



Application Notes for Configuring Netcall QueueBuster with Avaya Communication Manager using E1 Trunks - Issue 1.0

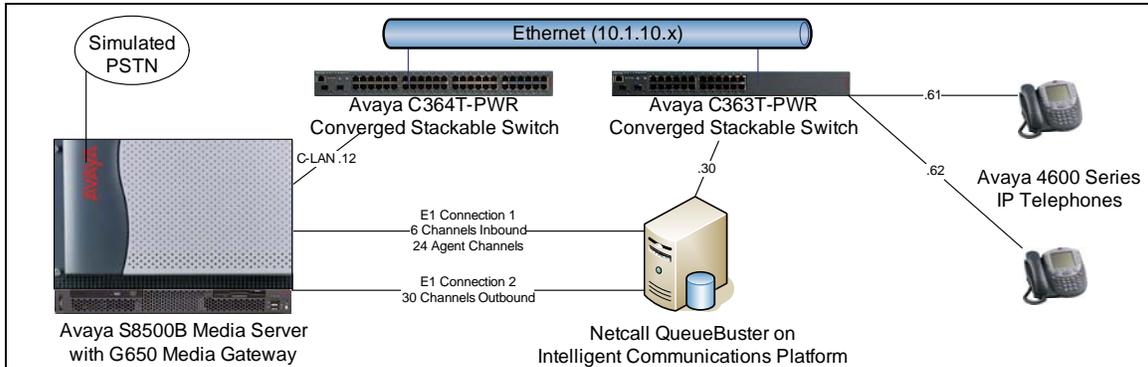
Abstract

These Application Notes describe the configuration steps required for Netcall QueueBuster to successfully interoperate with Avaya Communication Manager. The objective of the test was to evaluate interoperability of the products in a contact center, offering automated callbacks to inbound callers.

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

1 Introduction

These Application Notes describe the configuration steps required for the Netcall QueueBuster product to successfully interoperate with Avaya Communication Manager.



Netcall QueueBuster runs on the Netcall Intelligent Communications Platform (ICP), which is a server supporting the range of Netcall callback and productivity solutions.

The Netcall ICP running QueueBuster uses Intel Dialogic boards to connect to Avaya Communication Manager using E1 or T1 connections. One board is used for calls inbound from Avaya Communication Manager to QueueBuster and also for calls outbound from QueueBuster to Avaya Communication Manager agents. The other board is used solely for callback calls to customers and can either route through Avaya Communication Manager or connect straight into the Public Switched Telephone Network (PSTN)

Integration is achieved using Integrated Services Digital Network (ISDN) messaging over the D-Channel. E1 trunk groups were used for the compliance testing and the E1 connection for callback calls to customers was routed through Avaya Communication Manager

Netcall QueueBuster gives customers an alternative to queuing. When a caller is in a queue, they can opt to use QueueBuster to call them back when an agent becomes available. The call will be routed into QueueBuster for the caller to record their name, and choose whether to be called back on the number presented as ANI or enter a different number. QueueBuster then calls an Avaya Communication Manager VDN/vector and queues for an available agent. When an agent answers the call, QueueBuster announces the name of the person being called back, commences dialing the customer, and connects the agent to the outbound trunk. If the call to the customer is unsuccessful, QueueBuster will announce the reason to the agent and give them the option to reschedule the call.

2 Equipment and Software Validated

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

Equipment	Software
Avaya S8500B Media Server	Avaya Communication Manager R013.01.2.632.1
Avaya G650 Media Gateway: <ul style="list-style-type: none">• TN2464BP UDS1 Circuit Pack• TN2464CP UDS1 Circuit Pack	HW05/FW019 HW02/FW019
Avaya 4620SW IP Telephones (H.323)	2.4
Avaya 4625SW IP Telephones (H.323)	2.5
Netcall QueueBuster running on Netcall Intelligent Communications Platform	2.4.15k 2.4
Intel Dialogic Board	Windows 2000 5.00.2195 SP4 6.0 (build 61)

3 Configure Avaya Communication Manager

This section provides the procedures for configuring Avaya Communication Manager. The procedures include the following areas.

- Verify Avaya Communication Manager license.
- Administer DS-1 boards and trunk groups.
- Administer call routing.
- Administer VDNs and vectors.

The detailed administration of some contact center devices, such as ACD/Skill groups and logical agents are assumed to be in place and are not covered in these Application Notes. For administration of contact center devices, refer to the appropriate documentation in **Section 9**.

For the compliance testing, agents with physical station extensions of “10001, 10002, 10003” and logical agent identifiers of “15001, 15002, 15003” were used. All the agents were assigned two skills; hunt group 1 was used as the main skill for incoming calls, hunt group 401 was used as the skill for calls from QueueBuster.

3.1 Verify Avaya Communication Manager License

Use the “display system-parameters customer-options” command, verify that the **ISDN-PRI** customer option is set to “y” on **Page 4**.

```
change system-parameters customer-options                               Page 4 of 11
                                OPTIONAL FEATURES

Emergency Access to Attendant? y                                     IP Stations? y
  Enable 'dadmin' Login? y                                           Internet Protocol (IP) PNC? n
  Enhanced Conferencing? y                                           ISDN Feature Plus? n
    Enhanced EC500? y                                               ISDN Network Call Redirection? n
Enterprise Survivable Server? n                                       ISDN-BRI Trunks? n
  Enterprise Wide Licensing? n                                       ISDN-PRI? y
    ESS Administration? n                                           Local Survivable Processor? n
  Extended Cvg/Fwd Admin? y                                           Malicious Call Trace? y
  External Device Alarm Admin? n                                       Media Encryption Over IP? y
Five Port Networks Max Per MCC? n   Mode Code for Centralized Voice Mail? n
  Flexible Billing? n
Forced Entry of Account Codes? n                                       Multifrequency Signaling? y
  Global Call Classification? y   Multimedia Appl. Server Interface (MASI)? n
  Hospitality (Basic)? y                                               Multimedia Call Handling (Basic)? n
Hospitality (G3V3 Enhancements)? n   Multimedia Call Handling (Enhanced)? n
  IP Trunks? y

IP Attendant Consoles? y
(NOTE: You must logoff & login to effect the permission changes.)
```

Verify that the **Lookahead Interflow (LAI)** and **Vectoring (Basic)** customer options are both set to “y” on **Page 6**. LAI is not required for QueueBuster but is recommended as it allows the Avaya Communication Manager vector to route the call to the next vector step when QueueBuster is busy or unavailable.

```

change system-parameters customer-options                               Page 6 of 11
                                CALL CENTER OPTIONAL FEATURES

                                Call Center Release: 3.0

                                ACD? y                                Reason Codes? n
                                BCMS (Basic)? y                        Service Level Maximizer? n
                                BCMS/VuStats Service Level? n        Service Observing (Basic)? y
                                BSR Local Treatment for IP & ISDN? n  Service Observing (Remote/By FAC)? y
                                Business Advocate? n                 Service Observing (VDNs)? y
                                Call Work Codes? n                   Timed ACW? n
                                DTMF Feedback Signals For VRU? n      Vectoring (Basic)? y
                                Dynamic Advocate? n                  Vectoring (Prompting)? n
                                Expert Agent Selection (EAS)? y        Vectoring (G3V4 Enhanced)? n
                                EAS-PHD? y                            Vectoring (3.0 Enhanced)? n
                                Forced ACD Calls? n                   Vectoring (ANI/II-Digits Routing)? n
                                Least Occupied Agent? n              Vectoring (G3V4 Advanced Routing)? n
                                Lookahead Interflow (LAI)? y          Vectoring (CINFO)? n
                                Multiple Call Handling (On Request)? n Vectoring (Best Service Routing)? n
                                Multiple Call Handling (Forced)? n    Vectoring (Holidays)? n
                                PASTE (Display PBX Data on Phone)? y  Vectoring (Variables)? n
                                (NOTE: You must logoff & login to effect the permission changes.)

```

If any of the abovementioned customer options are not set, contact the Avaya sales team or business partner for a new license.

3.2 Administer DS-1 Boards and Trunk Groups

Two DS-1 boards are used.

- The first DS-1 is used for Avaya Communication Manager to route incoming calls into QueueBuster and for QueueBuster to route calls to Avaya Communication Manager agents. For the purposes of these Application Notes, this DS-1 shall be referred to as the internal DS-1.
- The second DS-1 is used for QueueBuster to route outgoing calls to Avaya Communication Manager for onward routing to customers. For the purposes of these Application Notes, this DS-1 shall be referred to as the external DS-1.

Both DS-1s are configured in the same way. Use the “add ds1 x” command, where “x” is the slot number where the DS-1 board is inserted. Configure the fields as follows.

- **Name:** Enter a descriptive name.
- **Bit Rate:** “2.048”
- **Line Coding:** “hdb3”
- **Signaling Mode:** “isdn-pri”
- **Connect:** “pbx”
- **Interface:** “network”
- **Country Protocol:** “etsi”
- **Protocol Version:** “a”
- **Interface Companding:** “alaw”

```
add ds1 01a05                                     Page 1 of 1
                                                DS1 CIRCUIT PACK
Location: 01A05                                     Name: Netcall
Bit Rate: 2.048                                     Line Coding: hdb3
Signaling Mode: isdn-pri
Connect: pbx                                         Interface: network
TN-C7 Long Timers? n                               Country Protocol: etsi
Interworking Message: PROgress                     Protocol Version: a
Interface Companding: alaw                          CRC? y
Idle Code: 11111111
                                                DCP/Analog Bearer Capability: 3.1kHz
                                                T303 Timer(sec): 4
Slip Detection? n                                   Near-end CSU Type: other
```

Three trunk groups are used.

- The first trunk group routes calls from Avaya Communication Manager into QueueBuster and consists of the first 6 ports of the internal DS-1. For the purposes of these Application Notes, this trunk group will be referred to as the inbound trunk group.
- The second trunk group routes calls from QueueBuster to Avaya Communication Manager agents and consists of the last 24 ports of the internal DS-1. For the purposes of these Application Notes, this trunk group will be referred to as the agent trunk group.
- The third trunk group routes calls from QueueBuster to Avaya Communication Manager for onward routing to customer numbers and consists of all 30 ports of the external DS-1. For the purposes of these Application Notes, this trunk group will be referred to as the outbound trunk group.

The number of ports in each trunk group may vary; the values used in the compliance testing are consistent with a large proportion of the installed base.

All three trunk groups are configured in the same way. Use the “add trunk-group x” command, where “x” is an available trunk group number. Configure the fields on **Page 1** as follows.

- **Group Type:** “isdn”
- **Group Name:** Enter a descriptive name.
- **TAC:** Enter a valid trunk access code.

```

add trunk-group 16                                     Page 1 of 21
                                     TRUNK GROUP

Group Number: 16                                     Group Type: isdn          CDR Reports: y
  Group Name: Netcall Inbound                       COR: 1                   TN: 1           TAC: 716
  Direction: two-way                               Outgoing Display? n     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
  
```

Configure the fields on **Page 2** as follows.

- **Supplementary Service Protocol:** Enter “c” to use the ETSI protocol.
- **Disconnect Supervision:** Enter “y” in both **In** and **Out** fields.

```

add trunk-group 16                                     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: none
  Supplementary Service Protocol: c               Digit Handling (in/out): enbloc/enbloc

  Trunk Hunt: ascend                               QSIG Value-Added? n
                                               Digital Loss Group: 13
Incoming Calling Number - Delete:                 Insert:                 Format:
  Bit Rate: 1200                                  Synchronization: async Duplex: full
  Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0
  
```

Two signaling groups are used (one for each DS-1 board). Both are configured in the same way. Use the “add signaling-group x” command, where “x” is an available signaling group number. Configure the fields on **Page 1** as follows.

- **Primary D-Channel:** Enter “x16”, where “x” is the slot number of the DS-1 board.
- **Trunk Group for Channel Selection:** Enter one of the trunk groups that will be configured on the DS-1 this signaling group serves.

```

                                     SIGNALING GROUP

Group Number: 16                                     Group Type: isdn-pri
  Associated Signaling? y                           Max number of NCA TSC: 0
  Primary D-Channel: 01A0516                       Max number of CA TSC: 0
  Trunk Group for Channel Selection: 16             Trunk Group for NCA TSC:
  Supplementary Service Protocol: a                 X-Mobility/Wireless Type: NONE
  
```

The final step is to assign the DS-1 ports to the trunk groups. Use the “change trunk-group x” command, where “x” is the number of the trunk group to be configured. On **Page 5** assign ports as follows:

- **Inbound Trunk Group:** Assign ports 1 – 6 of the internal DS-1 to ports 1-6 on the inbound trunk group form. Enter the signaling group of the internal DS-1 in the **Sig Grp** field for each trunk.
- **Agent Trunk Group:** Assign ports 7 – 31 (omitting 16) of the internal DS-1 to ports 1-24 on the agent trunk group form. Enter the signaling group of the internal DS-1 in the **Sig Grp** field for each trunk.
- **Outbound Trunk Group:** Assign ports 1 – 31 (omitting 16) of the external DS-1 to ports 1-30 on the outbound trunk group form. Enter the signaling group of the external DS-1 in the **Sig Grp** field for each trunk.

add trunk-group 16		Page 5 of 21	
		TRUNK GROUP	
		Administered Members (min/max): 1/6	
GROUP MEMBER ASSIGNMENTS		Total Administered Members: 6	
	Port	Code Sfx Name	Night Sig Grp
1:	01A0501	TN2464 B	16
2:	01A0502	TN2464 B	16
3:	01A0503	TN2464 B	16
4:	01A0504	TN2464 B	16
5:	01A0505	TN2464 B	16
6:	01A0506	TN2464 B	16

The trunk groups used for the compliance testing are summarized in the following table.

Type	Group No.	DS-1 Board	Channels	Signaling Group
Inbound	16	Internal	1-6	16
Agent	17	Internal	7-15, 17-31	16
Outbound	18	External	1-15, 17-31	18

3.3 Administer Call Routing

During the compliance testing, Automatic Alternate Routing (AAR) was used to route calls from the Avaya Communication Manager vector over the QueueBuster inbound trunk. To achieve this, firstly use the “change uniform dial-plan 0” command to add an entry as follows.

- **Matching Pattern:** Enter the complete string used to route to QueueBuster in the inbound vector in **Section 3.4** .
- **Len:** Enter the total number of digits used to dial QueueBuster.
- **Net:** “aar”

```
change uniform-dialplan 0                                     Page 1 of 2
UNIFORM DIAL PLAN TABLE                                     Percent Full: 0
```

Matching Pattern	Len	Del	Insert Digits	Net	Conv	Node Num	Matching Pattern	Len	Del	Insert Digits	Net	Conv	Node Num
2	5	0		aar	n								n
3	5	0		aar	n								n
5	5	0		aar	n								n
6	5	0		aar	n								n
880000	6	0		aar	n								n

Next, use the “change aar analysis 0” command to add an entry as follows.

- **Dialed String:** Enter the complete string used to dial QueueBuster.
- **Total:** Enter the total number of digits used to dial QueueBuster in both **Min** and **Max** fields.
- **Route Pattern:** Enter an available route-pattern number.
- **Call Type:** “aar”

```
change aar analysis 0                                       Page 1 of 2
AAR DIGIT ANALYSIS TABLE                                   Percent Full: 0
```

Dialed String	Total Min	Total Max	Route Pattern	Call Type	Node Num	ANI Reqd
2	5	5	2	aar		n
3	5	5	3	aar		n
4	5	5	4	aar		n
5	5	5	5	aar		n
50099	5	5	1	lev0		n
50100	5	5	1	lev0		n
600	5	5	600	aar		n
601	5	5	601	aar		n
7	5	5	3	aar		n
82	6	6	82	aar		n
83	6	6	83	aar		n
86	6	6	86	aar		n
880000	6	6	88	aar		n

Next, use the “change route-pattern x” command, where “x” is the route-pattern entered in the previous step. Configure the fields on **Page 1** as follows.

- **Grp No:** Enter the number of the inbound trunk-group.
- **FRL:** “0”

```
change route-pattern 88                                     Page 1 of 3
                Pattern Number: 88  Pattern Name: QB Inbound
                SCCAN? n          Secure SIP? n
  Grp FRL NPA Pfx Hop Toll No.  Inserted          DCS/ IXC
  No          Mrk Lmt List Del  Digits          QSIG
                Dgts          Intw
1: 16   0
2:
3:
4:
5:
6:
                n  user
                n  user
                n  user
                n  user
                n  user
                n  user

  BCC VALUE  TSC CA-TSC  ITC BCIE Service/Feature PARM  No. Numbering LAR
  0 1 2 3 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
```

QueueBuster needs to be able to dial out via Avaya Communication Manager using the Automatic Route Selection (ARS) feature access code. Use the “change feature-access-codes” command, enter a value in the **Automatic Route Selection (ARS) – Access Code 1** field on **Page 1**. Note that this value may vary. For the compliance testing “9” was used for the ARS feature access code.

```
change feature-access-codes                               Page 1 of 5
                FEATURE ACCESS CODE (FAC)
  Abbreviated Dialing List1 Access Code: *01
  Abbreviated Dialing List2 Access Code: *02
  Abbreviated Dialing List3 Access Code: *03
  Abbreviated Dial - Prgm Group List Access Code: *04
  Announcement Access Code: *05
  Answer Back Access Code: *06
  Attendant Access Code:
  Auto Alternate Routing (AAR) Access Code: 888
  Auto Route Selection (ARS) - Access Code 1: 9  Access Code 2:
  Automatic Callback Activation: *10  Deactivation: #10
  Call Forwarding Activation Busy/DA: *11  All: *12  Deactivation: #12
  Call Park Access Code: *13
  Call Pickup Access Code: *14
  CAS Remote Hold/Answer Hold-Unhold Access Code: *15
  CDR Account Code Access Code: *16
  Change COR Access Code:
  Change Coverage Access Code: *18
  Contact Closure Open Code: *19  Close Code: #19
  Contact Closure Pulse Code: *20
```

3.4 Administer VDNs and Vectors

Two VDN/vector combinations are used.

- The first VDN/vector combination queues to an agent skill and gives the caller an option to be routed to QueueBuster. For the purposes of these Application Notes, this VDN/vector combination will be referred to as the inbound VDN/vector.
- The second VDN/vector combination receives calls from QueueBuster and queues them for an available agent. For the purposes of these Application Notes, this VDN/vector combination will be referred to as the agent VDN/vector.

The inbound vector requires an **announcement** step as this sends a D-Channel “connected” event, which is required by QueueBuster. The vector queues the call to a skill and then uses a **collect** step which asks the caller to dial 1 for QueueBuster. A **route-to** step is used to route the calls into QueueBuster (if the caller had dialed 1). There follows an example inbound vector which may be modified for different call treatments.

```
change vector 400                                     Page 1 of 3
                                                    CALL VECTOR
Number: 400                Name: ACM>QB
Basic? y   EAS? y   G3V4 Enhanced? n   Meet-me Conf? n   Lock? n
Prompting? n   LAI? y   G3V4 Adv Route? n   ANI/II-Digits? n   ASAI Routing? y
Variables? n   3.0 Enhanced? n   CINFO? n   BSR? n   Holidays? n
01 wait-time 2 secs hearing ringback
02 announcement 18010
03 queue-to skill 1 pri m
04 collect 1 digits after announcement 18011
05 route-to number 880000 with cov n if digit = 1
06 announcement 18012
07 stop
```

The agent vector requires an **announcement** step as this sends a D-Channel “connected” event, which is required by QueueBuster. Use a **queue-to** step to route the calls initiated by QueueBuster to agents. There follows an example agent vector which may be modified for different call treatments.

```
change vector 401                                     Page 1 of 3
                                                    CALL VECTOR
Number: 401                Name: QB Agent
Basic? y   EAS? y   G3V4 Enhanced? n   Meet-me Conf? n   Lock? n
Prompting? n   LAI? y   G3V4 Adv Route? n   ANI/II-Digits? n   ASAI Routing? y
Variables? n   3.0 Enhanced? n   CINFO? n   BSR? n   Holidays? n
01 wait-time 2 secs hearing ringback
02 announcement 18010
03 queue-to skill 401 pri m
04 stop
```

Both VDNs are configured in the same way. Use the “add vdn x” command, where “x” is an available VDN number. Configure the fields on **Page 1** as follows.

- **Name:** Enter a descriptive name.
- **Vector Number:** Enter the number of the vector to be associated with this VDN.

```

add vdn 17400                                     Page 1 of 2
          VECTOR DIRECTORY NUMBER
          Extension: 17400
          Name*: ACM>QB
          Vector Number: 400
          Meet-me Conferencing? n
          Allow VDN Override? n
          COR: 1
          TN*: 1
          Measured: none
          1st Skill*:
          2nd Skill*:
          3rd Skill*:
* Follows VDN Override Rules
  
```

The following table summarizes the VDNs and vectors used in the compliance testing.

Type	VDN	Vector	Skill
Inbound	17400	400	1
Agent	17401	401	401

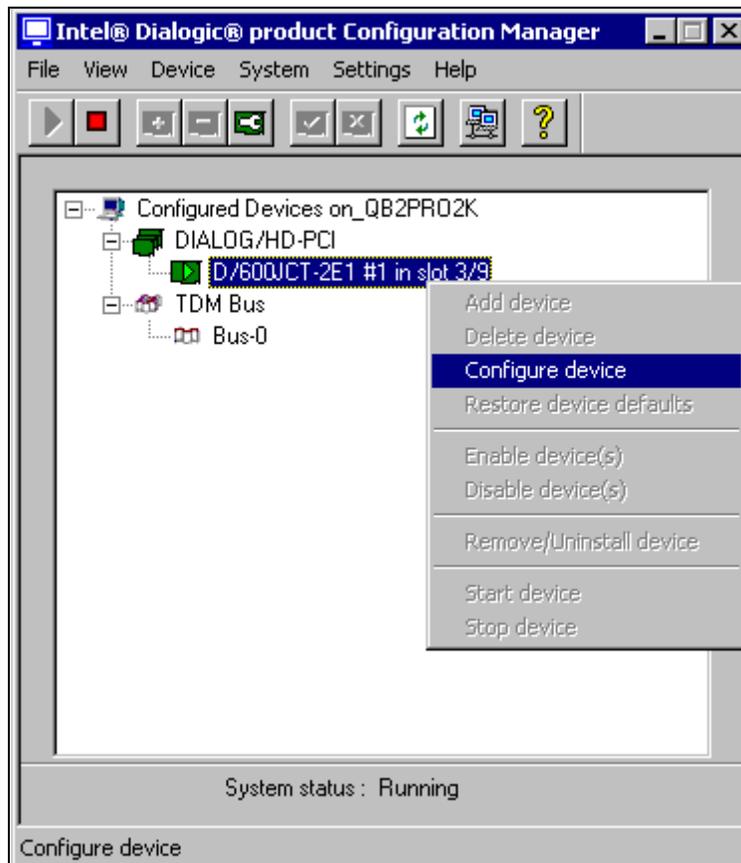
4 Configure QueueBuster

This section provides the procedures for configuring Netcall QueueBuster. The procedures include the following areas:

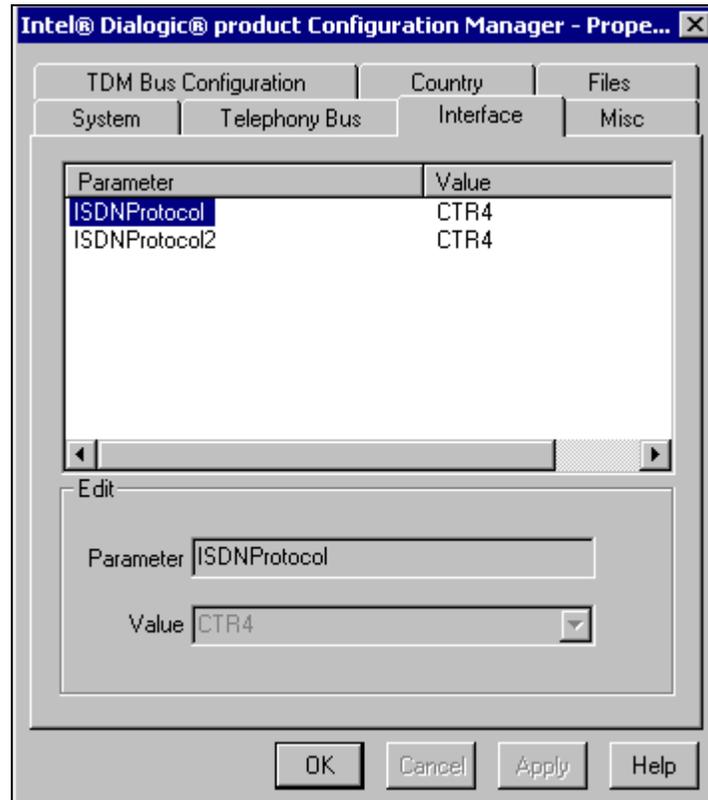
- Administer the Dialogic board
- Administer QueueBuster

4.1 Administer the Dialogic Board

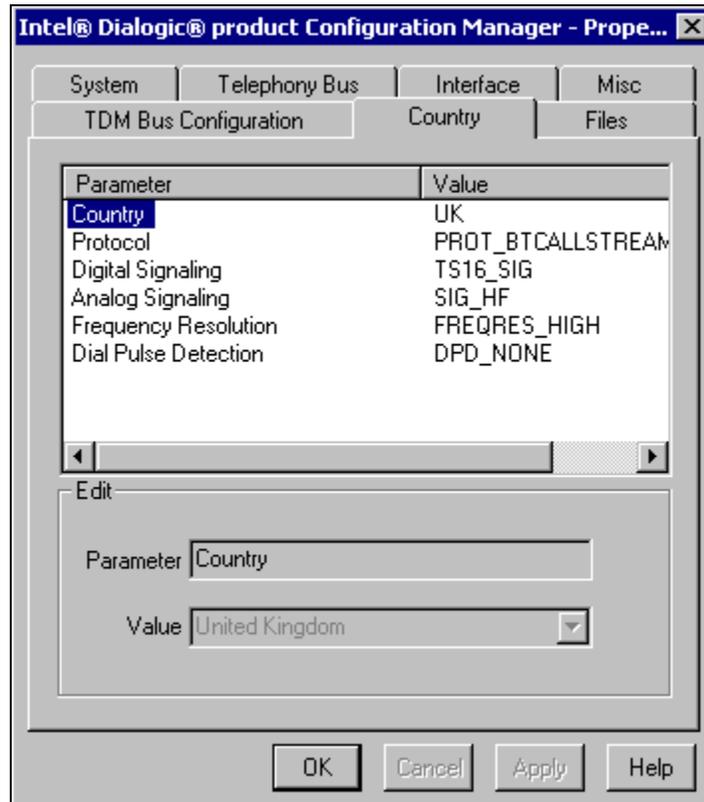
On the ICP server running QueueBuster, open the Dialogic Configuration Manager (DCM) located at the file path “Program Files\Dialogic\BIN\NCM.exe” on the drive where the application was installed. Right-click on the required board, select **Configure device** from the drop-down menu.



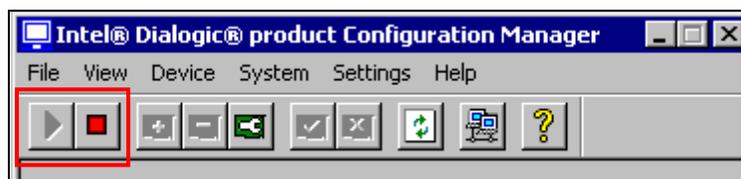
In the **Properties** dialogue box click on the **Interface** tab and set the protocol for each interface to “CTR4”.



Next, click on the **Country** tab and ensure that the **Country** parameter is set to the country where the application is installed, then click **OK**.

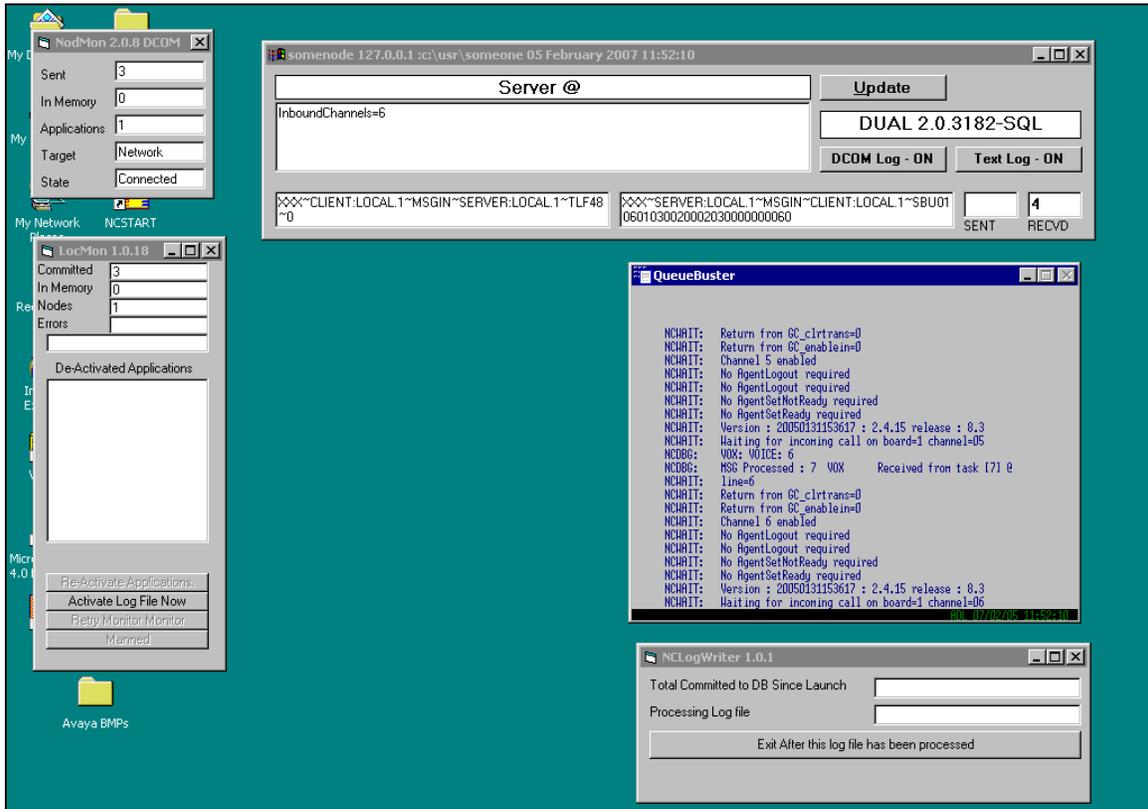


At this point, the Dialogic card is configured. If any changes are made to the card's configuration the card should be restarted using the **stop** and **start** buttons on the left side of the DCM task bar.

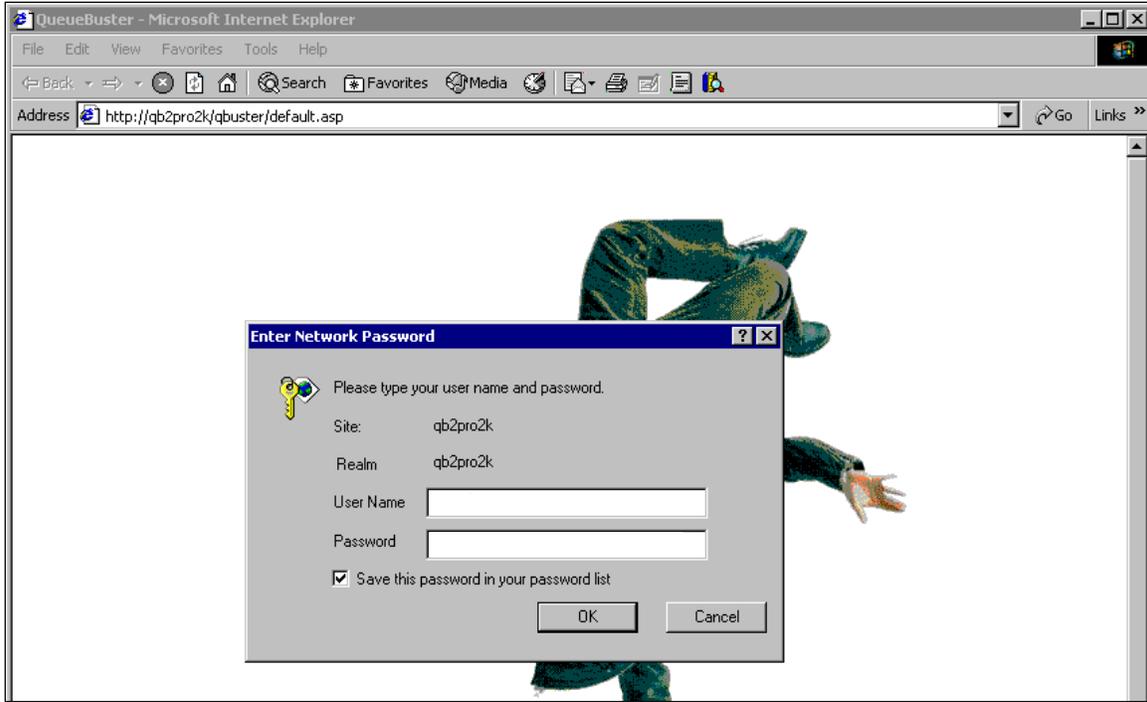


4.2 Administer QueueBuster

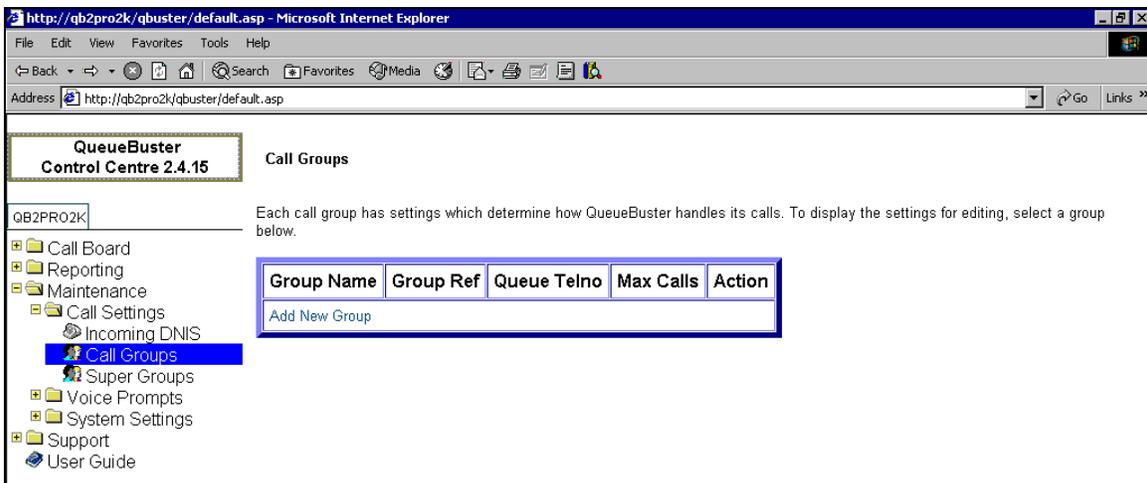
QueueBuster will start automatically on booting the ICP server. If QueueBuster needs to be started manually open the Windows **Start** menu and select “Programs>Startup>Executiv”. Once started, the following components of QueueBuster should appear on the desktop: **NodMon**, **LocMon**, **somenode**, **QueueBuster** and **NCLogWriter**.



To start administering QueueBuster, open a browser window and enter the following into the address bar; “http://qb2pro2k/qbuster/default.asp” where qb2pro2k is the hostname of the ICP server (this may vary). The **Enter Network Password** dialog box will appear. Log in using an appropriate user name and password.



The **QueueBuster Control Centre** main menu now loads. Next, select **Maintenance>Call Settings>Call Groups** to bring up the **Call Groups** page.



Select **Add New Group**, this brings up the **Call Group Maintenance** page. Configure the following fields and leave the rest at their default values.

- **Group Name:** Enter a descriptive name for the group.
- **Queue Telno:** Enter the agent VDN number configured in **Section 3.4**.
- **Allow Repeat Callers:** “Yes” was selected for the compliance testing to allow the same ANI to call into QueueBuster more than once.

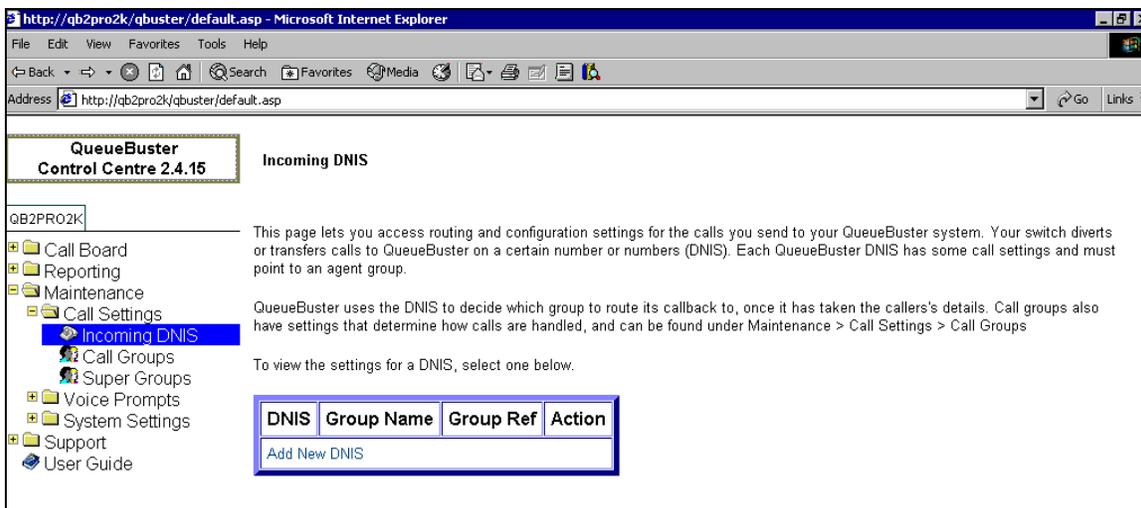
Once the configuration is complete, click on the **Add Now** button at the bottom of the form.

The screenshot shows the 'Call Group Maintenance' page in a Microsoft Internet Explorer browser. The page title is 'QueueBuster Control Centre 2.4.15'. The address bar shows 'http://qb2pro2k/qbuster/default.asp'. The page content includes a navigation tree on the left with 'Call Groups' selected. The main area contains a form with the following sections:

- Group settings:**
 - Group Name: Aveya
 - Group Ref: 17
 - Super Group: QueueBuster
 - Queue Telno: 17401
 - Queue Availability: 08:00 to 22:00 every day
 - Clear-Down Time: 0 mins
 - Queue Timeout: 120 mins
 - Answer Timeout: 40 Seconds
 - Max Calls: 30 (Current System capacity:30)
- Agent settings:**
 - Agent Detect: One To accept
 - Retry Agent failures: 60 times, with a 1 minute interval
 - Agent Call Rescheduling: Off
- Caller settings:**
 - Allow Repeat callers?: Yes
 - Bar Mobile callers?: No
 - Retry Unavailable callers: All 3 times, with a 15 minute interval

At the bottom of the form are 'Add Now' and 'Cancel' buttons.

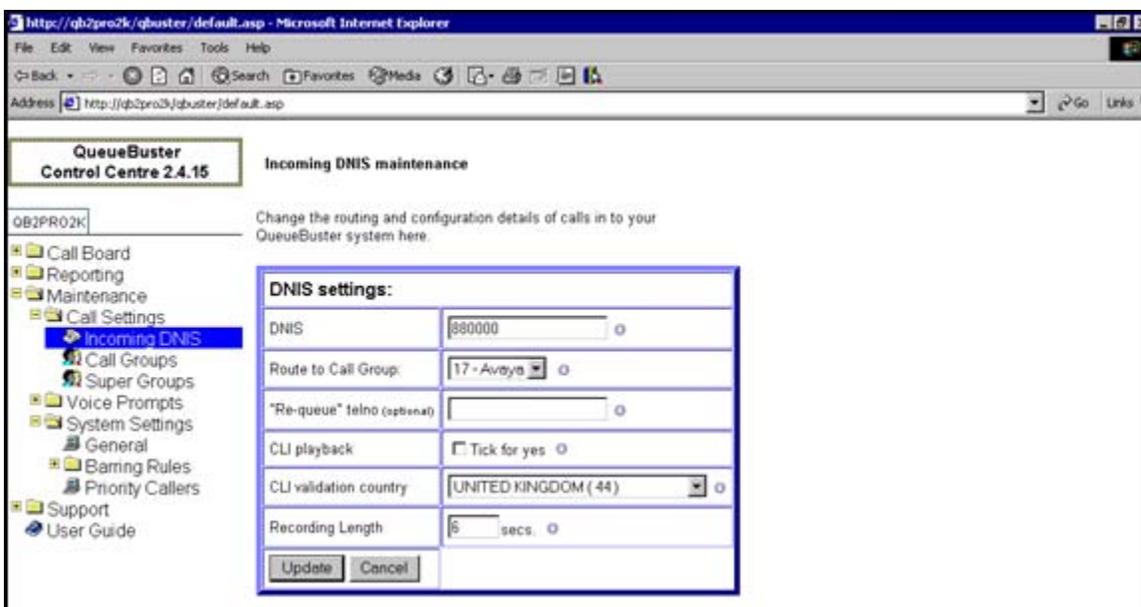
Next, create the incoming DNIS and add the call group to it. To do this, select **Maintenance>Call Settings>Incoming DNIS** from the menu, this brings up the **Incoming DNIS** page.



Select **Add New DNIS**, this brings up the **Incoming DNIS maintenance** page. Configure the following fields and leave the rest at their default values.

- **DNIS:** Enter the number from the route-to step of the incoming VDN (see **Section 3.4**).
- **Route to Call Group:** Ensure this is set to the call group configured on the previous page.
- **CLI Validation Country:** Ensure this is set to the country where the system is installed.

Once completed, click on the **Update** button at the bottom of the form.



Next, select **Maintenance>System Settings>General** to open up the **General system settings** page. On this page ensure that the **System Country** field is set to the country where the system is installed, and that the **Dialout Prefix setting** field is set to match the ARS feature access code in Avaya Communication Manager configured in **Section 3.3**. Leave the remaining fields at their default values. Once completed, click on the **Update** button at the bottom of the form.

QueueBuster Control Centre 2.4.15

Change QueueBuster's system settings here.

Where you see ⓘ, hover the mouse to read more information.

QB2PRO2K

System name ⓘ	QB2PRO2K
Background Colour	<input type="button" value="Pick Colour >"/> Restore default
Foreground Colour	<input type="button" value="Pick Colour >"/> Restore default
Performance summary hours ⓘ	Start: 09:01 hh:mm Finish: 17:30 hh:mm
System country ⓘ	UNITED KINGDOM (44)
Default Queue Availability ⓘ	08:00 to 22:00 every day <input data-bbox="974 913 1031 934" type="button" value="More..."/>
Background Dialling ⓘ	NO
Retry Unavailable callers	All 3 times, with a 15 minute interval <input data-bbox="1031 987 1128 1008" type="button" value="Advanced..."/>
Voice detect settings ⓘ	Don't monitor first 0 secs. Detect on 0 hits in 0 samples.
Dialout Prefix setting ⓘ	9
Ignore customers ANI / CLI ⓘ	<input type="checkbox"/>
Caller survival time ⓘ	0 secs.

5 Interoperability Compliance Testing

The interoperability compliance test included both feature and serviceability testing.

The feature testing focused on verifying Netcall QueueBuster's ability to request and respond to Avaya Communication Manager features including:

- Inbound calls into QueueBuster.
- Call-back calls made from QueueBuster using the original ANI and using different numbers entered by the caller.
- Using the agent telephone to hold/transfer/conference whilst on a call initiated by QueueBuster.

The serviceability testing focused on verifying Netcall QueueBuster's ability to recover from an outage condition, such as disconnecting the E1 link or loss of power.

5.1 General Test Approach

All feature and serviceability test cases were performed manually. The verification included checking call states at the telephone sets, and capturing ISDN message traces.

5.2 Test Results

All feature and serviceability test cases passed successfully.

6 Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager and Netcall QueueBuster.

6.1 Verify Avaya Communication Manager

Use the “status trunk x” command, where “x” is one of the trunk groups used by QueueBuster, verify that the status of each trunk in the group is “in service/idle”.

```
status trunk 16 Page 1
```

TRUNK GROUP STATUS			
Member	Port	Service State	Mtce Connected Ports Busy
0016/001	01A0501	in-service/idle	no
0016/002	01A0502	in-service/idle	no
0016/003	01A0503	in-service/idle	no
0016/004	01A0504	in-service/idle	no
0016/005	01A0505	in-service/idle	no
0016/006	01A0506	in-service/idle	no

6.2 Verify Netcall QueueBuster

Open the file “vosnt\exe\ADL.log” on the drive where QueueBuster is installed, verify that the E1 links are up by searching for the most recent **NCDBG** line with a status of “++”. Each “+” represents an E1 link that is in service. An out of service E1 link would be represented by a “-”.

```
ADL.log - Notepad
File Edit Format Help
070206 124335.21 NCALL800:15b30[16] 73669 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124335.32 ncstart:87d6[0] NCSTART: SEND HEARTBEAT: HVOS HEARTBEAT @ 070206 : 12:43:35
070206 124335.32 ncstart:bb49[0] NCSTART: Sending not handled by QBSSendMessage.
070206 124335.32 ncstart:bc10[0] NCSTART: writeTret returns:
070206 124335.32 ncstart:8524[0] NCSTART: Renaming TRET to DRET
070206 124335.32 ncstart:85cd[0] NCSTART: Rename Passed
070206 124335.32 ncstart:82e3[0] NCSTART: Checking ADL.log size=174450
070206 124335.32 NCDBG:c9d8[1] NCDBG: Status=++
070206 124335.32 NCDBG:780f[1] NCDBG: MSG Processed : xxxCHK D Received from task [0] @ 070206124333
070206 124336.00 NCALL800:15b30[33] 73679 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124336.06 NCALL800:15b30[53] 73687 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124336.18 NCALL800:15b30[8] 73667 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124336.18 NCALL800:15b30[39] 73681 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124336.71 NCALL800:15b30[28] 73675 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124337.03 NCALL800:4e09[45] 73684 NCALL800: Confirm_dig entered =
070206 124337.06 NCALL800:15b30[18] 73670 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124337.28 NCALL800:4e09[20] 73671 NCALL800: Confirm_dig entered =
070206 124337.28 NCALL800:4e09[26] 73674 NCALL800: Confirm_dig entered =
070206 124337.28 NCALL800:15b30[35] 73678 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124337.28 NCALL800:15b30[30] 73677 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
070206 124337.81 NCALL800:4e09[43] 73683 NCALL800: Confirm_dig entered =
070206 124337.84 NCALL800:15b30[41] 73682 VOX played =C:\VOSNT\VOX\DEFAULT\FB.VOX pmode=0 ret=11 action=P
```

7 Support

For technical support on QueueBuster, contact the Netcall Helpdesk on +44 207 570 8714. Technical support emails can be sent to customer.services@netcall.com.

8 Conclusion

These Application Notes describe the configuration steps required for successful interoperability of Netcall QueueBuster with Avaya Communication Manager using E1 trunks. All feature and serviceability test cases were completed successfully.

9 Additional References

This section references the product documentation that is relevant to these Application Notes.

- *Documentation for Avaya Communication Manager(3.1.2), Media Gateways and Servers*, Document ID 03-300151, Issue 5, February 2006, available at: <http://support.avaya.com>.
- The *QueueBuster User Guide* can be downloaded from the QueueBuster Customer Area (password required), available at: <http://www.hyperphonenumber.com/NetCallWebInterface/Netcall/Engine/Load.aspx>.

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