Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Interalia XMU+ with Avaya Aura™ Communication Manager using Line-Side T1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Interalia's XMU+ system to successfully interoperate with Avaya Aura™ Communication Manager using Line-Side T1. XMU+ is a voice application platform that supports multiple applications.

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.

1 Introduction

These Application Notes describe the compliance tested configuration using Interalia's XMU+ solution with Avaya Aura™ Communication Manager using Line-Side T1. The XMU+ is a microprocessor-based voice application platform that supports multiple applications simultaneously on a port-by-port basis. Typical XMU+ applications supported with Line side connectivity are as follows:

- ACD/UCD announcements
- Auto attendant
- Voicemail/IVR Failover
- Information Lines

The Interalia system used for the test will consist of a XMU+ server connected to Avaya Aura™ Communication Manager via a Line Side T1 on the Avaya G650 Media Gateway. A DS1 card in the Avaya G650 Media Gateway is set to the T1 dipswitch and is used to connect to the Interalia system. Link Failure\Recovery was also tested to ensure successful reconnection on link failure.

1.1 Interoperability Compliance Testing

The interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on verifying that the voice application response is activated in various scenarios and testing includes:

- Verification of connectivity between XMU+ and Avaya Aura™ Communication Manager
- Verification that interactive voice response occurs in various telephony operations using ACD announcement application
- Verification that interactive voice response occurs in various telephony operations using Voicemail application
- Verification that interactive voice response occurs in various telephony operations using Information Lines application
- Failover testing of the XMU+ system and Avaya Aura™ Communication Manager

The serviceability testing focused on verifying the ability of the XMU+ system to recover from disconnection such as power supply failure.

1.2 Support

Technical support can be obtained for Interalia's XMU+ as follows;

- Email: support@interalia.com
- Website: www.interalia.com
- Phone: +1 800 531 0115 (Toll Free)

2 Reference Configuration

Figure 1 shows the network topology during compliance testing. An Avaya S8500B Server running Communication Manager with an Avaya G650 Media Gateway was used as the hosting PBX. XMU+ is connected to the Communication Manager using the DS1 board set to Line-side T1.

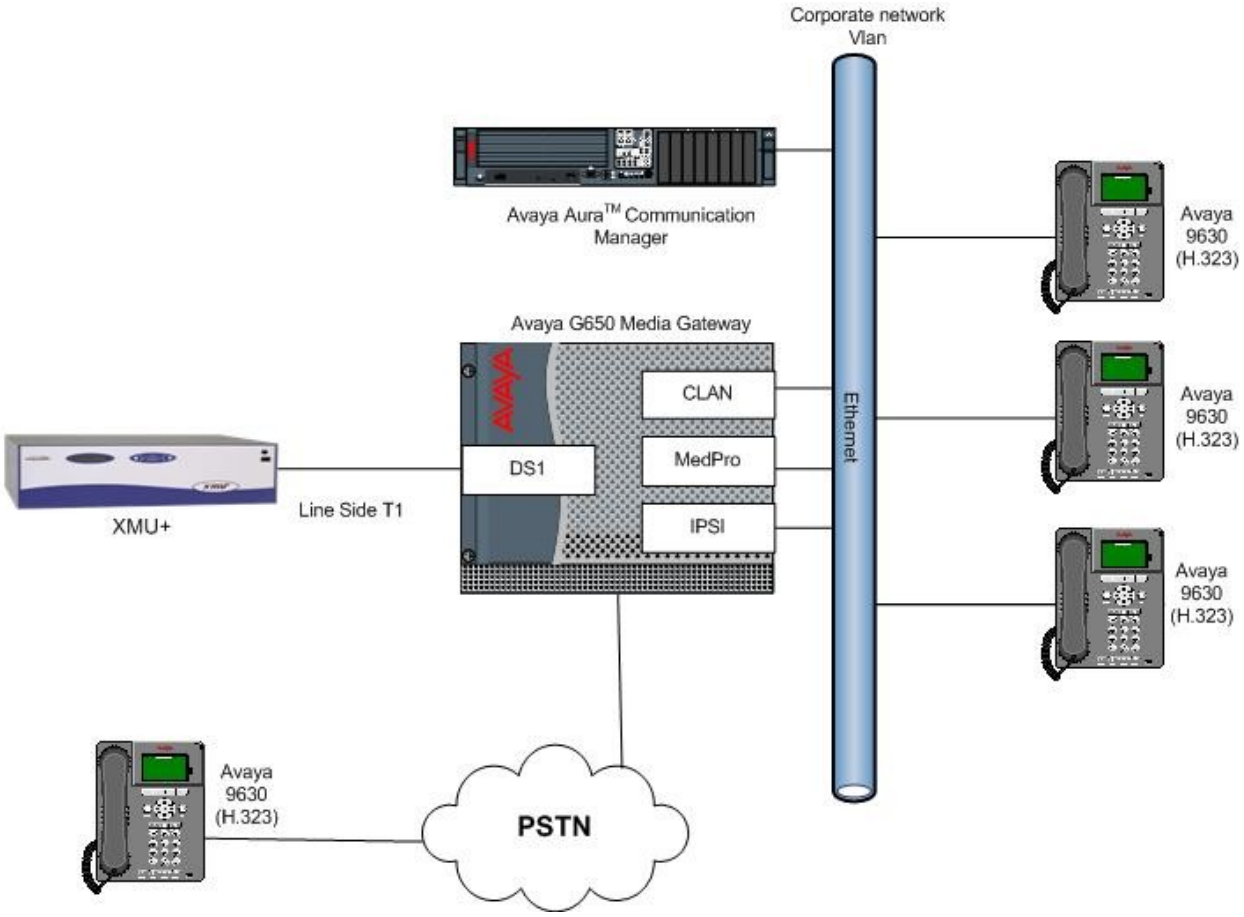


Figure 1: Network Topology

3 Equipment and Software Validated

All the hardware and associated software used in the compliance testing is listed below.

Equipment	Software Version
Avaya S8500B Server	Avaya Aura™ Communication Manager 5.2.1 (R015x.02.1.016.4)
Avaya G650 Media Gateway - IPSI TN2312BP - CLAN TN799DP - IP Media Processor TN2602AP - DS1 Interface TN246CP - Analog Line TN793CP	 HW15, FM49 HW01, FM34 HW02, FM49 HW02, FM024 HW09, FW10
Avaya 96xx Telephones (H.323) 9630	 3.0
Interalia XMU+ - Line-Side T1 Card	Firmware version: V6.82 Software: XMUCOM+ V7.25 PT # 47367 – T24

Table 1: Hardware and Software Version Numbers

4 Configure Avaya Aura™ Communication Manager

The configuration and verification operations illustrated in this section were all performed using Communication Manager System Administration Terminal (SAT). The information provided in this section describes the configuration of Avaya Aura™ Communication Manager for this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Verify System Parameters Customer Options
- Add DS1 Board
- Add DS1FD Stations
- Add Announcements
- Administer COR
- Confirm country Setting
- Administer Hunt Group, Vector and VDN
- Administer Agent Logins
- Administer Stations
- Add Feature Access Codes

The configuration of the PRI interface to the PSTN is outside the scope of these Application Notes.

4.1 Verify System Parameters Customer Options

Use the **display system-parameters customer-options** command to verify that Communication Manager has permissions for features illustrated in these Application Notes. On **Page 6**, verify the following customer options are set to **y** as shown below.

- **ACD?** to **y**
- **Vectoring (Basic)?** to **y**
- **Expert Agent Selection (EAS)?** to **y**

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

                         Call Center Release: 5.0

                                  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)? n
                  Business Advocate? n              Service Observing (VDNs)? n
                    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? n              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)? n                  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)? n               Vectoring (Variables)? n
```

Use the command **display system-parameters features** for verification of feature parameters. On **Page 11**, verify that the **Expert Agent Selection (EAS) Enabled?** option is set to **y** as shown below.

```
display system-parameters features                            Page 11 of 17
                     FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER SYSTEM PARAMETERS
  EAS
        Expert Agent Selection (EAS) Enabled? y
       Minimum Agent-LoginID Password Length:
         Direct Agent Announcement Extension:                  Delay:
   Message Waiting Lamp Indicates Status For: station
```

4.2 Add DS1 Board

A DS1 board is set up as the Line-Side T1 connection. Ensure that the physical board on the G650 is set to 120 ohms and 24 channels. On Communication Manager use the command; **add ds1 n** to add the DS1 card where **n** is the physical slot number on the G650. Set the values to correspond to those expected on the physical XMU+ system.

- **Name:** Enter in a descriptive name, **T1 Board** is used in this case.
- **Bit Rate:** This is set to **1.544**
- **Line Coding:** Set this value to **b8zs** to correspond to the XMU+ value used
- **Signaling Mode:** This is set to **robbed-bit**.

```
add ds1 01a10                                                Page   1 of   2
                                DS1 CIRCUIT PACK

            Location: 01A10                          Name: T1 Board
            Bit Rate: 1.544                    Line Coding: b8zs
   Line Compensation: 1                       Framing Mode: esf
      Signaling Mode: robbed-bit


Interface Companding: mulaw
           Idle Code: 11111111


      Slip Detection? n                Near-end CSU Type: other

   Echo Cancellation? n
```

4.3 Add DS1FD Stations

A number of DS1FD stations were added to the Line-Side T1 board. To add a station use the command **add station n** where **n** is a valid extension in the dial plan table in Communication Manager. Set the values as follows:

- **Type:** This is set to **DS1FD**
- **Port:** Enter in one of the 24 available port numbers on the T1 card, in this case **01a1001.**
- **Name:** Enter a descriptive name, such as **LineSide 1**

```
add station 5010                                             Page   1 of   4
                                    STATION

Extension: 5010                        Lock Messages? n              BCC: 0
     Type: DS1FD                       Security Code:                 TN: 1
     Port: 01A1001                   Coverage Path 1:                COR: 1
     Name: LineSide 1                Coverage Path 2:                COS: 1
                                     Hunt-to Station:              Tests? y
STATION OPTIONS
                                         Time of Day Lock Table:
             Loss Group: 4
    Off Premises Station? y
       R Balance Network? n

          Survivable COR: internal
   Survivable Trunk Dest? y
```

4.4 Add Announcements

An announcement is added for each music or message to be played by the XMU+. Use the command; **add announcement n** where **n** is a valid extension under the provisioned dial plan. Add an **Annc Name**, in this case **ACD2**. The **Annc Type** is set to **ds1-fd** and the **Port** is set to a valid T1 port, in this case, **01a1005**.

```
add announcement 5050                                          Page   1 of   1

                        ANNOUNCEMENTS/AUDIO SOURCES

  Extension: 5050                                 COR: 1
  Annc Name: ACD2                                  TN: 1
  Annc Type: ds1-fd                             Queue? y
       Port: 01a1005                  Queue Length: 0
```

Repeat the above process to create two more announcements. The list of announcements created is shown below by using the **list announcement** command.

```
list announcement

                            ANNOUNCEMENTS/AUDIO SOURCES
Announcement                                                  Source      Num of
Extension             Type       Name                       Pt/Bd/Grp   Files
3100                  integrated monday_night               01A08       1
3200                  integrated Greeting_1st_Hold          01A08       1
3300                  integrated PC3_Inbound                01A08       1
5040                  ds1-fd     ACD1                       01A1004     1
5050                  ds1-fd     ACD2                       01A1005     1
5060                  ds1-fd     ACD3                       01A1006     1
6070                  analog     IVR1                       01A0507     1
6100                  analog     IVR2                       01A0510     1
```

4.5 Administer COR

Set the Class of Restriction (COR) for the stations to be used in compliance testing to enable music on hold for these stations. Use the command **change cor 1** where **1** is the COR assigned to the stations in **Section 4.9**. On **Page 1**, set the parameter **Hear System Music on Hold?** to **y**.

```
change cor 1                                                  Page   1 of  23
                              CLASS OF RESTRICTION

               COR Number: 1
          COR Description:

                      FRL: 0                                  APLT? y
  Can Be Service Observed? y           Calling Party Restriction: none
Can Be A Service Observer? y            Called Party Restriction: none
 Partitioned Group Number: 1       Forced Entry of Account Codes? n
         Priority Queuing? n                Direct Agent Calling? y
     Restriction Override: none       Facility Access Trunk Test? n
     Restricted Call List? n                 Can Change Coverage? n

            Access to MCT? y             Fully Restricted Service? n
Group II Category For MFC: 7
         Send ANI for MFE? n              Add/Remove Agent Skills? y
            MF ANI Prefix:               Automatic Charge Display? n
Hear System Music on Hold? y   PASTE (Display PBX Data on Phone)? n
                         Can Be Picked Up By Directed Call Pickup? y
                                     Can Use Directed Call Pickup? y
                                    Group Controlled Restriction: inactive
```

4.6 Confirm Country Setting

Ensure that the country options set for the Communication Manager correspond to the call progress tones set in **Section 5.2**. Use the command **display tone-generation**. On **Page 1** ensure that the **Base Tone Generator Set** value is set to the country option expected, in this case the value is set to **1**.

```
display tone-generation                                       Page   1 of  21
                               TONE GENERATION

      Base Tone Generator Set: 1
          440Hz PBX-dial Tone? n              440Hz Secondary-dial Tone? n
```

4.7 Administer Hunt Group, Vector and VDN

Administer a hunt group, vector and Vector Directory Number (VDN). The VDN and vector were created to route to the XMU+ for the purpose of the compliance testing.

4.7.1 Hunt Group

Enter the **add hunt-group n** command where **n** is an unused hunt group number. On **Page 1** of the **Hunt Group** form, assign a **Group Name** and **Group Extension** valid under the provisioned dial plan. Set the following options to **y** as shown below.

- **ACD** to **y**
- **Queue** to **y**
- **Vector** to **y**

```
add hunt-group 1                                              Page   1 of   3
                                   HUNT GROUP

           Group Number: 1                                 ACD? y
             Group Name: XMU                             Queue? y
        Group Extension: 3090                           Vector? y
             Group Type: ucd-mia
                     TN: 1
                    COR: 1                       MM Early Answer? n
          Security Code:                   Local Agent Preference? n
 ISDN/SIP Caller Display:

            Queue Limit: unlimited
 Calls Warning Threshold:      Port:
  Time Warning Threshold:      Port:
```

On **Page 2**, set the **Skill** field to **y** as shown below.

```
add hunt-group 1                                              Page   2 of   3
                                   HUNT GROUP

                    Skill? y
                      AAS? n
                 Measured: internal
     Supervisor Extension:

   Controlling Adjunct: none

                                Redirect on No Answer (rings):
                                             Redirect to VDN:
                  Forced Entry of Stroke Counts or Call Work Codes? N
```

4.7.2 Vector

Enter the **change vector n** command, where **n** is set to **1**. Enter the vector steps to queue to the **Skill 1** as shown below. If skill 1 is unavailable the vector is routed through to the announcements residing on the T1 ports.

```
change vector 1                                                Page   1 of   6
                                  CALL VECTOR

    Number: 1                Name: IVR
                                                                      Lock? n
     Basic? y   EAS? y   G3V4 Enhanced? y   ANI/II-Digits? y   ASAI Routing? y
 Prompting? y   LAI? y  G3V4 Adv Route? y   CINFO? y   BSR? y   Holidays? y
 Variables? y   3.0 Enhanced? y
01 queue-to     skill 1    pri m
02 wait-time    6   secs hearing music
03 announcement 5040
04 wait-time    6   secs hearing music
05 queue-to     skill 1    pri m
06 announcement 5050
07 wait-time    6   secs hearing music
08 queue-to     skill 1    pri m
09 announcement 5050
10 wait-time    6   secs hearing music
11 goto step    09            if unconditionally
12 disconnect   after announcement
```

```
change vector 1                                                Page   2 of   6
                                  CALL VECTOR
13 stop
14
```

4.7.3 Vector Directory Number (VDN)

Enter the **add vdn n** command, where **n** is an unused VDN number. The VDN chosen is **1800**. On **Page 1** assign a **Name *** for the VDN, set the **Destination** to **Vector Number** as **1** and **1st Skill** to **1**.

```
add vdn 1800                                                   Page   1 of   3
                          VECTOR DIRECTORY NUMBER

                           Extension: 1800
                               Name*: IVR
                         Destination: Vector Number        1

                  Allow VDN Override? n
                                COR: 1
                                TN*: 1
                           Measured: none

                           1st Skill*: 1
                           2nd Skill*:
                           3rd Skill*:

* Follows VDN Override Rules
```

4.8 Administer Agent Logins

Enter the **add agent-loginID n** command; where **n** is a valid extension under the provisioned dial plan. The agent **Login ID** chosen is **6001** and the **Password** is set to **6001**. Enter a descriptive name for the agent in the **Name** field. Ensure the **COR** field is set to **1** which relates to the COR configured in **Section 4.5**.

```
add agent-loginID 6001                                        Page   1 of   2
                                AGENT LOGINID

               Login ID: 6001                                    AAS? n
                   Name: IVR Agent 1                           AUDIX? n
                     TN: 1                              LWC Reception: spe
                    COR: 1                     LWC Log External Calls? n
          Coverage Path:                     AUDIX Name for Messaging:
          Security Code:
                                     LoginID for ISDN/SIP Display? n
                                                         Password: 6001
                                           Password (enter again): 6001
                                                       Auto Answer: station
                                                 MIA Across Skills: system
                                            ACW Agent Considered Idle: system
                                            Aux Work Reason Code Type: system
                                              Logout Reason Code Type: system
                        Maximum time agent in ACW before logout (sec): system
                                             Forced Agent Logout Time:   :

     WARNING:  Agent must log in again before changes take effect
```

On **Page 2**, specify the list of skills assigned to the login and the skill level for each of them in the **SN/SL** field as shown below. In this case set the Skill Number, **SN** to **1** and the Skill Level, **SL** to **1**.

```
Add agent-loginID 6001                                        Page   2 of   2
                                AGENT LOGINID
      Direct Agent Skill:                                Service Objective? n
Call Handling Preference: skill-level                 Local Call Preference? n

    SN   RL SL          SN   RL SL          SN   RL SL          SN   RL SL
 1: 1       1       16:                31:                46:
 2:                 17:                32:                47:
```

4.9 Administer Stations

A number of stations were set up and used as agent phones during the compliance testing. Use the command; **add station n** where **n** is a free extension according to the dial plan. On **Page 1**, set the **Type** to **9630** and enter in a name in the **Name** field. Set the **COR** to **1** to correspond with **Section 4.5**.

```
add station 3000                                          Page   1 of   5
                                   STATION

Extension: 3000                       Lock Messages? n               BCC: 0
     Type: 9630                       Security Code: 3000             TN: 1
     Port: S00002                   Coverage Path 1:                 COR: 1
     Name: S1                       Coverage Path 2:                 COS: 1
                                    Hunt-to Station:
STATION OPTIONS
                                         Time of Day Lock Table:
             Loss Group: 19        Personalized Ringing Pattern: 1
                                             Message Lamp Ext: 3000
           Speakerphone: 2-way            Mute Button Enabled? y
       Display Language: english               Button Modules: 0
 Survivable GK Node Name:
         Survivable COR: internal            Media Complex Ext:
   Survivable Trunk Dest? y                        IP SoftPhone? n
```

4.10 Add Feature Access Codes

Feature Access Codes are added on the Communication Manager for logging in agents for the purposes of compliance testing. Enter the command **change feature-access-codes** and on **Page 5** add the following values to the Automatic Call Distribution Features:

- **After Call Work Access Code #8**
- **Auto-In Access Code #2**
- **Aux Work Access Code #4**
- **Login Access Code #6**
- **Logout Access Code #5**
- **Manual-in Access Code #7**

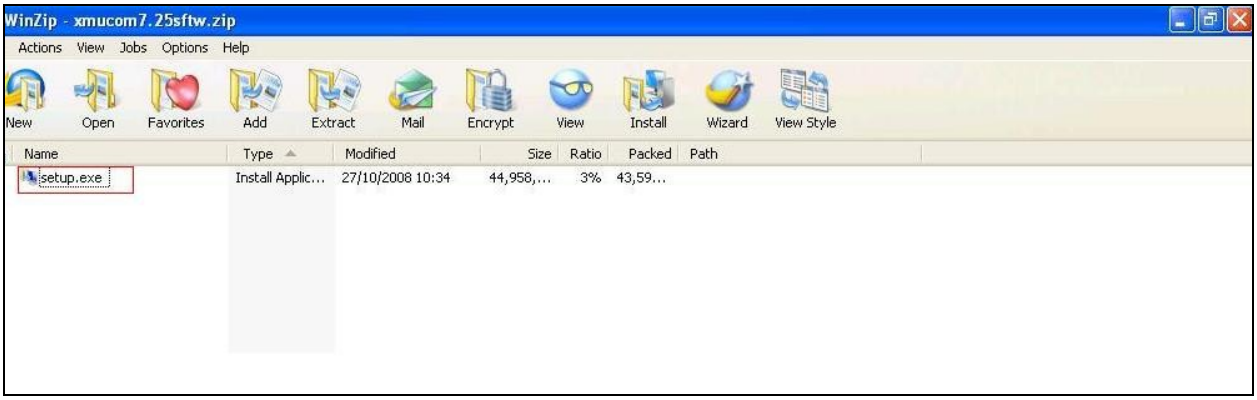
```
change feature-access-codes                                Page   5 of   8
                            FEATURE ACCESS CODE (FAC)

                        Automatic Call Distribution Features
                  After Call Work Access Code: #8
                             Assist Access Code:
                           Auto-In Access Code: #2
                          Aux Work Access Code: #4
                             Login Access Code: #6
                            Logout Access Code: #5
                         Manual-in Access Code: #7
     Service Observing Listen Only Access Code:
     Service Observing Listen/Talk Access Code:
         Service Observing No Talk Access Code:
                    Add Agent Skill Access Code:
                 Remove Agent Skill Access Code:
       Remote Logout of Agent Access Code:
```

5 Configure the XMU+

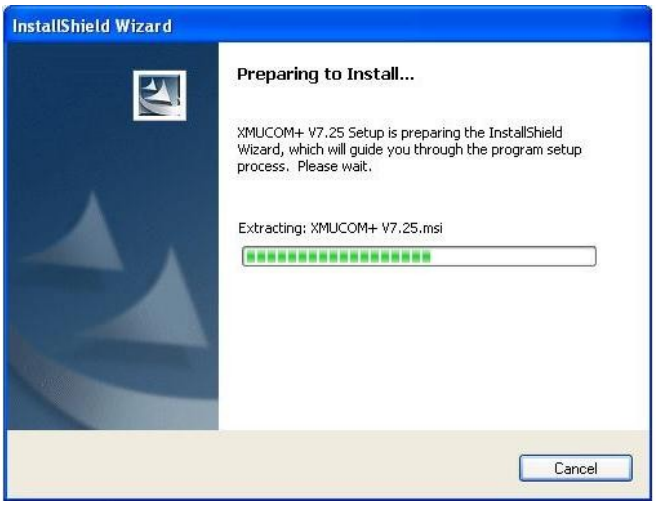
The following section documents the necessary steps taken to configure the XMU+ to Communication Manager.

5.1 Installing XMU+

Start the install of the XMU+ by opening the zip file **xmucom7.25sftw.zip** and running the **setup.exe** file as shown.

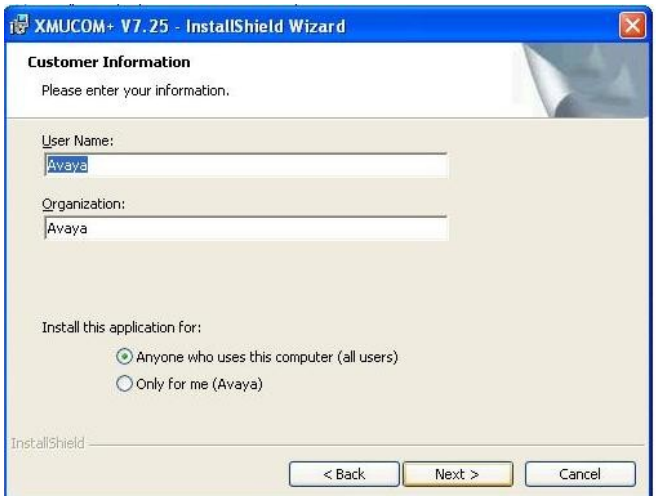


A **Preparing to Install** screen appears below.



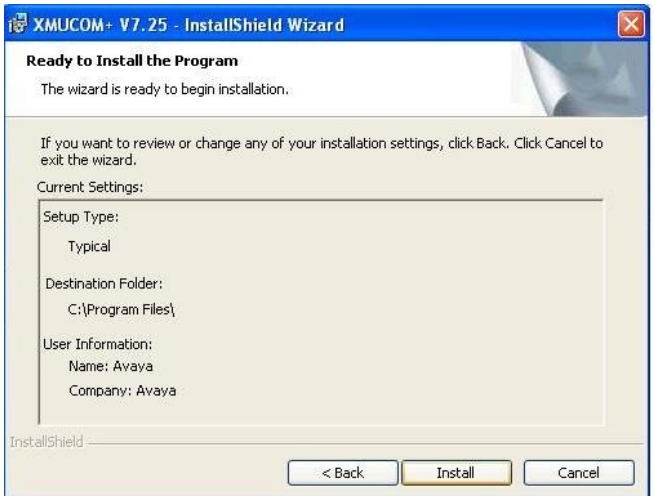
A welcome screen appears next. Click **Next** to continue with the install.

On the **Customer Information** screen enter in the **User Name** and **Organization** and click **Next**.



Choose your install destination on the **Destination Folder** screen and click **Next**.

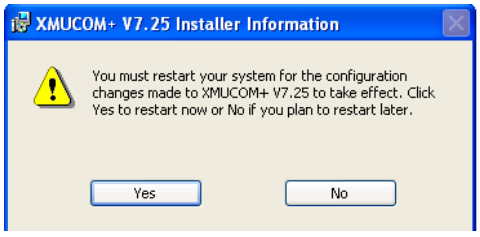
Review the selected settings and click **Install**.



A screen appears showing the status of the install.

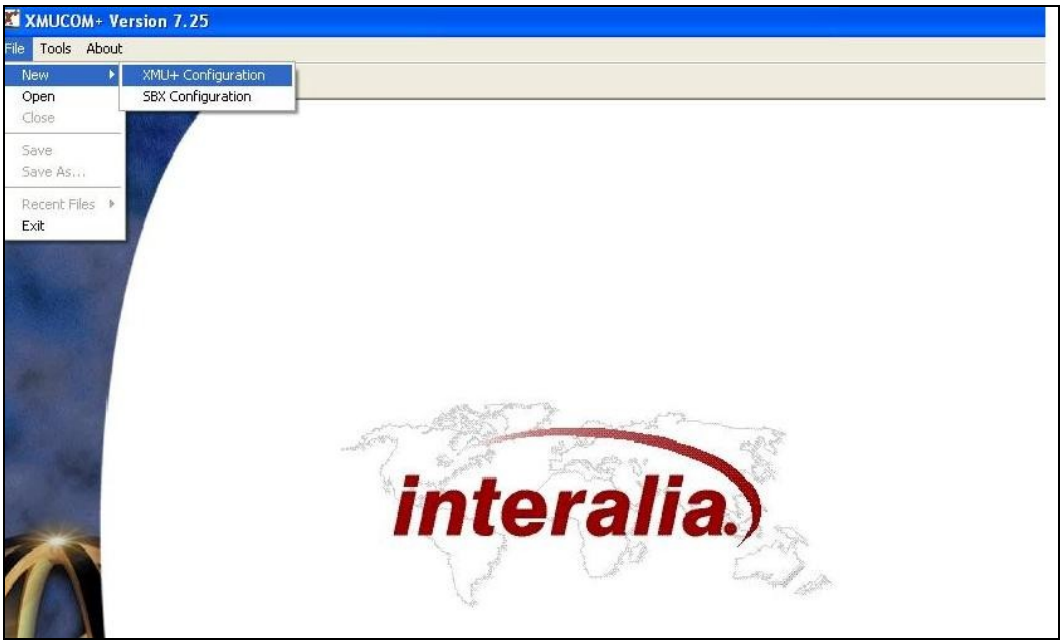
A screen appears to indicate the successful install of the product. Click **Finish** to complete it.

Restart the pc to allow configuration changes to take effect. Choose the **Yes** button to restart.

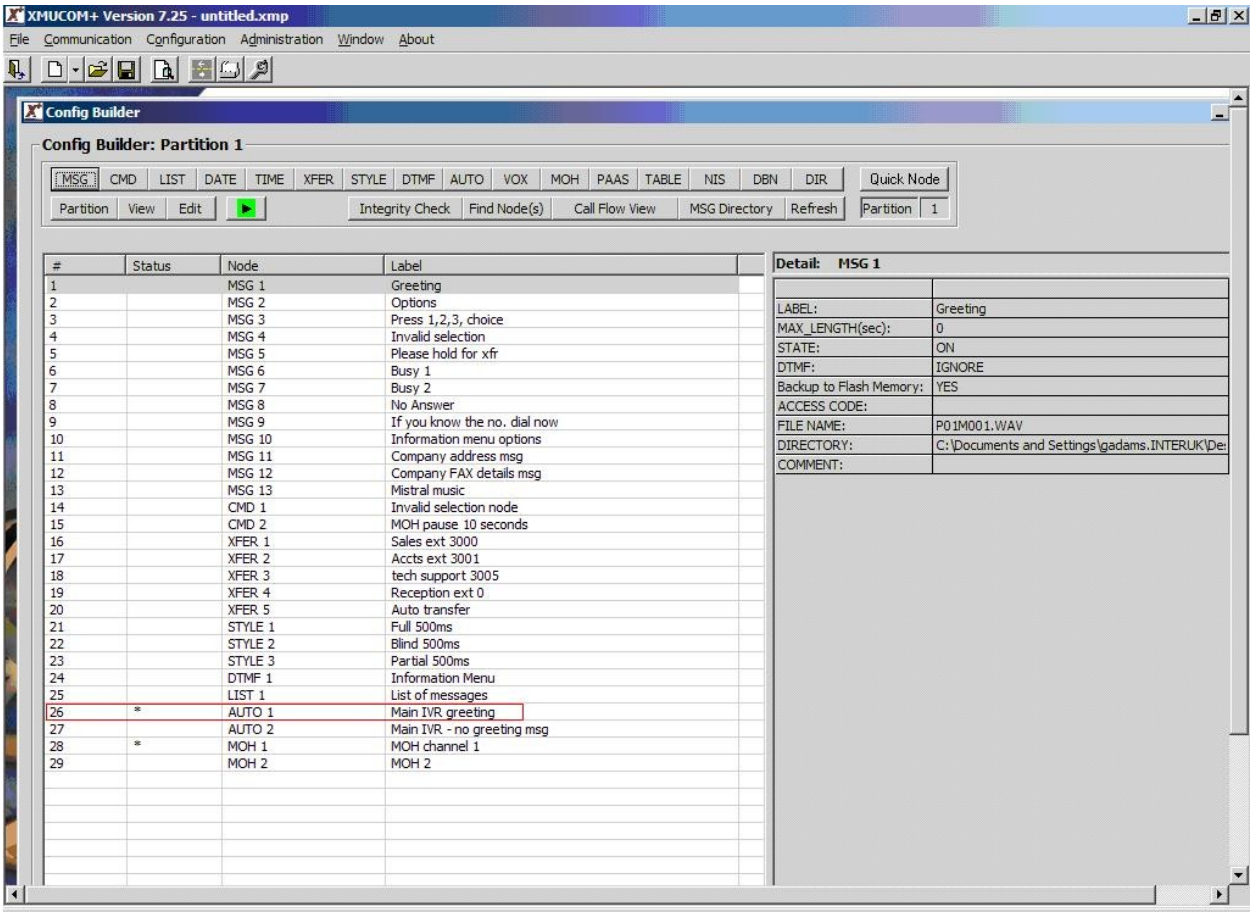


5.2 Configuring the XMU+

Open the XMUCOM+ program in the installed directory. Select **File → New → XMU+ Configuration**.

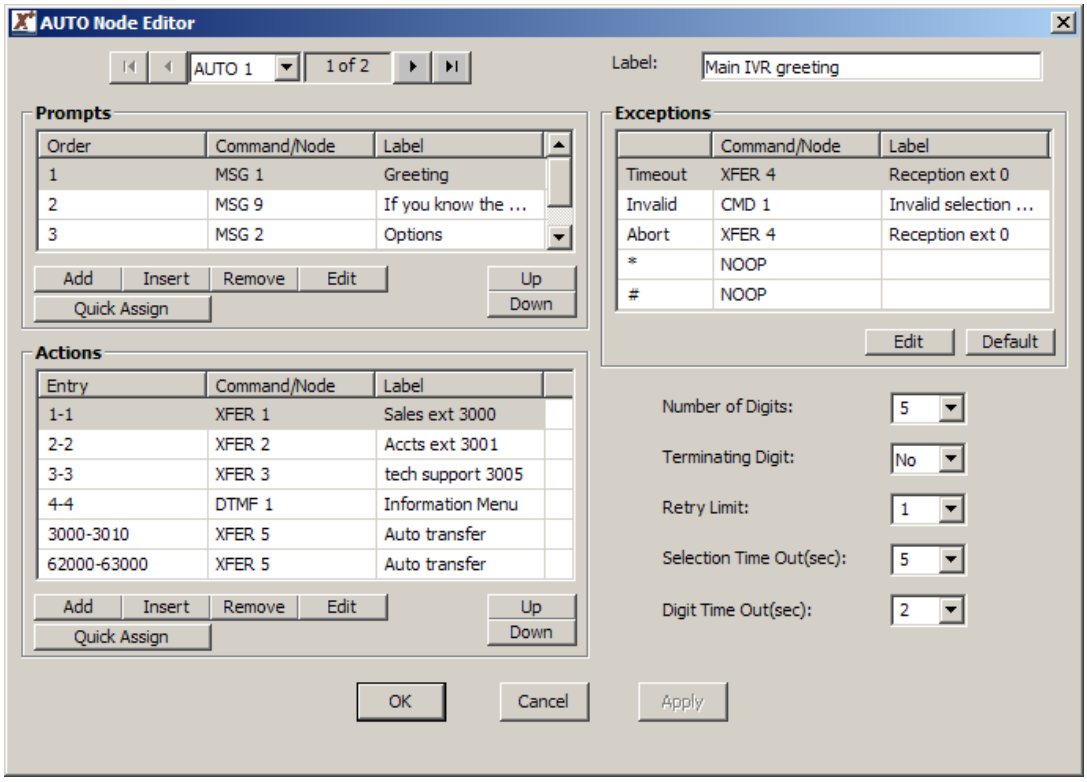


The **Config Builder** form is displayed which is the main IVR\Auto-Attendant configuration screen. Populate this form with music and message files. A completed form is displayed below.

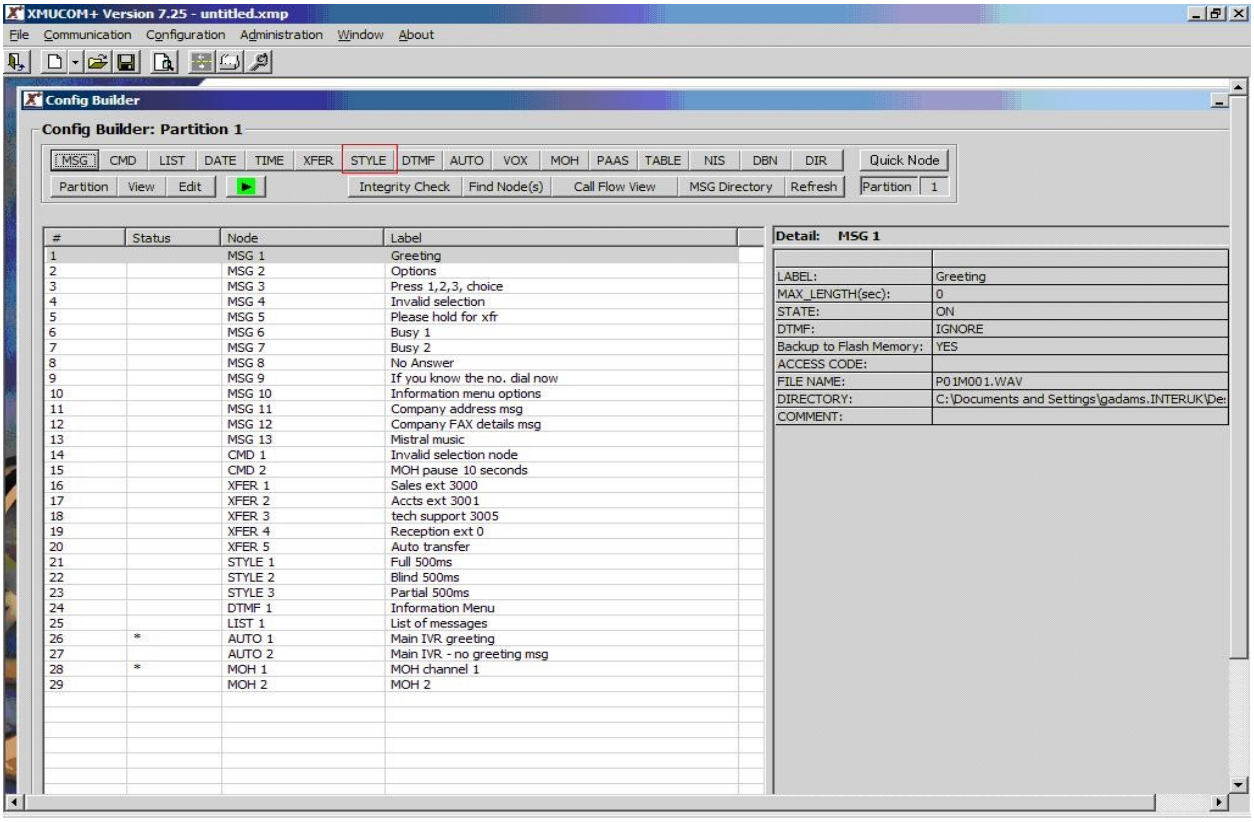


Note the highlighted entries in the screen above with an * as their **Status**. Once the configuration is built the line card needs to be set to Auto 1 as this is the starting node and is shown by the * against its status in the screen shot above.

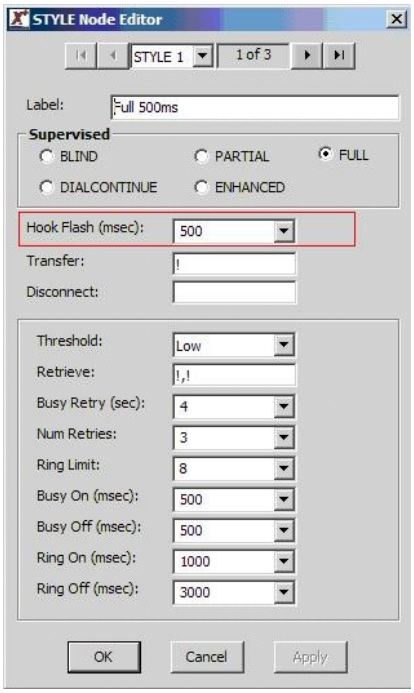
By double clicking the AUTO 1 entry from the Config builder screen the AUTO 1 entry below will appear so the settings can be reviewed and edited. Double-click the entry for the **Node** displaying **AUTO 1** to open it for editing and the **AUTO Node Editor** screen appears as shown below. It displays set **Prompts**, **Actions** and **Exceptions**.



In order to manage a call, the XMU+ will monitor for a busy or no answer indication, this is achieved by setting the Style node. This can be accessed through the **STYLE** tab as highlighted below. Within the configuration builder note the transfer styles that require setting (Blind, Partial or Supervised).

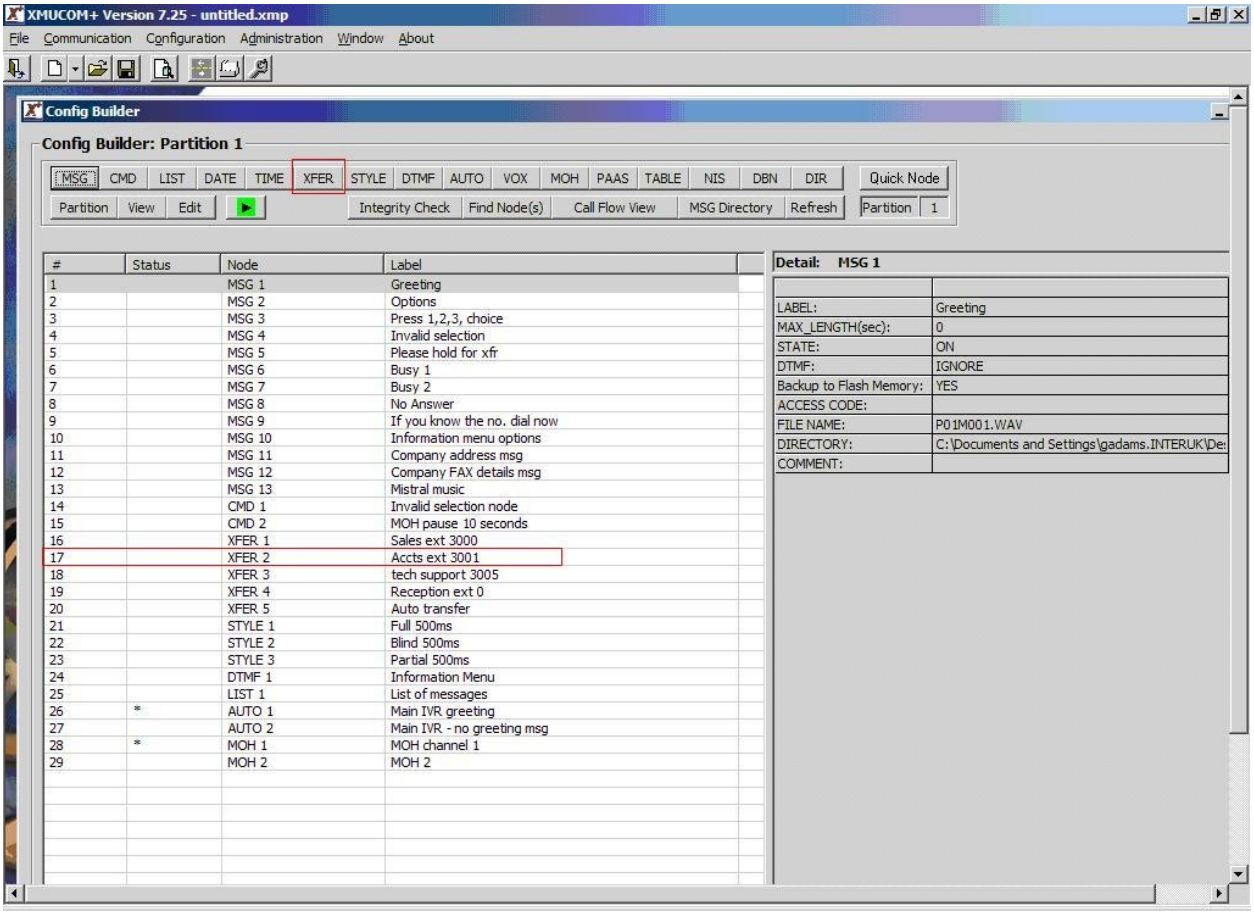


By double clicking the **Style 1** entry from the Config builder screen the Style 1 entry below will appear so the settings can be reviewed and edited. As the T1 card is using the North American PBX settings the transfer style shows the **Hook Flash (msec)** being set as **500ms** in order to perform the transfer / retrieval of a call.

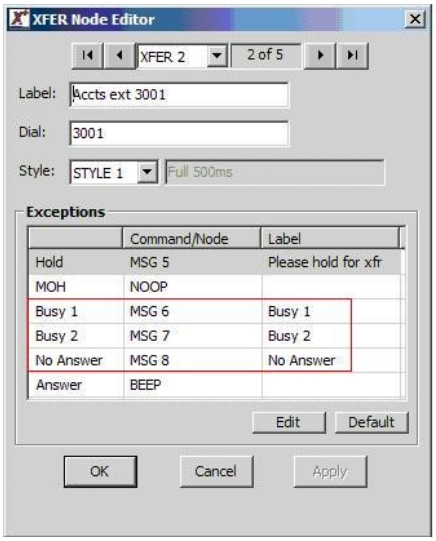


Alter the Hook Flash values according to the call progress tones set for country option as referred to in **Section 4.6**.

During the monitoring of a call, it is possible to inform the caller of their progress. In the main configuration builder window you can edit calls transfers i.e. Xfer 2. Click on the **XFER** node as highlighted in the diagram below.



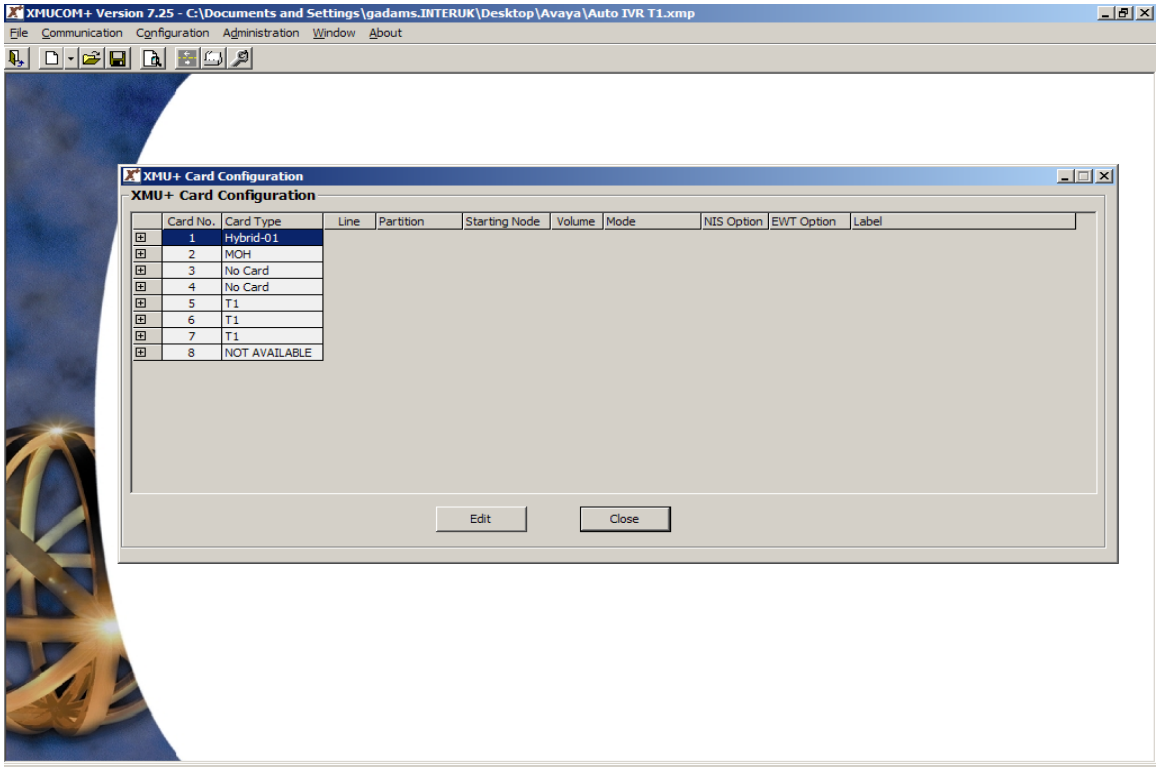
By double clicking the XFER 2 entry from the Config builder screen highlighted in the screen above the **XFER 2** entry below will appear so the settings can be reviewed and edited. During the transfer to the extension, if the extension is busy, messages 6 and 7 (**MSG 6** and **MSG 7**) will play according to the Xfer Style. If there is no answer then the **No Answer** message (**MSG 8**) will play.



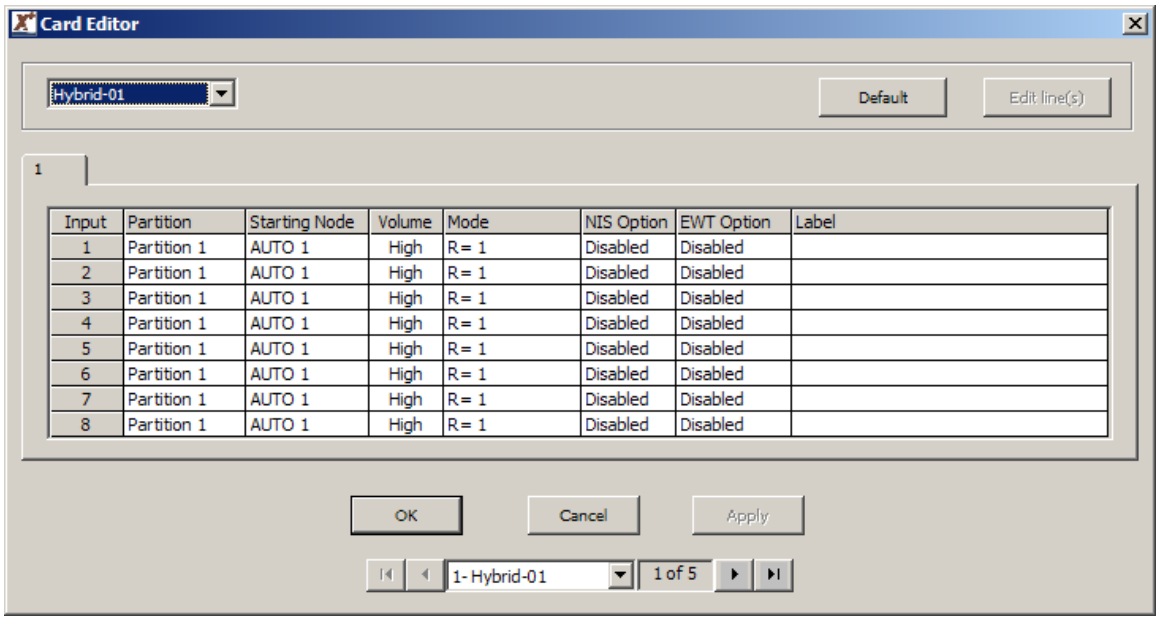
Note that whilst carrying out the fully supervised transfers the status mode on the front of the XMU+ display can indicate the B, b, B etc or R, r, R as an indication of the call progression.

5.3 Configuring XMU+ cards

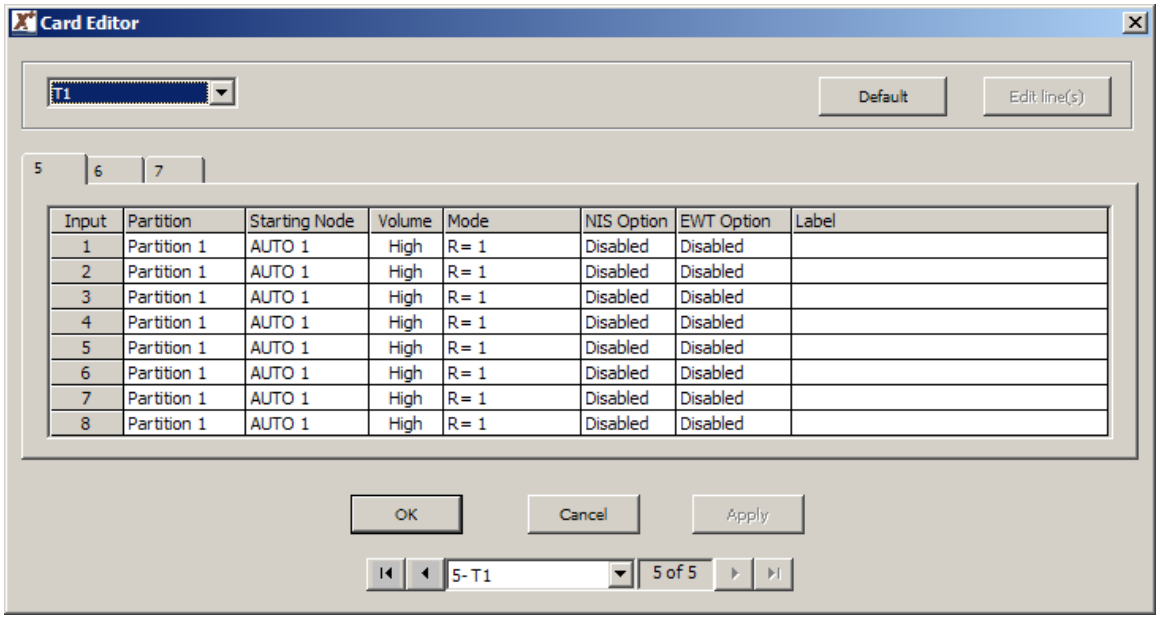
As the XMU+ can house multiple cards, the screen below shows an example of the XMU+ card configuration in a large XMU+ chassis. The first card is a standard DSP Hybrid 01 line card, followed by an MOH card and then two empty spaces as the T1 card can only reside in the first or fifth slot.



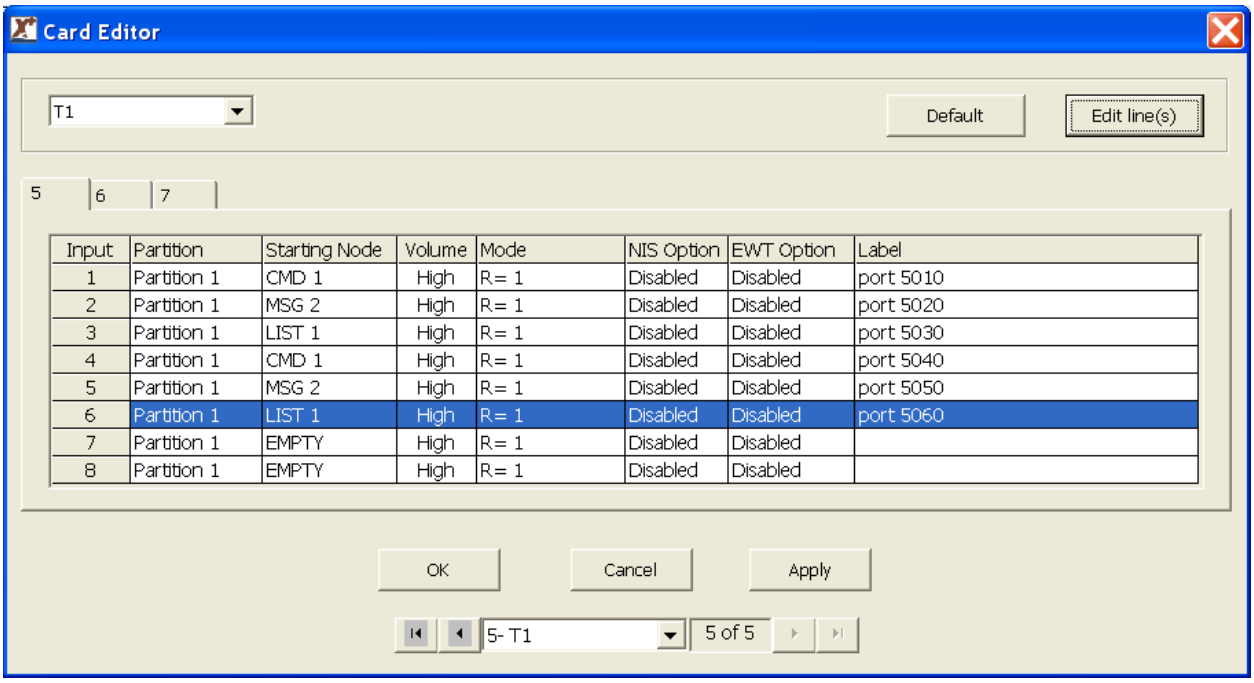
Select the first card and then edit the card by clicking **Edit** to show the details below. The first card is the Hybrid-01



The fifth card is the T1 card, notice how this card takes up slots 5, 6, 7 as indicated by the three tabs present, as each slot is addressing 8 lines hence 3x8 =24 channels.



The following screen shows ACD messaging configuration on the XMU+ T1 card. The **Starting Node** reads **CMD1** in first slot and **MSG 2** in second slot. ACD messaging was also tested on the XMU+ T1 card. The ports used in the compliance test are as follows: Port 1=5010, Port 2=5020, Port 3=5030, Port 4=5040, Port 5=5050, Port 6=5060. These ports are shown in the screen below.



Each of the CMD and MSG nodes can be represented by a number of steps e.g. CMD 1 consists of Table 1 followed by MSG 1 which is a Greeting message.

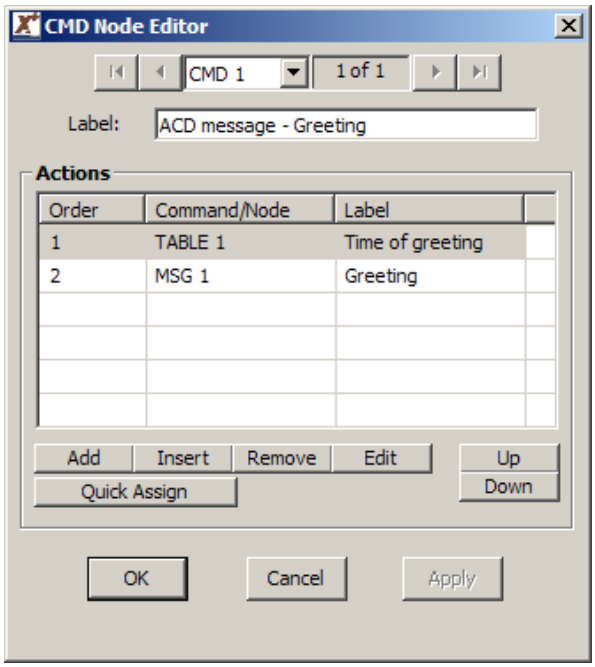
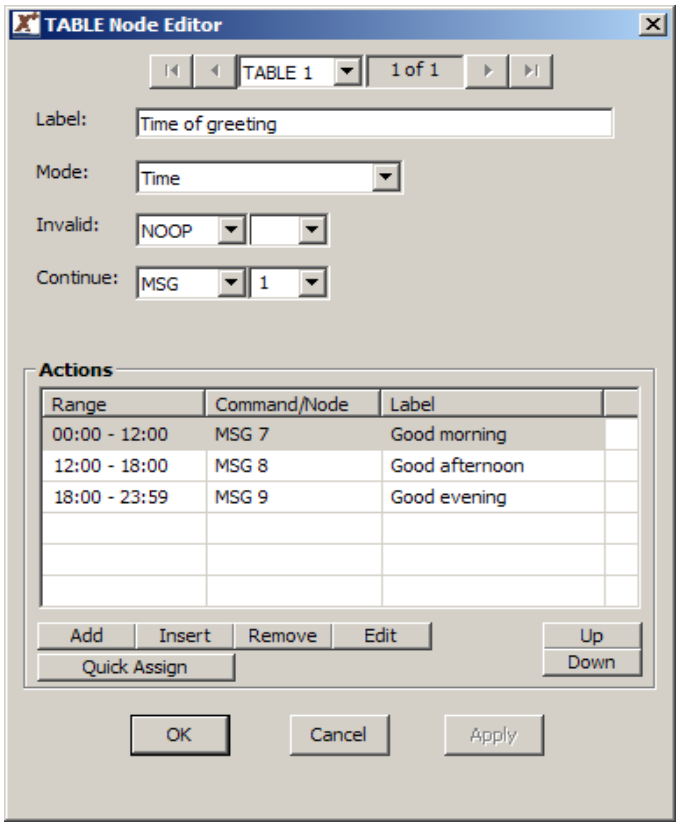


Table 1 in the screen below shows a series of actions to be taken at different times of the day.



6 General Test Approach and Test Results

The test approach was to validate the correct operation of typical interactive voice response applications such as ACD Announcements, Voicemail etc. The following results were obtained:

- Confirmation that interactive voice messages are played as expected in different call scenarios
- Confirmation that messages and music are routed successfully as expected
- Confirmation of good quality audio in all test cases
- Successful recovery of XMU+ after failover testing
- Successful recovery of Communication Manager after failover testing.

The tests were all functional in nature and performance testing was not included. All the test cases passed successfully.

7 Verification Steps

This section provides the tests that can be performed to verify correct configuration of Communication Manager and XMU+ configuration using Line-Side T1.

7.1 Verify Avaya Aura™ Communication Manager Status

The following steps can ensure that the communication between Communication Manager and the XMU+ is functioning correctly via the Line-Side T1.

7.1.1 Test DS1 Board

Test the DS1 board to ensure connectivity by running the command **test board 01a10** where 01a10 is the DS1 board located on slot 10 in the G650 cabinet as set up in **Section 4.2**. The DS1FD stations 5010 and 5020 on the T1 ports are in use.

```
test board 01a10

                                TEST RESULTS

Port        Mtce Name   Alt. Name        Test No.  Result           Error Code

01A10       UDS1-BD                      138       PASS
01A10       UDS1-BD                      139       PASS
01A10       UDS1-BD                      140       PASS
01A10       UDS1-BD                      141       PASS
01A10       UDS1-BD                      142       PASS
01A10       UDS1-BD                      143       PASS
01A10       UDS1-BD                      144       PASS
01A10       UDS1-BD                      145       PASS
01A10       UDS1-BD                      146       PASS
01A10       UDS1-BD                      1227      ABORT            1951
01A1001     OPS-LINE    5010             312       PASS
01A1001     OPS-LINE    5010             36        PASS
01A1023     OPS-LINE    5020             312       PASS
01A1023     OPS-LINE    5020             36        PASS
```

7.1.2 Status of DS1FD Stations

Check the status of the DS1FD stations set up in **Section 4.3** by running the command **status station 5010**. On **Page 1** the **Service State** is **in-service/on-hook**.

```
status station 5010                                          Page   1 of   4
                           GENERAL STATUS
     Administered Type: DS1FD              Service State: in-service/on-hook
        Connected Type: N/A
             Extension: 5010
                  Port: 01A1001       Parameter Download: not-applicable
           Call Parked? no                SAC Activated? no
      Ring Cut Off Act? no
Active Coverage Option: 1            one-X Server Status: N/A

          EC500 Status: N/A        Off-PBX Service State: N/A
   Message Waiting:
   Connected Ports:


  Limit Incoming Calls? no

 User Cntrl Restr: none                      HOSPITALITY STATUS
Group Cntrl Restr: none                    Awaken at:
                                            User DND: not activated
                                           Group DND: not activated
                                         Room Status: non-guest room
```

7.2 Verify XMU+ Status

The Status window, as highlighted below, on the display on the front of the XMU+, can be used to verify the communication of the XMU+. It is accessible by pressing the right arrow to enter the Status window. This shows the call flow as calls are made and received by the interactive voice response system.

8 Conclusion

These Application Notes describe the configuration steps required for Interalia XMU+ to successfully interoperate with Avaya Aura™ Communication Manager 5.2.1 using Line-Side T1. All functionality and serviceability test cases were completed successfully.

9 Additional References

This section references the Avaya and Interalia XMU+ product documentation that are relevant to these Application Notes. Product documentation for Avaya products may be found at http://support.avaya.com

1. *Administering Avaya Aura™ Communication Manager, Release 5.2; Document No. 03-300509, May 2009*
2. *DEFINITY Enterprise Communications Server Release 9 System Description 555-233-200, Issue 2, November 2000*

The Interalia documentation can be found at the following location:
http://www.interalia.com/Products/XMU/XMU-Overview

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.