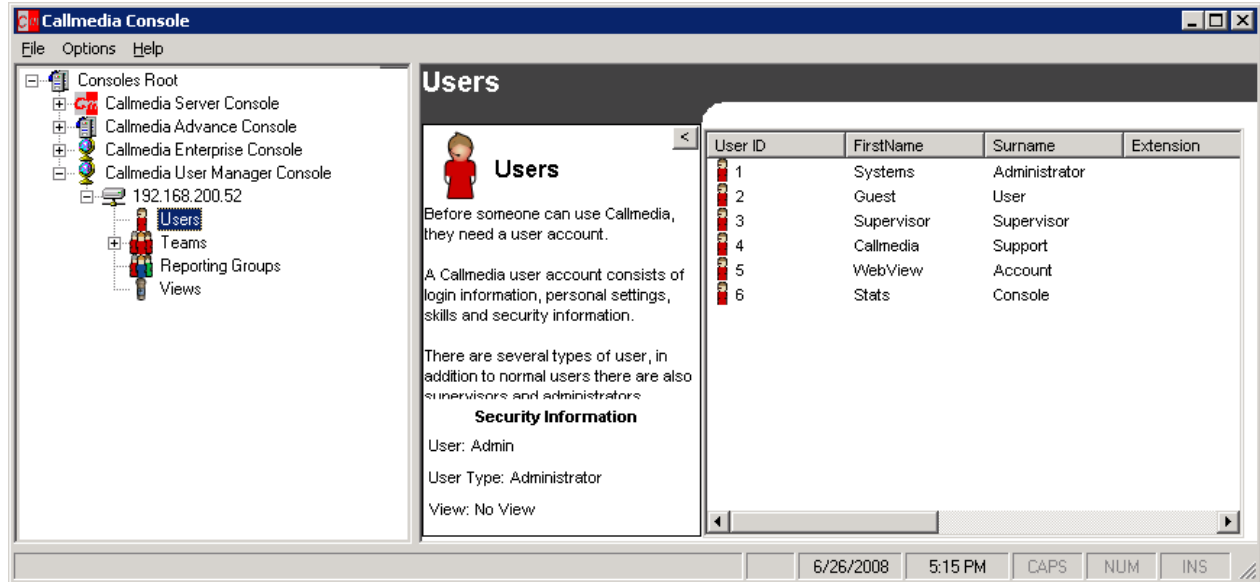


Figure 79: Callmedia Users Screen

Allocate a new user by entering the parameters shown in the following table. Click “OK”.

Parameter	Usage
Logon ID / Password	Select an appropriate ID / password for the user.
Firstname	Enter the agent’s first name.
Surname	Enter the agent’s last name.
Team	Select the team to which the agent is to be assigned from this drop-down list.

Table 20: System-Parameters Features Parameters

User

Settings | Skills | Stats Reset | Security

System Information

Logon ID: agent1

Password: *****

Ignore wrap up timeout: ☐

Personal Details

Firstname: agent

Surname: one

Email Address:

SMS:

Comments:

Membership Information

Reporting Group: <= None =>

Team: Team A

Advance User Type:

Connector Information

Description	Value
Agent ID	
Agent Password	
PCS Password	
Auto Answer	

☐ Keep Window Open

OK Cancel Help

Figure 80: Callmedia User Allocation Screen

3.3.7.3 Configure Callmedia Switch Driver

Expand the “Callmedia Server Console” item in the left frame. Select the “Switch Driver” icon and click “Change”.

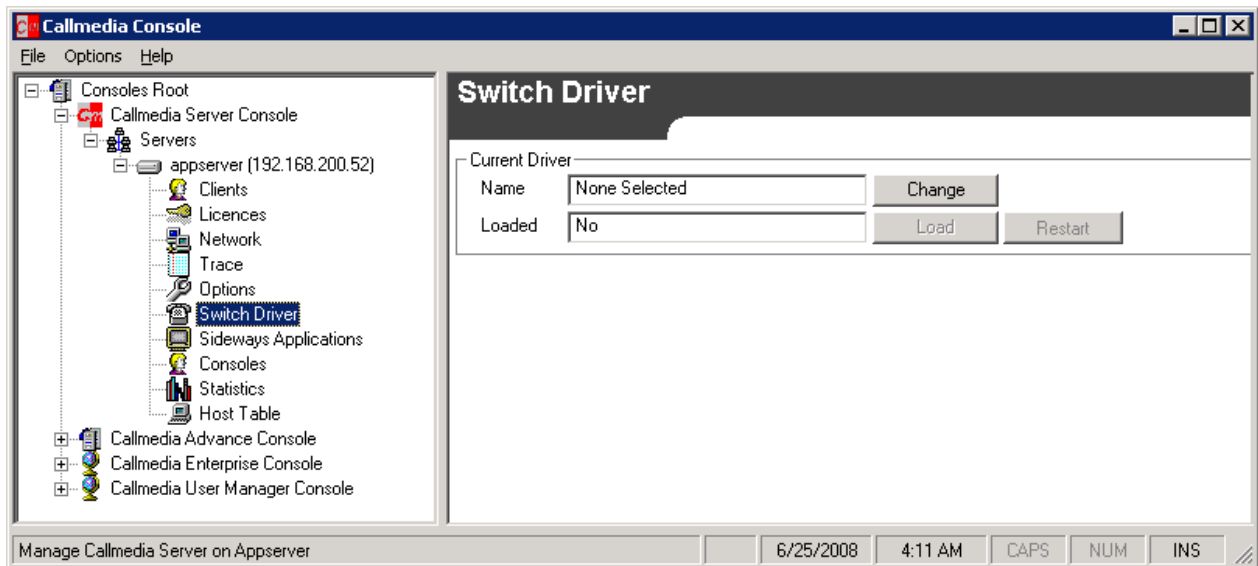


Figure 81: Callmedia Switch Driver Screen

Select “Avaya Communications Manager” from the drop-down menu and click “OK”.

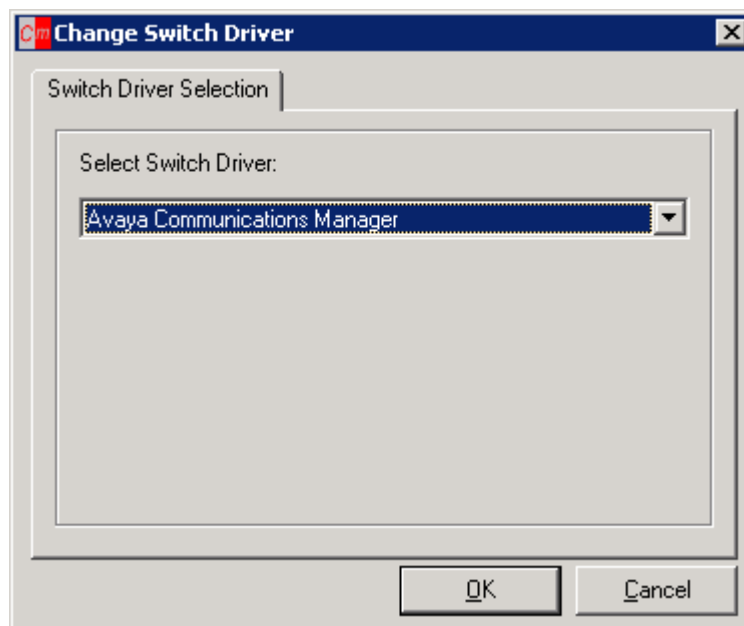


Figure 82: Callmedia Switch Driver Selection Screen

Click “load”.

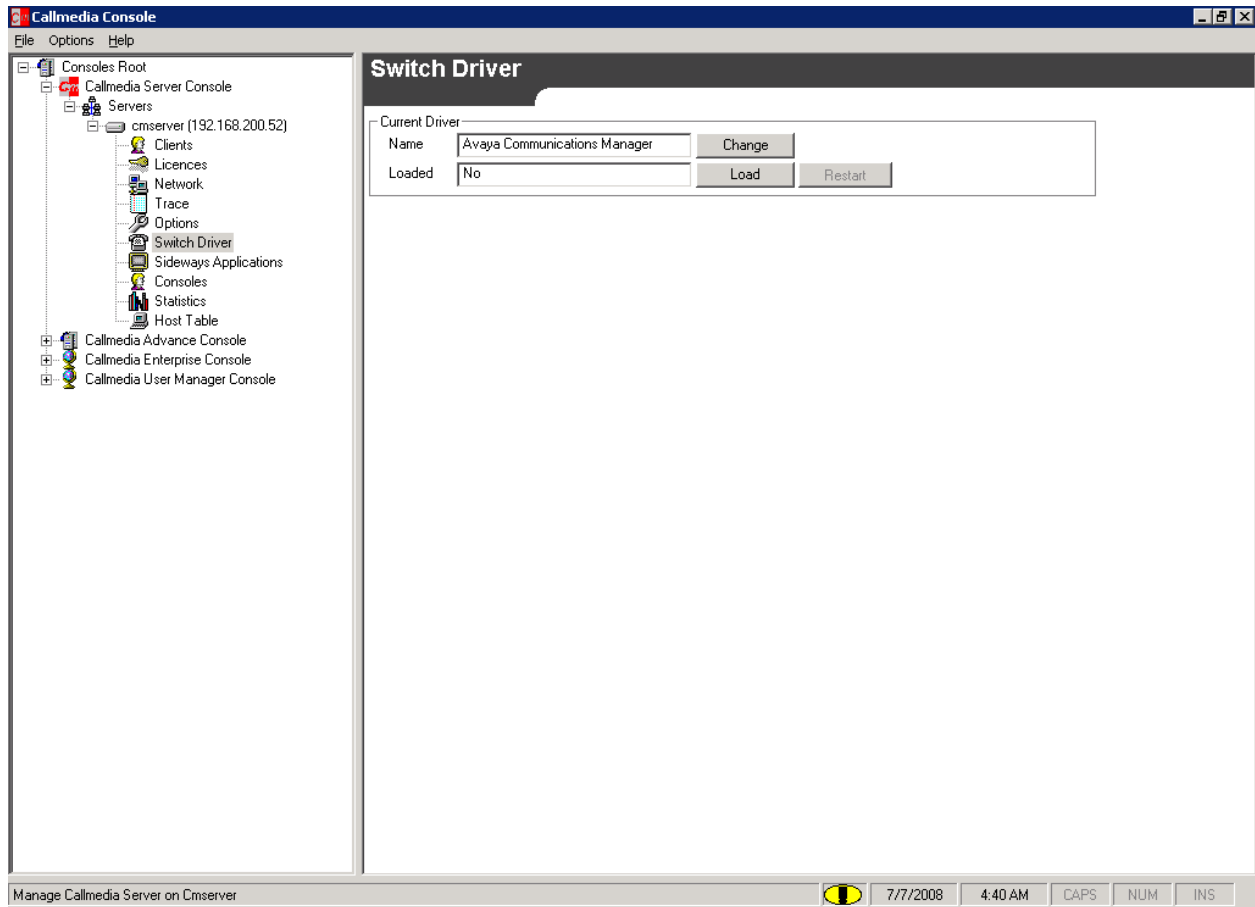


Figure 83: Callmedia Switch Driver Load Screen

Click “Settings”.

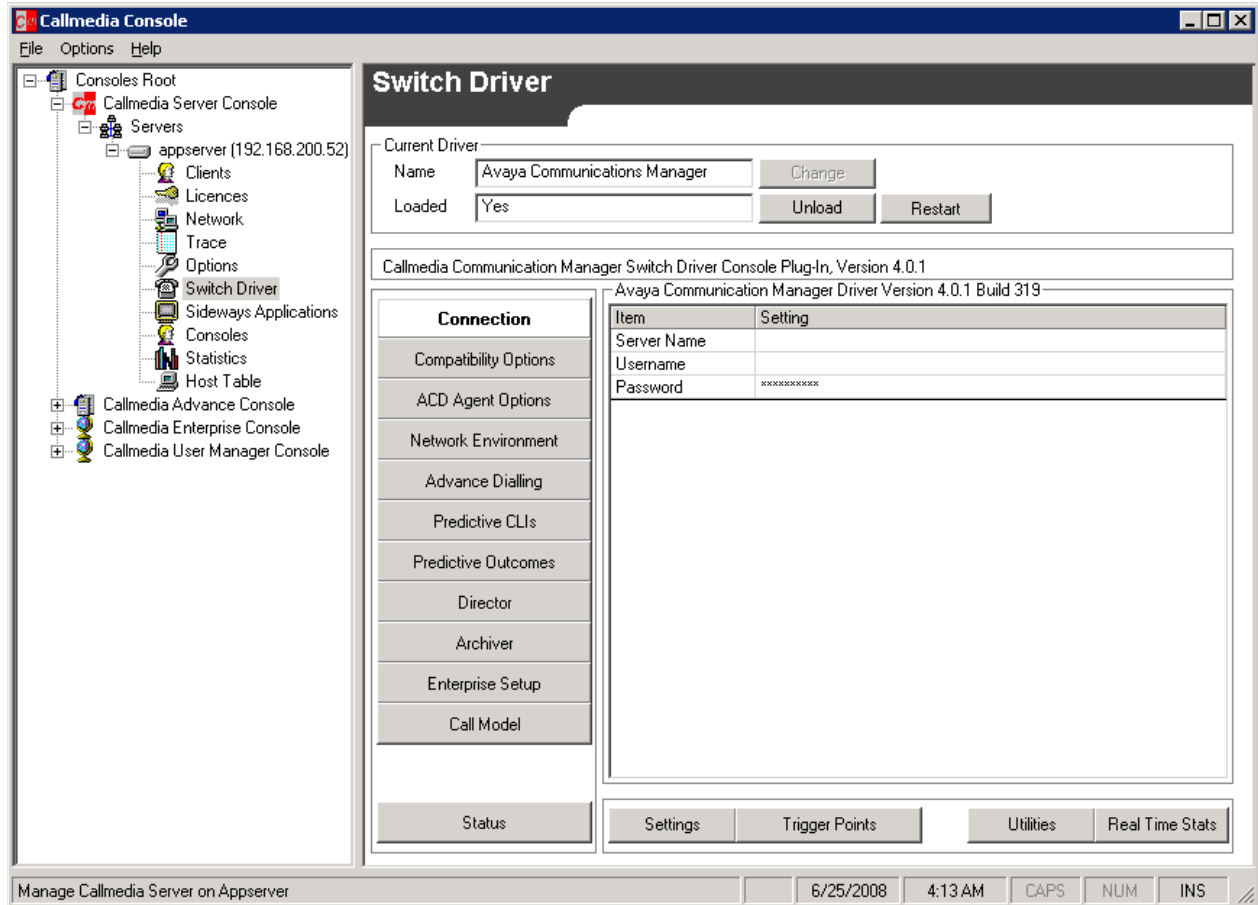


Figure 84: Callmedia Switch Driver Settings Selection Screen

Allocate a new user by entering the parameters shown in the following table and click “OK”.

Parameter	Usage
Server	From entry corresponding to the Avaya Communication Manager system to be used from the drop-down menu.
User Name / Password	Enter the AES user name and password which were allocated for <i>Callmedia</i> in Figure 44 .

Table 21: Communication Manager Driver Settings

Figure 85: Callmedia Switch Driver Communication Manager Driver Settings Screen

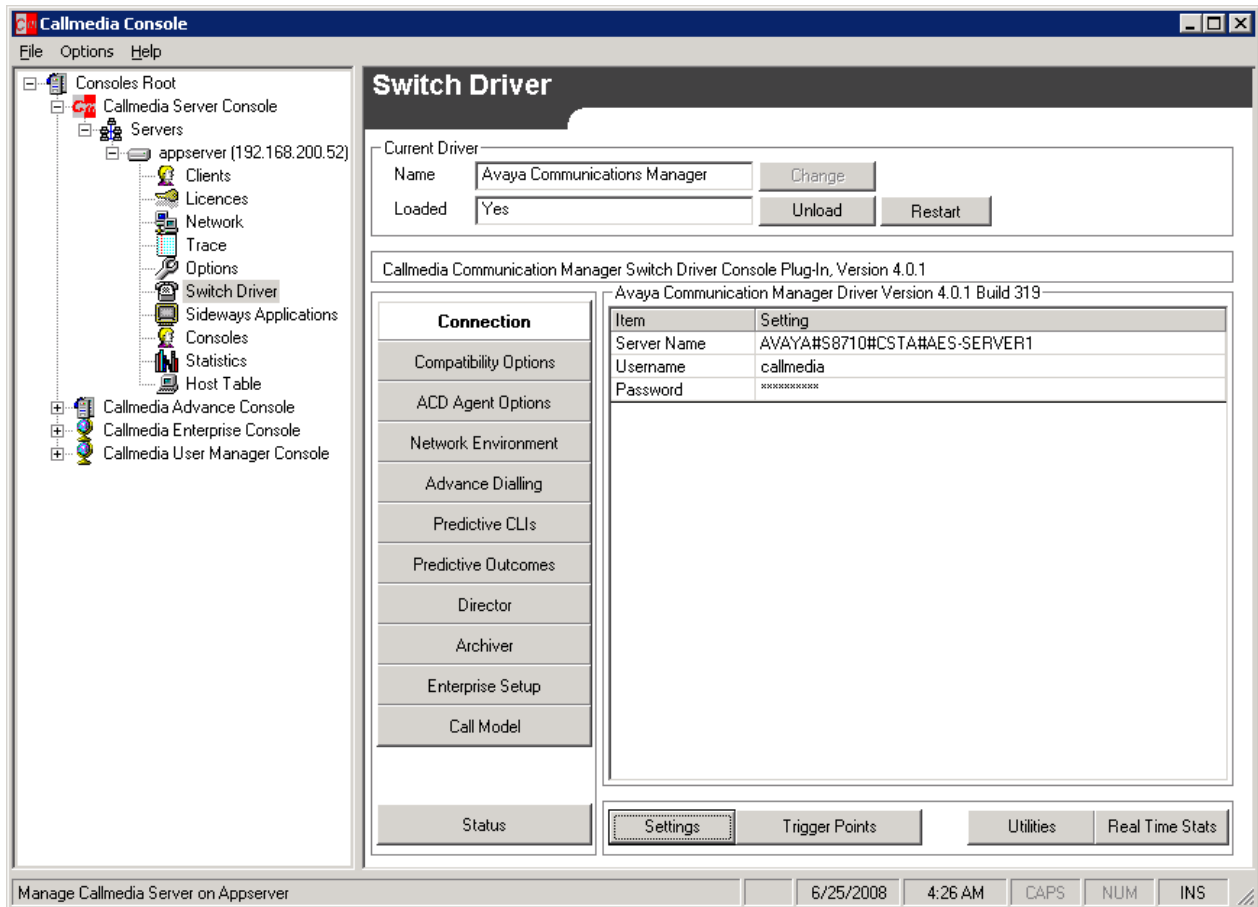


Figure 86: Callmedia Switch Driver Settings Screen

Click “Status” to view the current status of the connection to switch.

The screenshot displays the Callmedia Console application. The left sidebar shows a tree view with the following structure:

- Consoles Root
 - Callmedia Server Console
 - Servers
 - appserver (192.168.200.52)
 - Clients
 - Licences
 - Network
 - Trace
 - Options
 - Switch Driver (selected)
 - Sideways Applications
 - Consoles
 - Statistics
 - Host Table
 - Callmedia Advance Console
 - Callmedia Enterprise Console
 - Callmedia User Manager Console

The main content area is titled "Switch Driver". It contains the following sections:

- Current Driver:**
 - Name: Avaya Communications Manager (with a "Change" button)
 - Loaded: Yes (with "Unload" and "Restart" buttons)
- Callmedia Communication Manager Switch Driver Console Plug-In, Version 4.0.1**
- Avaya Communication Manager Driver Version 4.0.1 Build 319**
- Table:**

Item	Setting	Status
TServer	AVAYA#S8710#CSTA#AE	OK
TServer Version		4.1.0 Build 327
Driver Version		4.1.0 Build 327
Library Version		AES4.2.0 Build 267
TSAPI Version	Communication Manager	3.1
API Version		ST2
Private Data Version		6
Basic Licences	AES	0
UCID		Not Known (No Events)
Predictive VDNs	None	
Archiver VDNs	0 VDNs	None
Director VDNs	0 VDNs	None
Enterprise	192.168.200.52:4608 ID:1	Disabled
- Navigation Buttons:**
 - Connection
 - Compatibility Options
 - ACD Agent Options
 - Network Environment
 - Advance Dialling
 - Predictive CLIs
 - Predictive Outcomes
 - Director
 - Archiver
 - Enterprise Setup
 - Call Model
 - Status** (highlighted)
 - Settings
 - Trigger Points
 - Utilities
 - Real Time Stats

The bottom status bar shows: "Manage Callmedia Server on Appserver" | 6/25/2008 | 4:26 AM | CAPS | NUM | INS

Figure 87: Callmedia Switch Driver Status Screen

Select “Enterprise Setup” and click “Settings”.

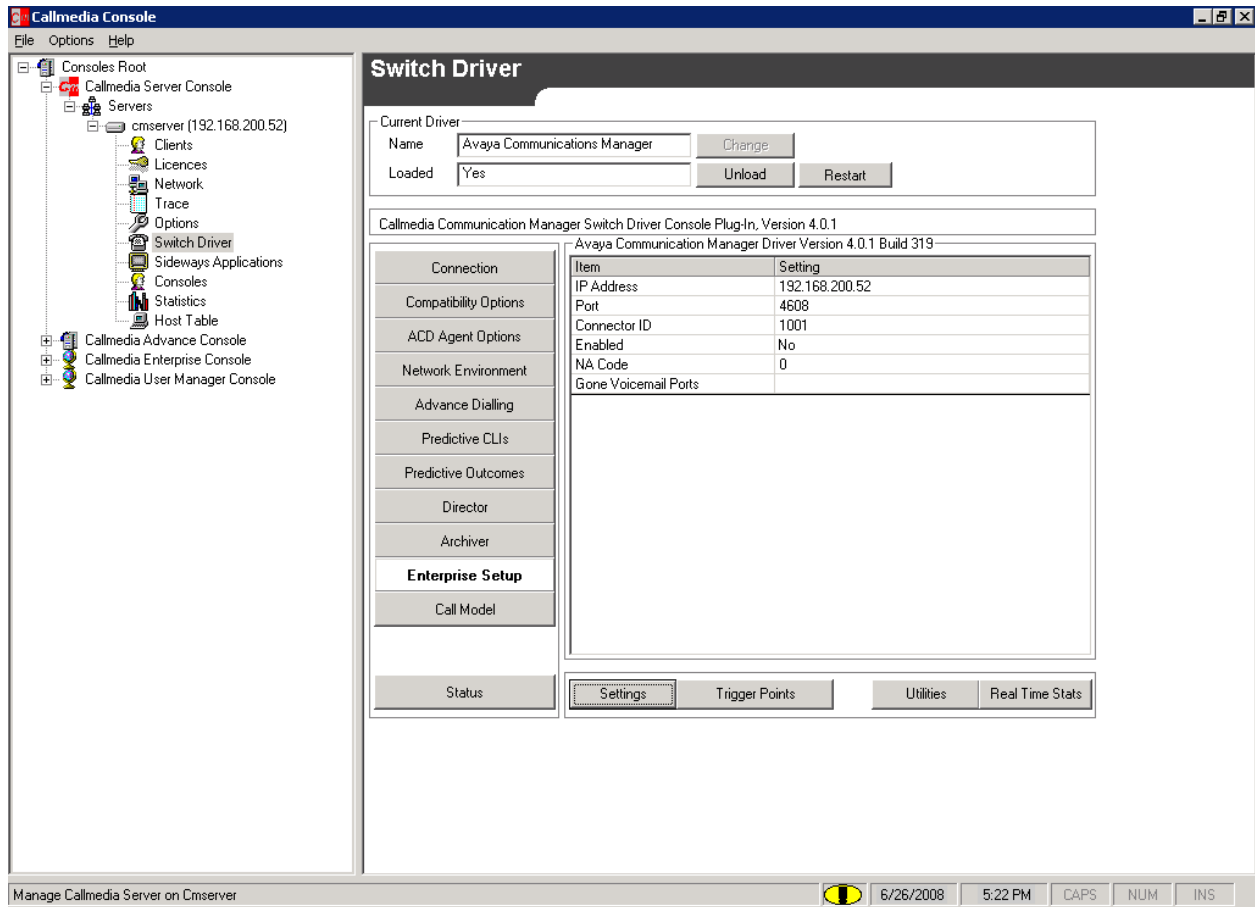


Figure 88: Callmedia Switch Driver Enterprise Settings Selection Screen

Configure the Avaya Communication Manager Driver settings by entering the parameters shown in the following table and click “OK”.

Parameter	Usage
Enterprise IP Address	Enter the IP address of the <i>Callmedia</i> server.
Port	Accept the default parameter.
Connector ID	Accept the default parameter.
Enabled	Check this box.

Table 22: Communication Manager Driver Settings

The screenshot shows the 'Callmedia Avaya Communication Manager Driver Configuration' window with the 'Enterprise' tab selected. The window has a title bar with a close button. Below the title bar are two rows of tabs: 'Connection', 'Compatibility', 'ACD Agents', 'Network', 'Advance', 'Outcomes' in the first row, and 'Director', 'Archiver', 'Trunk Groups', 'Enterprise', 'Call Model' in the second row. The 'Enterprise' tab is active. The main area contains several settings: 'Enterprise IP Address' (192.168.200.52), 'Port' (4608), 'Connector ID' (1001), 'Enabled' (checked), 'Not Available Codes' section with 'Enterprise NA Code' (0), 'Auto Answer Enterprise Voice Tasks' (checked), and a 'Task Gone Reasons' section with 'Voicemail Ports' (empty). A red note at the bottom states: 'Items in red will only take effect after the switch driver is restarted'. At the bottom right are 'OK' and 'Cancel' buttons.

Figure 89: Callmedia Switch Driver Enterprise Settings Screen

Select the “Switch Driver” entry from the “Callmedia Server Console” entry for the server being configured. Click the “Trigger Points” button.

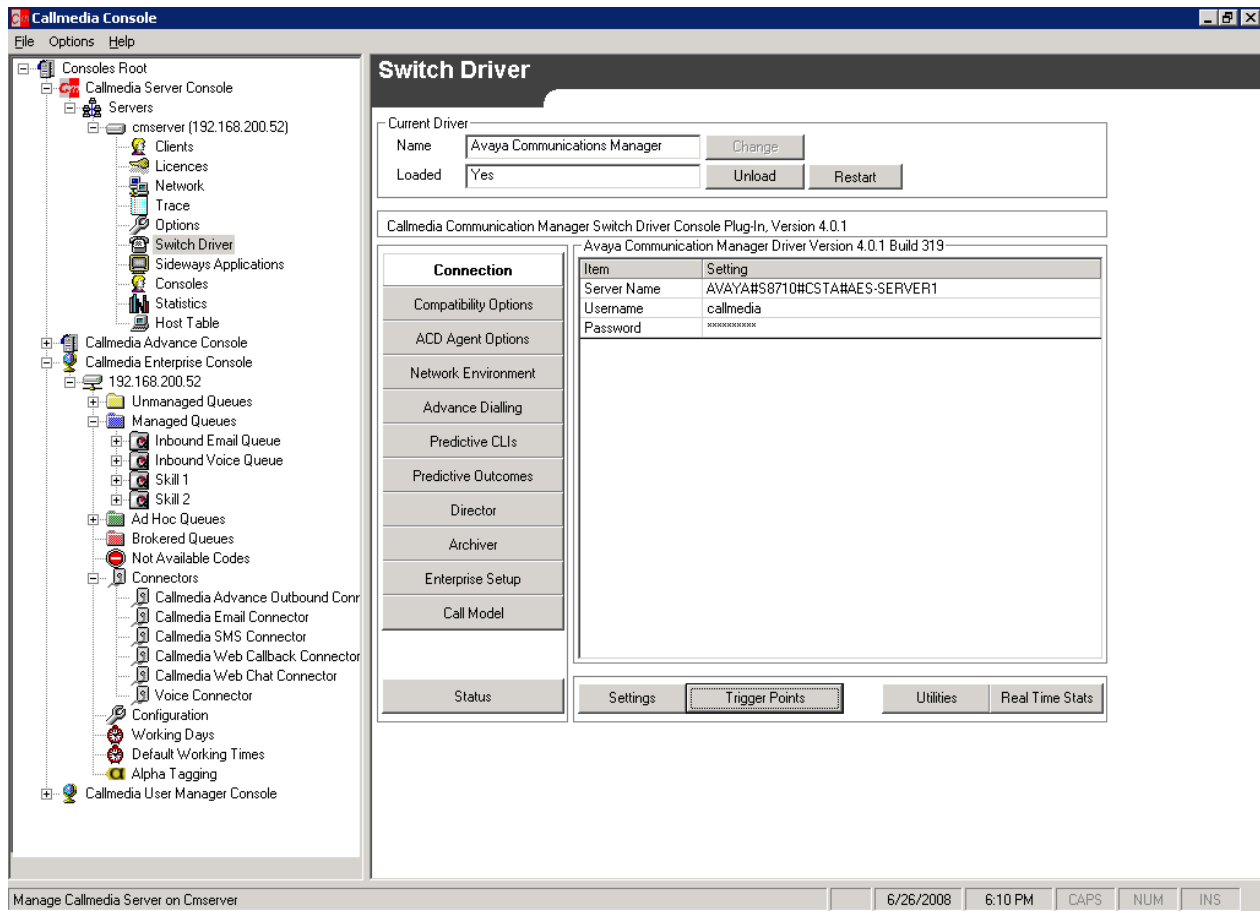


Figure 90: Callmedia Switch Driver Trigger Point Selection Screen

Click “Add”.

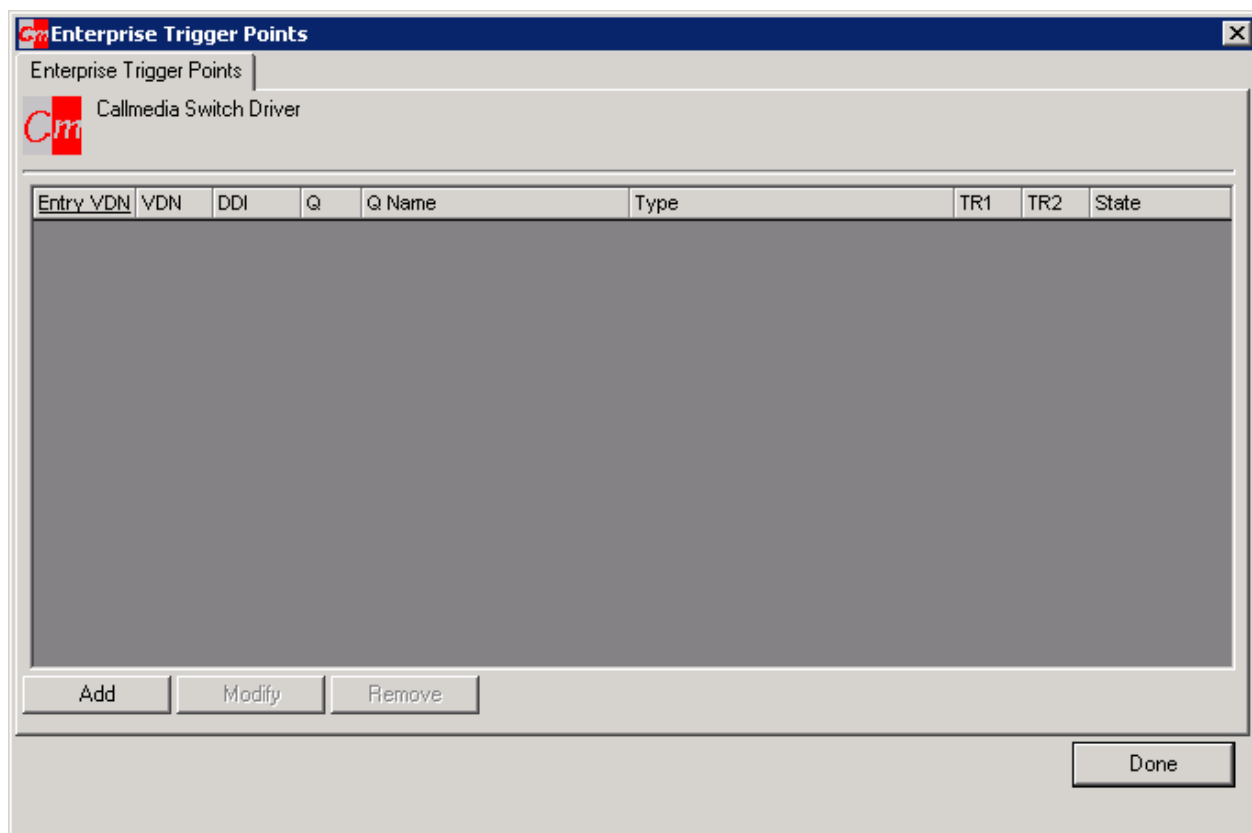


Figure 91: Callmedia Switch Driver Trigger Point List Screen

Select a skill which is to be used as a trigger point. In this case, “Skill 1” is selected. Click “Next”.

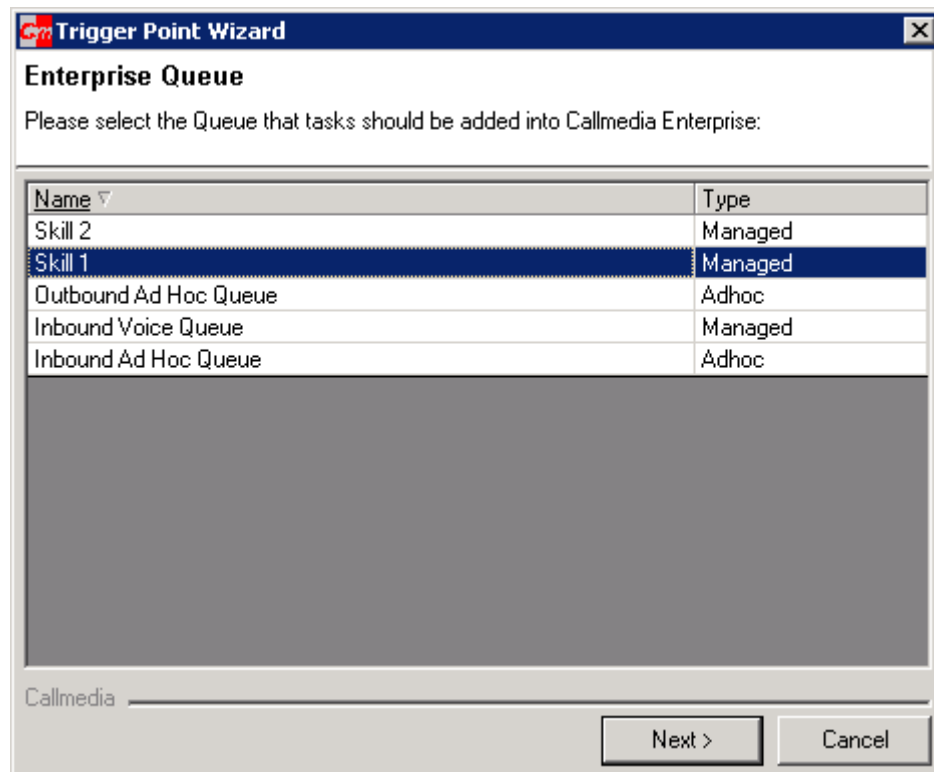


Figure 92: Callmedia Switch Driver Trigger Point List Screen

Set the VDN to be used to connect this queue to the switch, using the parameters shown in the following table.

Parameter	Usage
Managed Queue VDN Settings	Enter the VDN which is used for incoming calls for this skill, as defined in Figure 33 .
Queueing VDN	Enter the VDN which is used for calls which are queued for this skill, as defined in Figure 35 .

Table 23: Switch Driver Trigger Point VDN Parameters

Trigger Point Wizard

VDN
Please enter the VDN Settings

Managed Queue VDN Settings
This VDN should have an adjunct step and route elsewhere after a timeout.
Entry VDN

Queueing VDN
This VDN should have an adjunct step then loop until the call is routed to an agent by Enterprise.
VDN

DDI

Only respond to calls with this DDI

Callmedia

< Back Next > Cancel

Figure 93: Callmedia Switch Driver Trigger Point VDN Screen

Select extensions which are to be used for various errors which can prevent normal call flow. For each of these error conditions, select the “Overflow” extension show in **Table 1**, and click “Next”.

Trigger Point Wizard

Alternative Routes

Please enter alternative destinations for occasions when the task cannot be taken by Enterprise

Out of Queue working hours	<input type="text" value="10126"/>	*
No Skilled Users	<input type="text" value="10126"/>	*
Queue Full	<input type="text" value="10126"/>	*
Task Wait Exceeded	<input type="text" value="10126"/>	*

Callmedia Enterprise not connected (Blank) No Action

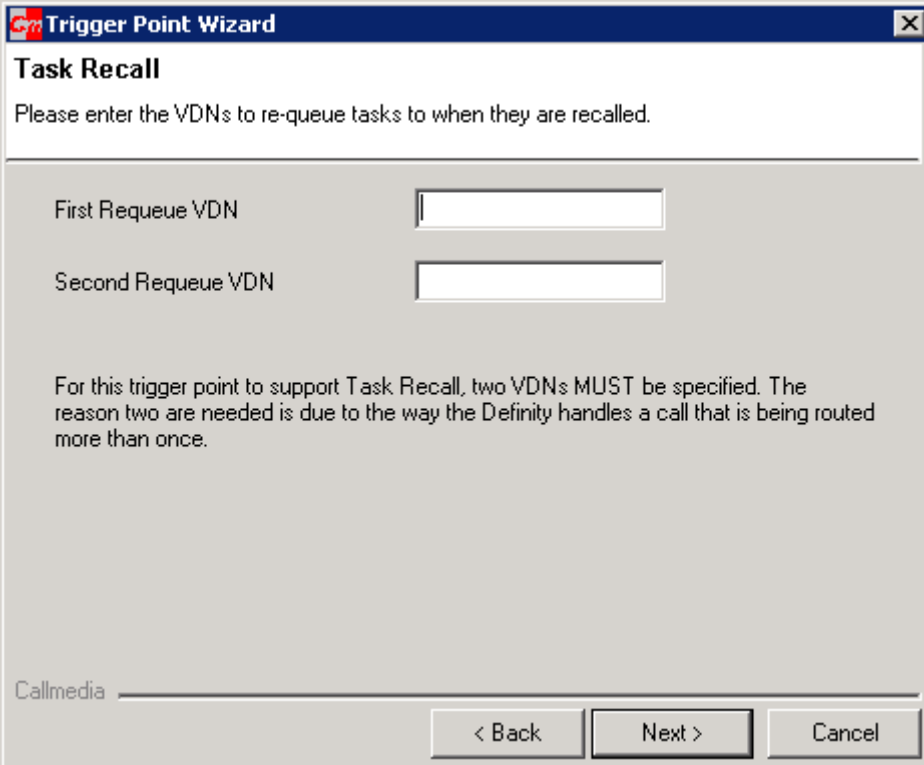
* Check Queue settings are correct for these routes to be used

Callmedia

< Back Next > Cancel

Figure 94: Callmedia Switch Driver Trigger Point Alternate Route Screen

Leave the fields in this form blank and click “Next”.



The screenshot shows a window titled "Trigger Point Wizard" with a close button in the top right corner. The main heading is "Task Recall". Below the heading is a text instruction: "Please enter the VDNs to re-queue tasks to when they are recalled." There are two input fields: "First Requeue VDN" and "Second Requeue VDN", both of which are currently empty. Below these fields is a paragraph of explanatory text: "For this trigger point to support Task Recall, two VDNs MUST be specified. The reason two are needed is due to the way the Definity handles a call that is being routed more than once." At the bottom left, the "Callmedia" logo is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 95: Callmedia Switch Driver Trigger Point Alternate Route Screen

Click “Finish” to complete the configuration of the Trigger Point.

The screenshot shows a window titled "Trigger Point Wizard" with a close button in the top right corner. The main heading is "Trigger Point Summary". Below this, there are several sections:

- Queue:** Skill 1
- Type:** Managed
- Entry VDN:** 11037. Description: New calls arriving at the entry VDN should be routed elsewhere after a few seconds.
- Queueing VDN:** 11038. Description: Call will queue at the queueing VDN until Callmedia Enterprise allocates it to a user.
- DDI:** (empty field) DDI to match
- Failure handling:** A red-bordered box containing five entries:
 - Out of Hours:** 10126. Description: Call will be routed here if the Queue is out of hours
 - No Skilled Users:** 10126. Description: Call will be routed here if there are no skilled users logged on
 - Queue Full:** 10126. Description: Call will be routed here if the Queue is full
 - Task Wait Exceeded:** 10126. Description: Call will be routed here if a Router fails to route the call within the timeout
 - Enterprise not connected:** (empty field). Description: Call will be routed here if Callmedia Server is connected but Enterprise is not

At the bottom left is the "Callmedia" logo. At the bottom right are three buttons: "< Back", "Finish" (highlighted with a dashed border), and "Cancel".

Figure 96: Callmedia Switch Driver Trigger Point Summary Screen

Click “Status” and verify that the Enterprise entry is now green. Click “Trigger Points”.

Callmedia Console

File Options Help

Consoles Root

- Callmedia Server Console
 - Servers
 - cmserver (192.168.200.52)
 - Clients
 - Licences
 - Network
 - Trace
 - Options
 - Switch Driver
 - Sideways Applications
 - Consoles
 - Statistics
 - Host Table
 - Callmedia Advance Console
 - Callmedia Enterprise Console
 - 192.168.200.52
 - Unmanaged Queues
 - Managed Queues
 - Ad Hoc Queues
 - Brokered Queues
 - Not Available Codes
 - Connectors
 - Configuration
 - Working Days
 - Default Working Times
 - Alpha Tagging
 - Callmedia User Manager Console
 - 192.168.200.52
 - Users
 - Teams
 - Reporting Groups
 - Views

Switch Driver

Current Driver

Name: Avaya Communications Manager

Loaded: Yes

Callmedia Communication Manager Switch Driver Console Plug-In, Version 4.0.1

Avaya Communication Manager Driver Version 4.0.1 Build 319

Item	Setting	Status
TServer	AVAYA#S8710#CSTA#AE	OK
TServer Version		4.1.0 Build 327
Driver Version		4.1.0 Build 327
Library Version		AES4.2.0 Build 267
TSAPI Version	Communication Manager	3.1
API Version		ST2
Private Data Version		6
Basic Licences	AES	0
UCD		Not Known (No Events)
Predictive VDNs	None	
Archiver VDNs	0 VDNs	None
Director VDNs	0 VDNs	None
Enterprise	192.168.200.52:4608 ID:11	OK
Trigger Points	0	None configured

Manage Callmedia Server on Cmserver

6/26/2008 5:54 PM CAPS NUM INS

Figure 97: Callmedia Switch Driver Enterprise Activated Screen

Verify that the “Trigger Points” which were configured in **Figure 90** through **Figure 96** are now “ACTIVE”.

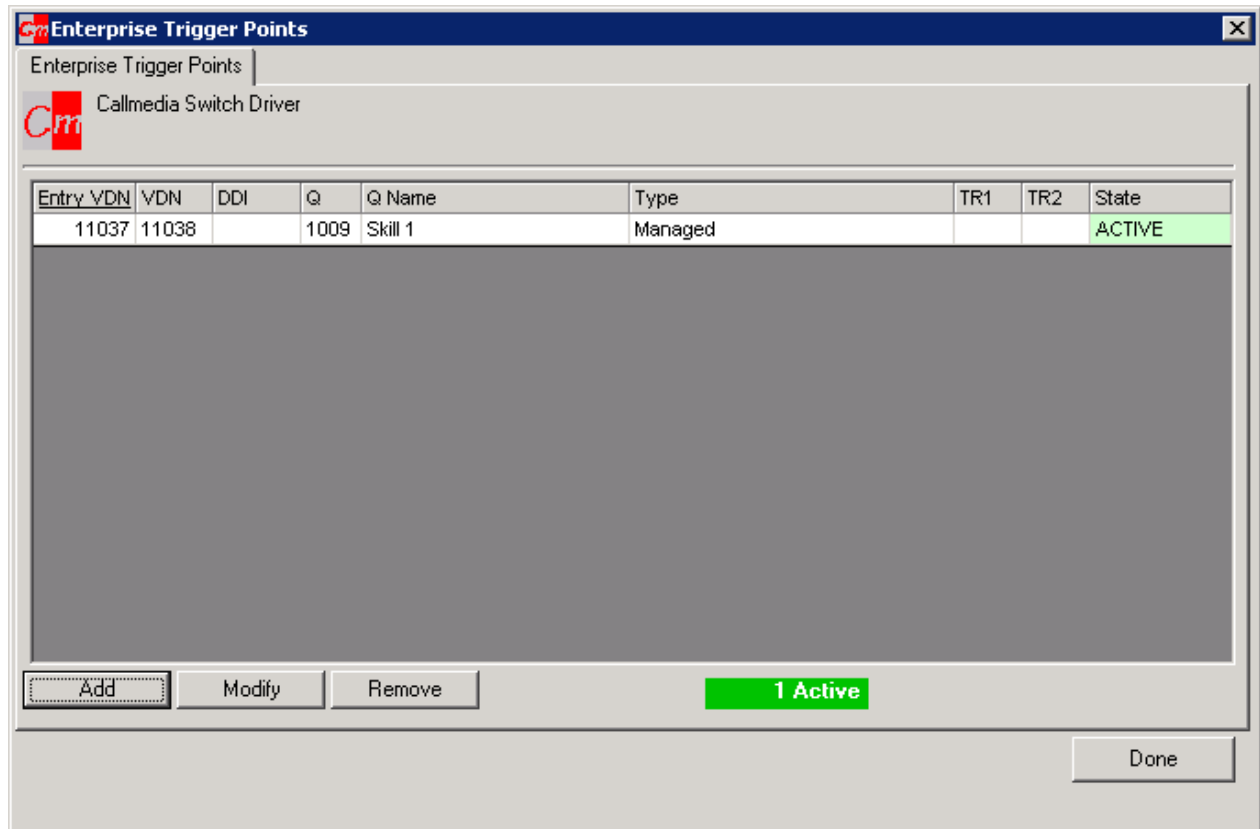


Figure 98: Callmedia Switch Driver Enterprise Trigger Points Activated Screen

3.3.7.4 Start Callmedia Log Viewer

Start the Callmedia Log Viewer from the Windows “Start” icon. This program is located at “C:\Program Files\Callmedia\CMLog\CMLogView.exe”.

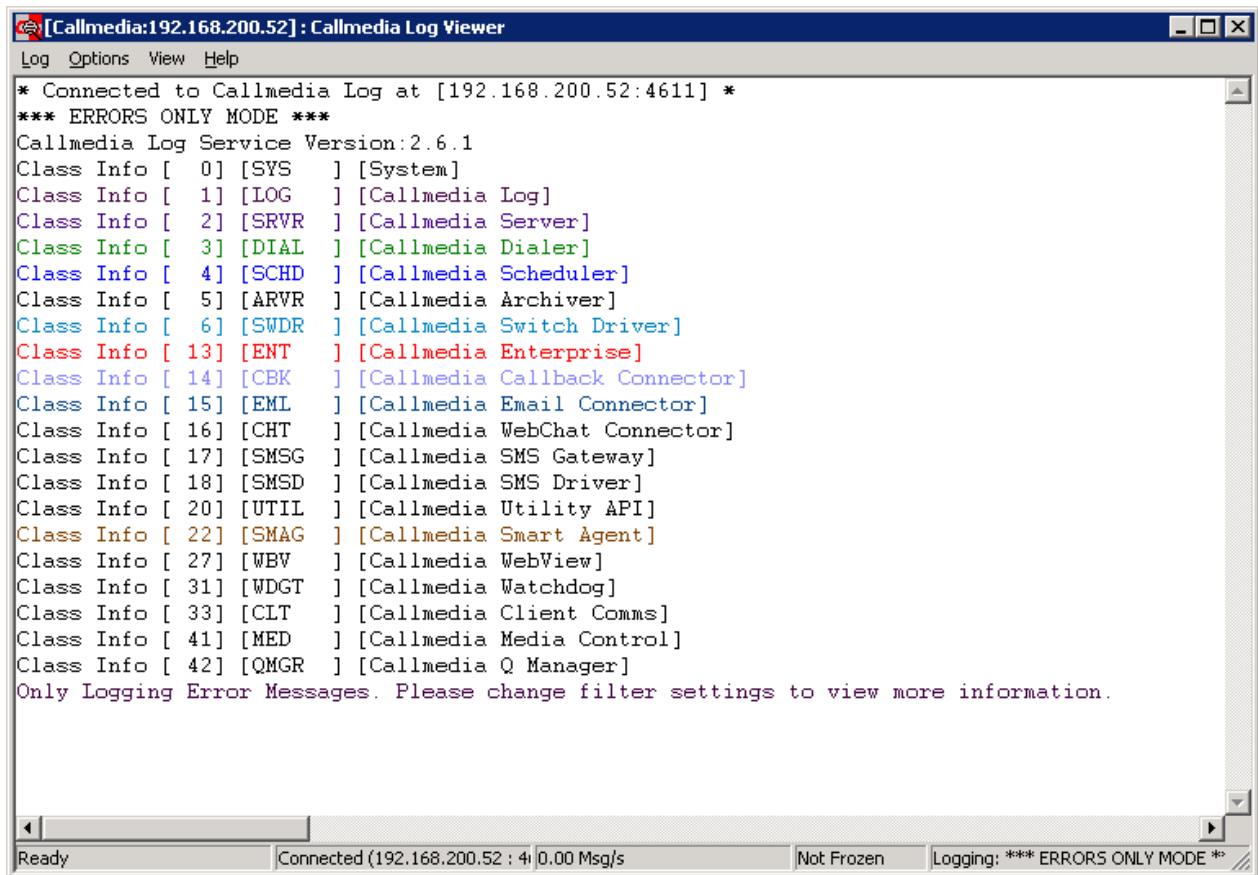


Figure 99: Callmedia Log Viewer Screen

3.3.7.5 Configure Callmedia Advance

Use Callmedia Advance for making the outgoing calls for a campaign. Select the Callmedia Advance Console from the Callmedia Console program.

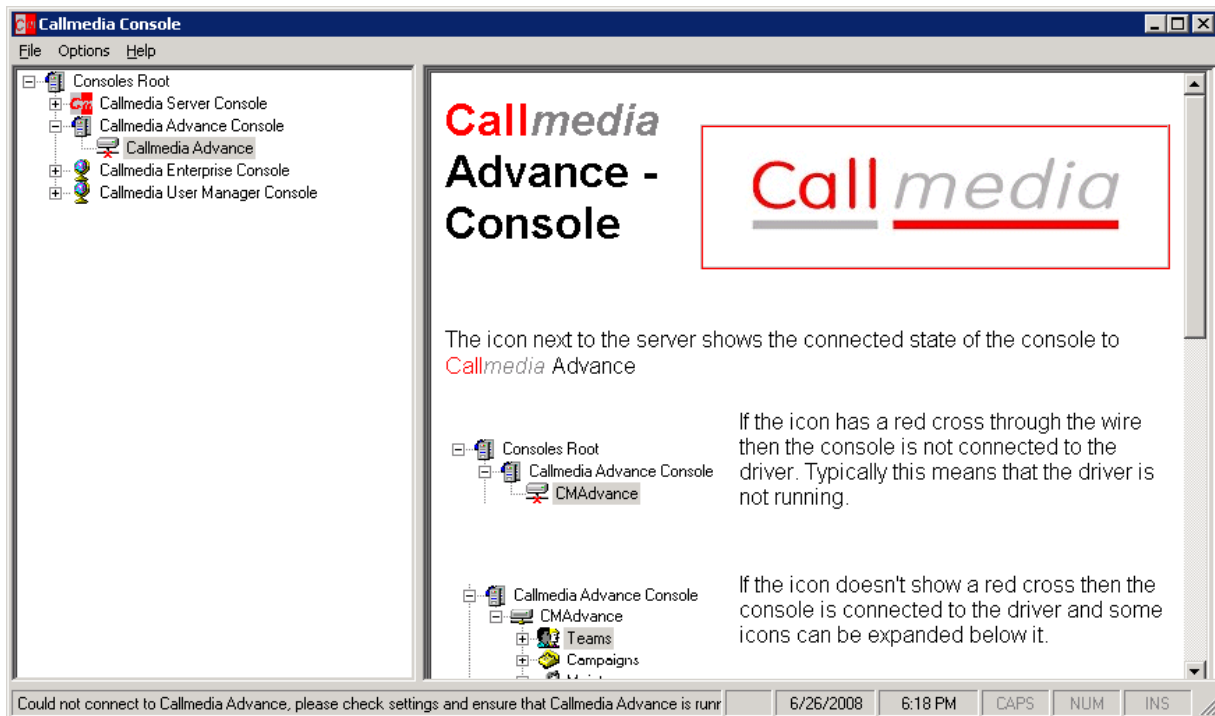


Figure 100: Callmedia Advance Console Prior to Start Screen

If Callmedia Advance is not running, start the “Callmedia Scheduler” from the Windows Services control.

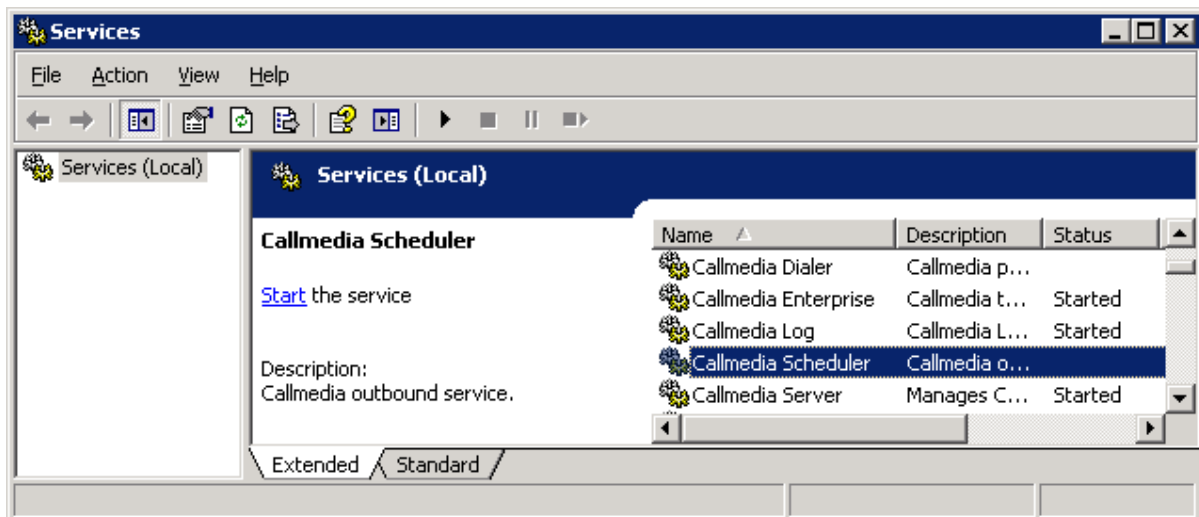


Figure 101: Callmedia Advance Service Initiation Screen

To create a “campaign” to make outbound calls, right-click on “Campaigns” from the “Callmedia Advance” menu item, and click “New”.

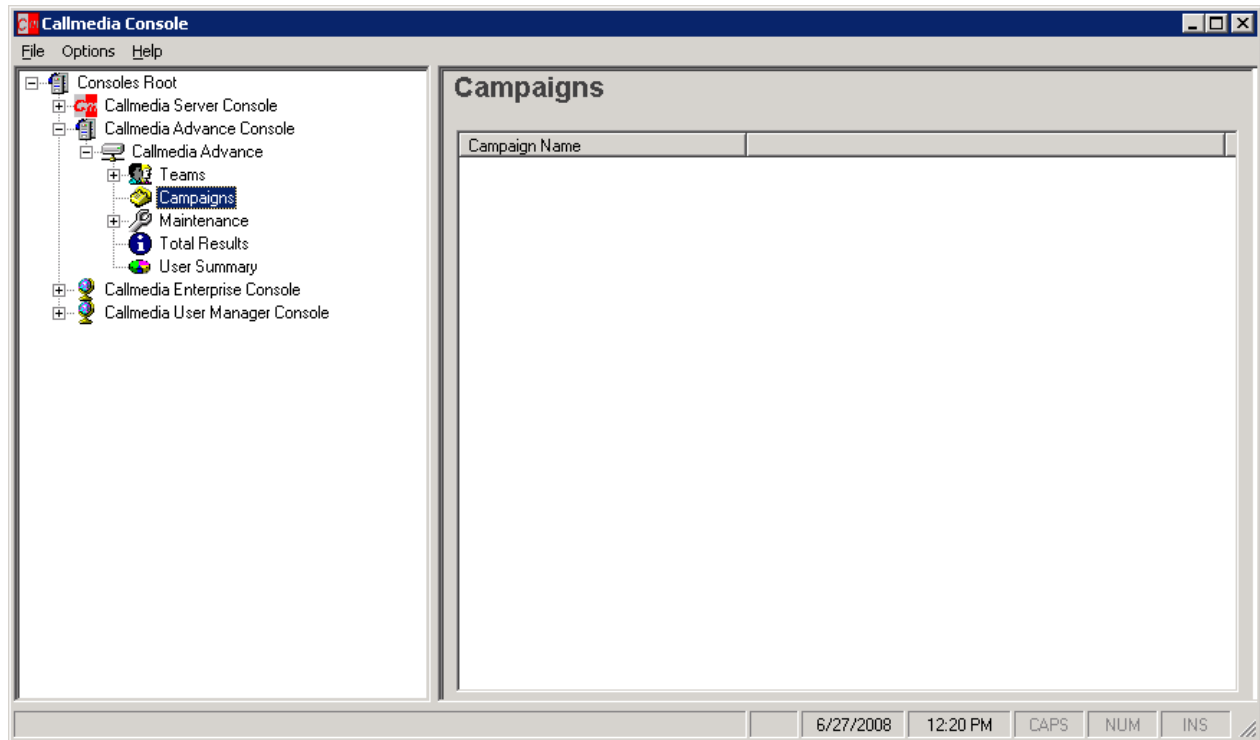


Figure 102: Callmedia Advance Campaigns Screen

Configure the Avaya Communication Manager Driver settings by entering the parameters shown in the following table and click “OK”. Accept the default values for those parameters which are not included in the table.

Parameter	Usage
Campaign Name	Select an appropriate name for the campaign.
Start Date (and time)	Enter the starting date and time for the campaign.
End Date (and time)	Enter the ending date and time for the campaign.

Table 24: Callmedia Advance Campaign Details Parameters

The screenshot shows the 'Campaign Details' dialog box. The 'Campaign Details' tab is selected. The 'Campaign Name' field contains 'Special Offer'. The 'URL / Parameter' field is empty. The 'Start Date' is set to Friday, June, 09:00. The 'End Date' is set to Friday, June, 18:00. The 'Dial Prefix' field is empty. The 'No Answer Timeout' is set to 20 Seconds. The 'Auto Wrap Timeout' is set to 0 Seconds. The 'AnswerMachine Detection' dropdown is set to 'Disable AMD'. The 'Abandoned Call Handling' section has two radio buttons: 'Always call previously abandoned calls with reserved agent' (selected) and 'Redial previously abandoned call normally after restriction period'. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

Figure 103: Callmedia Advance Campaign Details Screen

From the “Time Periods” tab, check those times for which campaign calls are to be made.

	AM	PM	Eve	All Day	TW 1	TW 2	TW 3
All Week	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WeekDay	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WeekEnd	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tuesday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wednesday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thursday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saturday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 104: Callmedia Advance Campaign Time Periods Screen

From the “Callmedia Advance” menu item, right-click on “Recycling Plans” of the now visible campaign which was allocated in **Figure 102**, and click “New”.

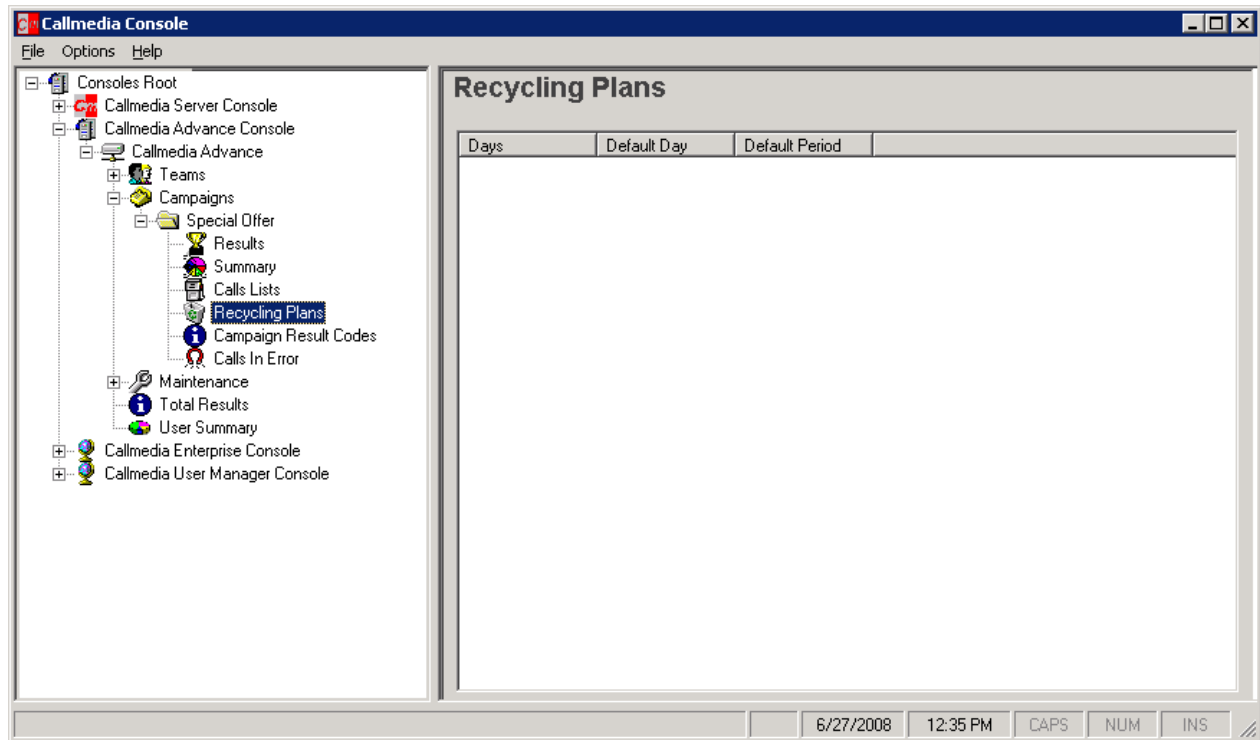


Figure 105: Callmedia Advance Campaign Recycling Plans Screen

Configure the Recycling Plan using the values shown in the following table.

Parameter	Usage
Activate Rule for Calls up to	Enter the number of days that calls are to be recycled. Select “5” days.
Default Rule Days	Enter the days for which calls are to be recycled. Select “All Week” from the drop-down menu.
Default Rule Period	Enter the time of day for which calls are to be recycled. Select “All Day” from the drop-down menu.

Table 25: Callmedia Advance Recycling Plan Configuration Parameters

Recycling Plan.

Plan Configuration | Ordinary Recycling Rules | Callbacks Recycling Rules

Activate Rule for Calls up to attempted days.

Default Rule

Default Rule Days

Period

Default Rule will be applied when Maximum daily attempts have been reached,
or when selected by the Daily Recycling Rules.

OK Cancel Help

Figure 106: Callmedia Advance Campaign Recycling Plan Configuration Screen

Use a database tool to create a database which contains the list of numbers to be called by the campaign. The steps required to create this list are outside the scope of this document. Right-click “New” on the “Call Lists” icon.

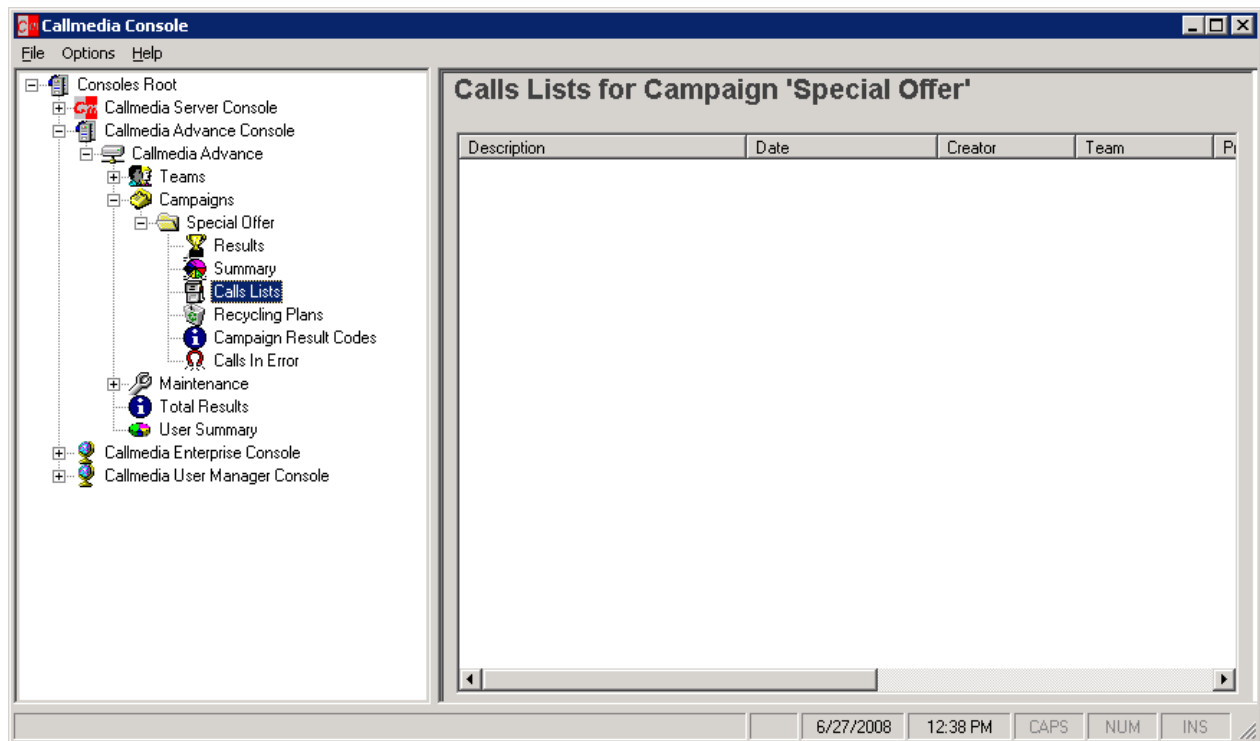


Figure 107: Callmedia Advance Campaign Call Lists Screen

Configure the Recycling Plan using the values shown in the following table and click “Next”.

Parameter	Usage
Imported By	Accept the default name which is supplied.
List Name	Enter an appropriate name for the call list.
Priority	Enter a priority for the call list with a value between 1 and 10, where 10 is the high priority.

Table 26: Callmedia Advance Recycling Plan Configuration Parameters

Calls list Import Wizard: Campaign: 'Special Offer'

This wizard will guide you through the process of importing a calls list, to begin, please enter your name and some details about the data.

Callmedia

Name the List & Select Priority

Calls List Details

Imported By : Admin

List Name : Hit List

Calls List Priority

Priority : 5

Higher priority calls are dialled first.
10 is the highest priority.

Cancel Back Next

Figure 108: Callmedia Advance New Call List Screen

Select the team which is to conduct the campaign. Note that only one team was allocated in **Figure 76**.



Figure 109: Callmedia Advance Call List Team Selection Screen

Select the call list to be used from the database which is used and click “Next”.

Calls list Import Wizard: Campaign: 'Special Offer'

Please select the DSN (Data Source Name) of the database that holds the Calls list data.

Callmedia

Select Data Source Name

Select data source name

- Calls
- CallsListDSN**
- CMAdvance
- CMEnterprise

Database authentication details

User Name :

Password :

Figure 110: Callmedia Advance Call List Team Selection Screen

Select the database table which holds the numbers to be called and click “Next”.



Figure 111: Callmedia Advance Call List Table Selection Screen

Select the unique identifier and the number columns and un-check the “Syntax Check TelNos.” and “Check Leading Zeros” fields. Click “Next” to proceed.

Calls list Import Wizard: Campaign: 'Special Offer'

Please select the URN (Unique Reference) and telephone numbers.

Select columns:

- id
- telno

URN (Unique Identifier): << id

Daytime: << telno

Checks:

- ☐ Check For Duplicates
 - ☒ TelNo and URN.
 - ☐ TelNo Only.
- ☐ Check TPS Database
 - ☐ Remove Contact if any number matched
- ☐ Syntax Check TelNos.
- ☐ Check Leading Zeros.

Additional Phone Numbers:

Evening: >>

Mobile: >>

Alt 1: >>

Alt 2: >>

Buttons: Cancel, Back, Next

Figure 112: Callmedia Advance Call List Number Selection Screen

Click “Next”, as no greeting is used.

Calls list Import Wizard: Campaign: 'Special Offer'

Please enter an initial greeting into the area below, using %1, %2, %3 %4 %5 to indicate where the database fields should be substituted.

Callmedia

Format Initial Greeting

Initial greeting text

Database substitution fields

id
telno

Field1 >>

Field2 >>

Field3 >>

Field4 >>

Field5 >>

Cancel Back Next

Figure 113: Callmedia Advance Call List Greeting Selection Screen

Click “Finish”.

Calls list Import Wizard: Campaign: 'Special Offer'

You have finished building the Calls list.

Stopped

Total Contacts	20	Invalid Contacts	0
Processed Contacts	20	Duplicates Found	0
Tel nos per contact	1	Invalid Numbers	0
Processed Tel Nos	20	TPS Records	0

Progress

Finish

Figure 114: Callmedia Advance Call List Conclusion Screen

The call list is now displayed.

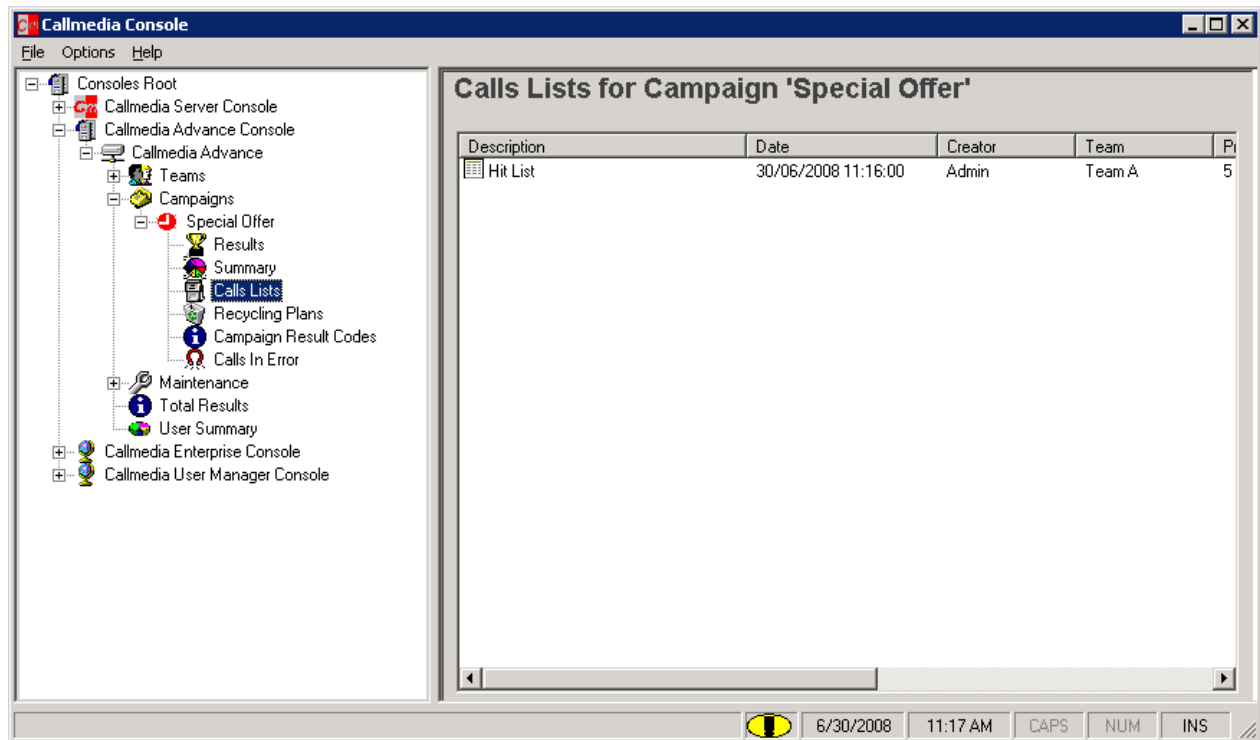


Figure 115: Callmedia Advance Call List Summary Screen

Right click on the team which was allocated in **Figure 76**.



Figure 116: Callmedia User Manager Team Members Screen

Enable outgoing calls for the team which is to conduct the campaign.

Queue Name	Level	Q Len	Q Time
<input checked="" type="checkbox"/> Callmedia Outbound Queue			
<input type="checkbox"/> Inbound Ad Hoc Queue			
<input type="checkbox"/> Inbound Email Queue			
<input type="checkbox"/> Inbound Voice Queue			
<input checked="" type="checkbox"/> Outbound Ad Hoc Queue			
<input checked="" type="checkbox"/> Skill 1	10	0	0
<input checked="" type="checkbox"/> Skill 2	10	0	0

Figure 117: Callmedia User Manager Team Skills For Campaign Screen

3.4. Install Callmedia Client

Install the Callmedia Client on each desktop PC which is to be used by agents. It is also useful to install the Callmedia Client on the server, so that the Callmedia Console can be used for system configuration.

Run the “MenuBox.exe” application from the “\MenuBox” directory of the Callmedia software distribution medium. Click “INSTALL CLIENT SOFTWARE”.



Figure 118: Callmedia Client Install Screen

Click “Next”.

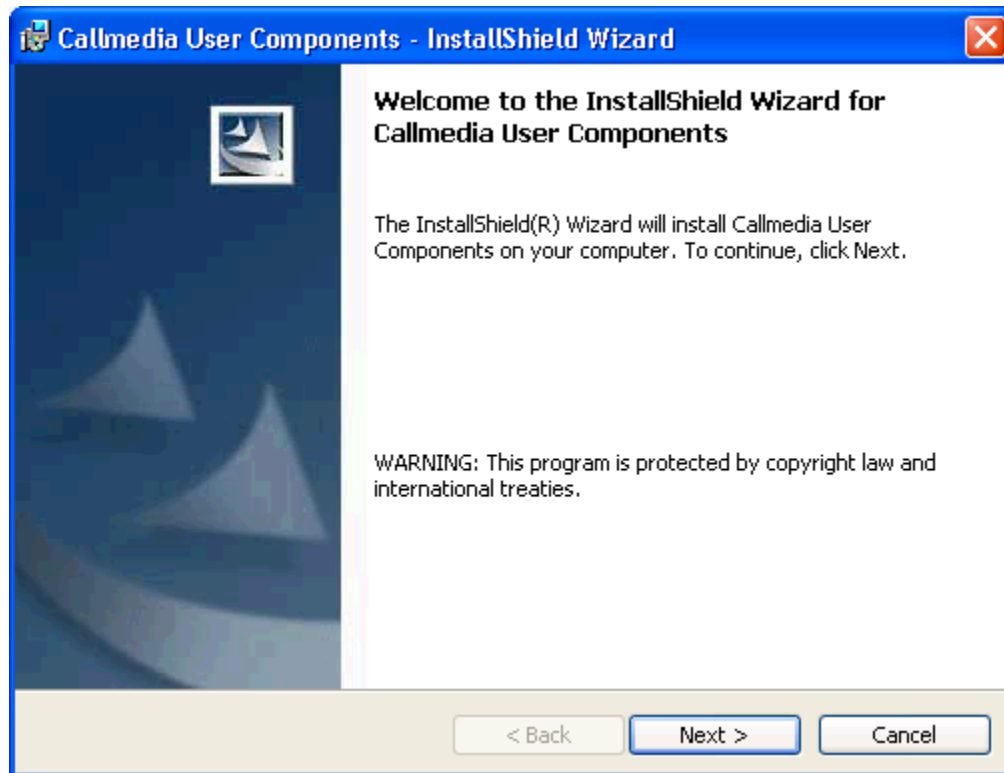


Figure 119: Callmedia Client Install Welcome Screen

Click “Next”.

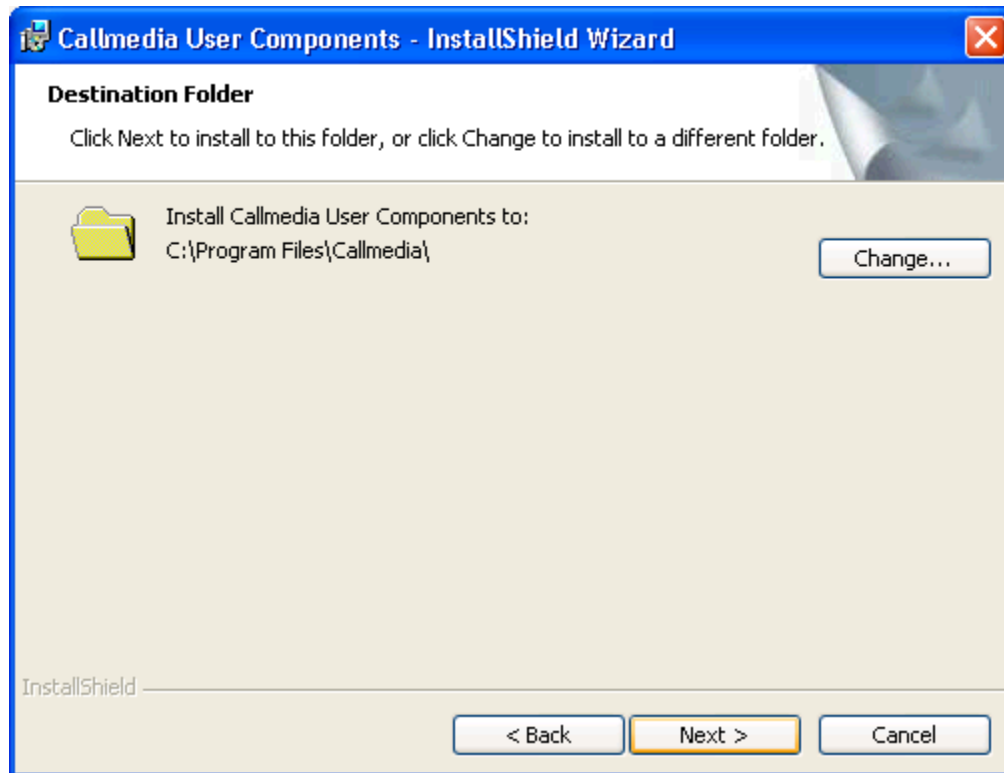


Figure 120: Callmedia Client Install Welcome Screen

Select “Callmedia Enterprise or Blended Contact Center” and click “Next”.

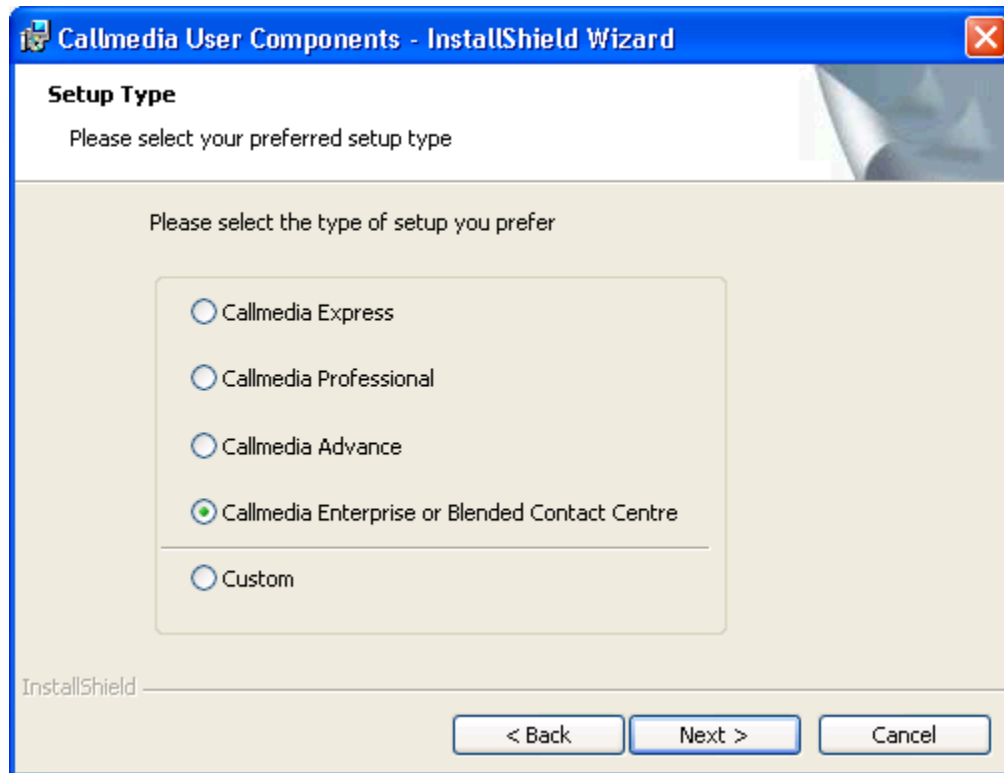


Figure 121: Callmedia Client Install Welcome Screen

Configure the client using the values shown in the following table and click “Next”.

Parameter	Usage
Hot Desking	Check this box to allow the agent to interactively an extension number when logging on.
Socket Number	Accept the default number which is offered.
Specify IP Address	Check this box.
IP Address	Enter the IP address of the Callmedia server.

Table 27: Callmedia Client Install Configuration Parameters

Callmedia User Components - InstallShield Wizard

Callmedia Client Configuration
Please specify your preferences

Your Telephony Extension

Extension Number:

☒ Hot Desking

Server Connection

Socket Number:

☒ Specify IP Address

IP Address:

Backup Callmedia Server Connection

NOTE: Only specify settings for a backup Callmedia Server if there is one available and has been correctly licensed.

Socket Number:

IP Address:

InstallShield

< Back Next > Cancel

Figure 122: Callmedia Client Install Configuration Screen

Click “Next”.

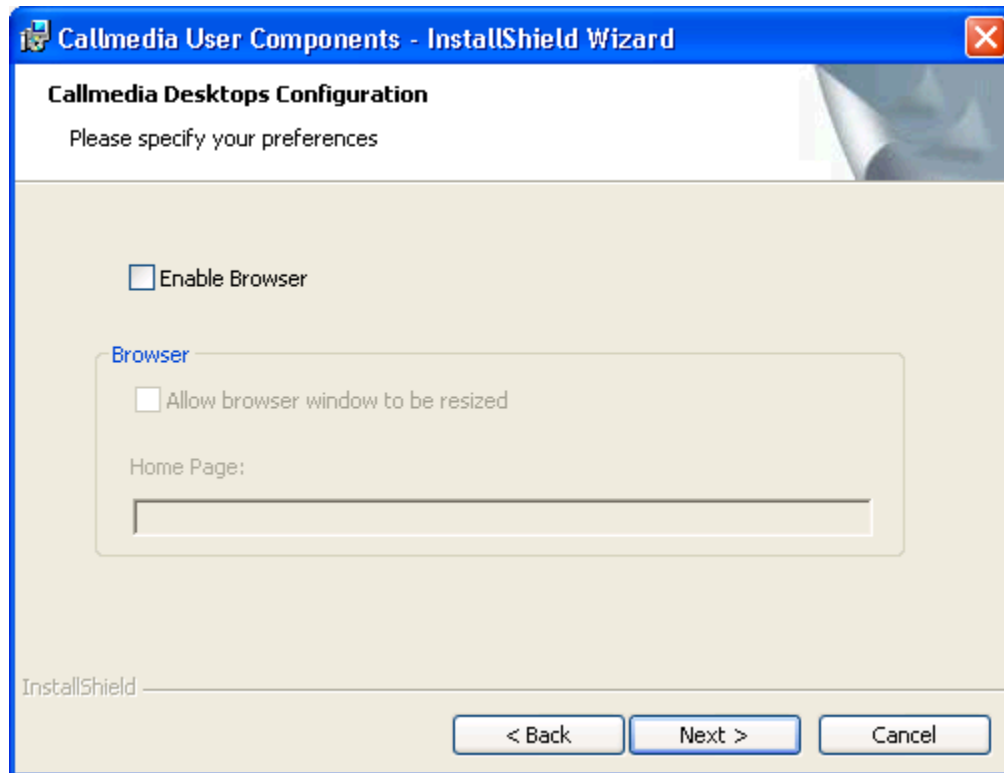


Figure 123: Callmedia Client Desktop Configuration Screen

Click “Install”.

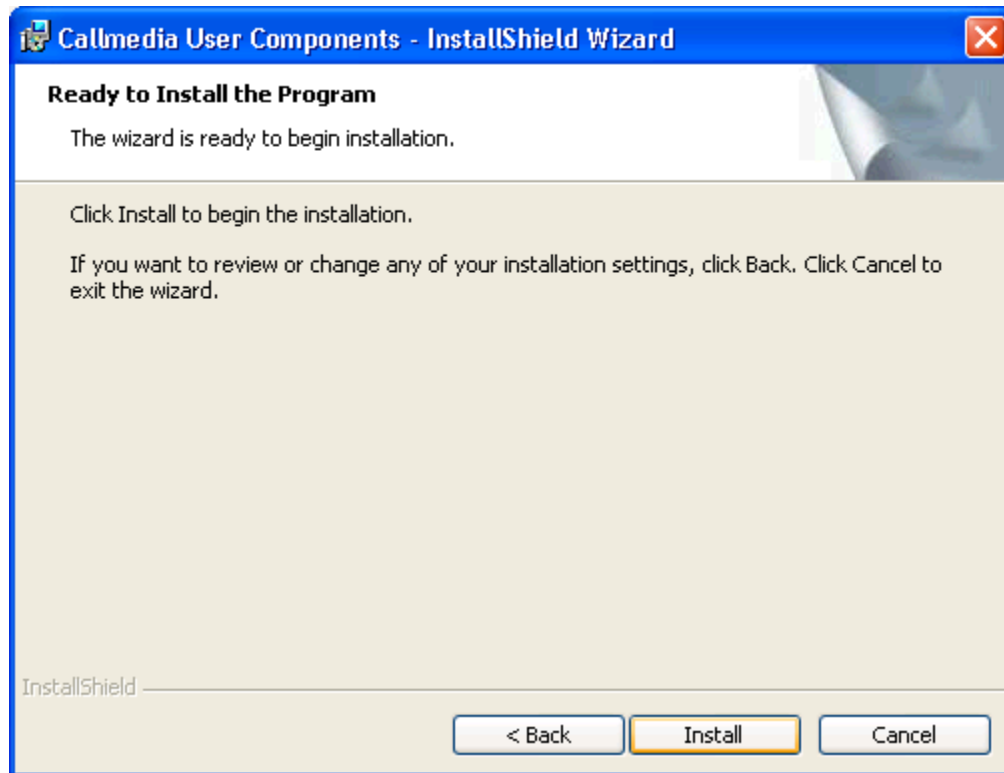


Figure 124: Callmedia Client Install Initiation Screen

Click “Finish”.

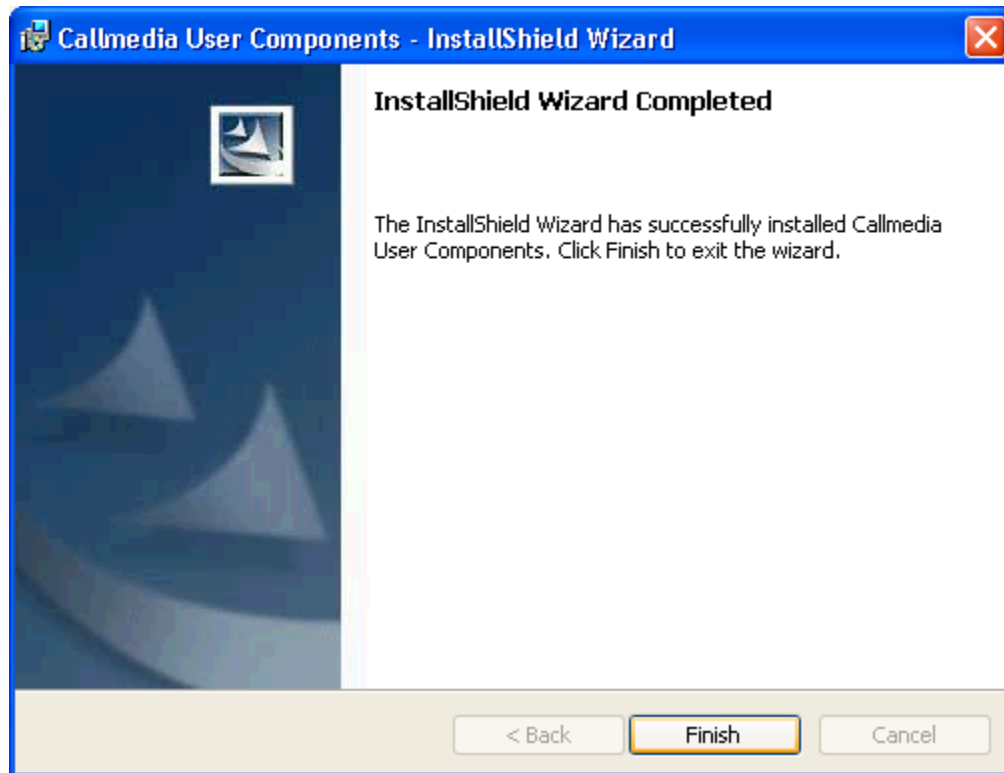


Figure 125: Callmedia Client Install Completion Screen

4. Interoperability Compliance Testing

4.1. General Test Approach

All tests performed were of a functional nature. No performance or load testing was performed. The following tests were performed during compliance testing:

- Verify agent login/logout using the *Callmedia* Desktop control, which is illustrated below.
- Verify agent status changes correctly changes to agent's ability to receive incoming calls.
- Verify that onhook/offhook workstation status is updated.
- Verify that the agent login password is verified correctly.
- Verify that incoming calls are queued if no agents are logged in.
- Verify that incoming calls are queued if no agents are available.
- Verify that incoming calls are delivered only to those agents which have registered with the corresponding skills.
- Verify that the *Callmedia* Desktop signals incoming calls.
- Verify that calls can be terminated by the handset or the *Callmedia* Desktop.
- Verify that the agent can perform hold and retrieve operations either via the *Callmedia* Desktop or the associated handset.
- Verify that the *Callmedia* Desktop can initiate and terminate After Call Work status.
- Verify that the agent can transfer or blind transfer a call to another agent or other telephone using the agent handset.
- Verify that the agent can initiate a conference to another agent or other telephone using the agent handset.
- Verify the ability for the agent to make external calls via a campaign.
- Verify the ability for the *Callmedia* to detect that called parties are busy or do not answer and reattempt such calls at a later time.
- Verify the ability of the various *Callmedia* components to detect and gracefully recover from problems caused by temporary interface interruptions or the temporary unavailable of other components due to power failure.
- Verify that incoming calls are directed to the "overflow" extension shown in **Figure 1** if *Callmedia* is unable to accept such calls due to temporary errors.

4.2. Test Results

All of the *Callmedia* components tested functioned correctly. Conference and transfer operations were only initiated via Avaya telephone handsets, as the *Callmedia* Desktop has limited support for transfer / conference operations. For these operations, the identity of the calling party is not shown by the by the transferred-to *Callmedia* Desktop, only by the associated agent telephone.

5. Verification Steps

The correct operation of the various system components can be verified via the following steps:

- Use the CM “status trunk” command to verify that the PSTN is “in-service”.
- Verify that local telephones can call each other.
- Verify that external telephones can call/be called by local telephones.
- Verify that the AES administration tool can be used to make a call between local stations.
- Verify that external telephones can call VDN extensions assigned to *Callmedia*, and that agents which have registered for with the required skills are signaled.

6. Conclusion

These Application Notes contain instructions for configuring Avaya Communication Manager, Avaya Application Enablement Services, *Callmedia* Server, and *Callmedia* Client to serve as a contact center solution. A list of instructions is provided to enable the user to verify that the various components have been correctly configured.

7. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Administrator Guide for Avaya Communication Manager*, January 2008, Issue 4.0, Document Number 03-300509.
- [2] *Feature Description and Implementation for Avaya Communication Manager*, January 2008, Issue 6, Document Number 555-245-205.
- [3] *Application Enablement Services Installation and Upgrade Guide for a Bundled Server*, May 2008, Issue 7, Document Number 02-300356
- [4] *Application Enablement Services TSAPI, JTAPI, and CVLAN Client and SDK Installation Guide*, May 2008, Document Number 02-300543
- [5] *Callmedia Advance System Administrators Guide*, Release 4.3
- [6] *Callmedia Advance Installation and Support Guide*
- [7] *Callmedia Advance Implementation Guide*
- [8] *Callmedia Enterprise System Administrators Guide*, May 2007
- [9] *Callmedia Enterprise Installation and Support Guide*, May 2007
- [10] *Callmedia Enterprise Implementation Guide*, May 2007
- [11] *Switch Driver Guide Avaya Communications Manager*, Version 3.7.4

The Callmedia user documentation is included on the product distribution media.

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