Avaya Solution & Interoperability Test Lab

Application Notes for Verint Ultra Suite with Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Verint Ultra Suite to successfully interoperate with Avaya Communication Manager 2.1.

The Ultra Suite is a call recording solution able to capture audio from Avaya Communication Manager using a variety of integration mechanisms.

Ultra uses Computer Telephony Integration (CTI) to extract call event information and supports active station side recording via both Line-Side E1 trunks and the Avaya Communication Manager API, passive tapping of analogue stations, passive trunk tapping, and passive VoIP capture.

An Avaya S8700 Media Server with an Avaya G600 Media Gateway running Avaya Communication Manager 2.1 was used as the hosting PBX. Features and functionality were validated and performance testing was conducted in order to verify operation under light load.

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

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1. Introduction

These Application Notes describe the compliance-tested configuration using a Verint Ultra Server and Avaya Communication Manager. The solution provides a call recording capability, using CTI to provide call detail information.

Verint Ultra supports active station side recording via Line-Side E1 trunks and the Avaya Communication Manager API, passive tapping of analogue stations, passive trunk tapping, and passive VoIP capture.

The solution as tested is shown below.

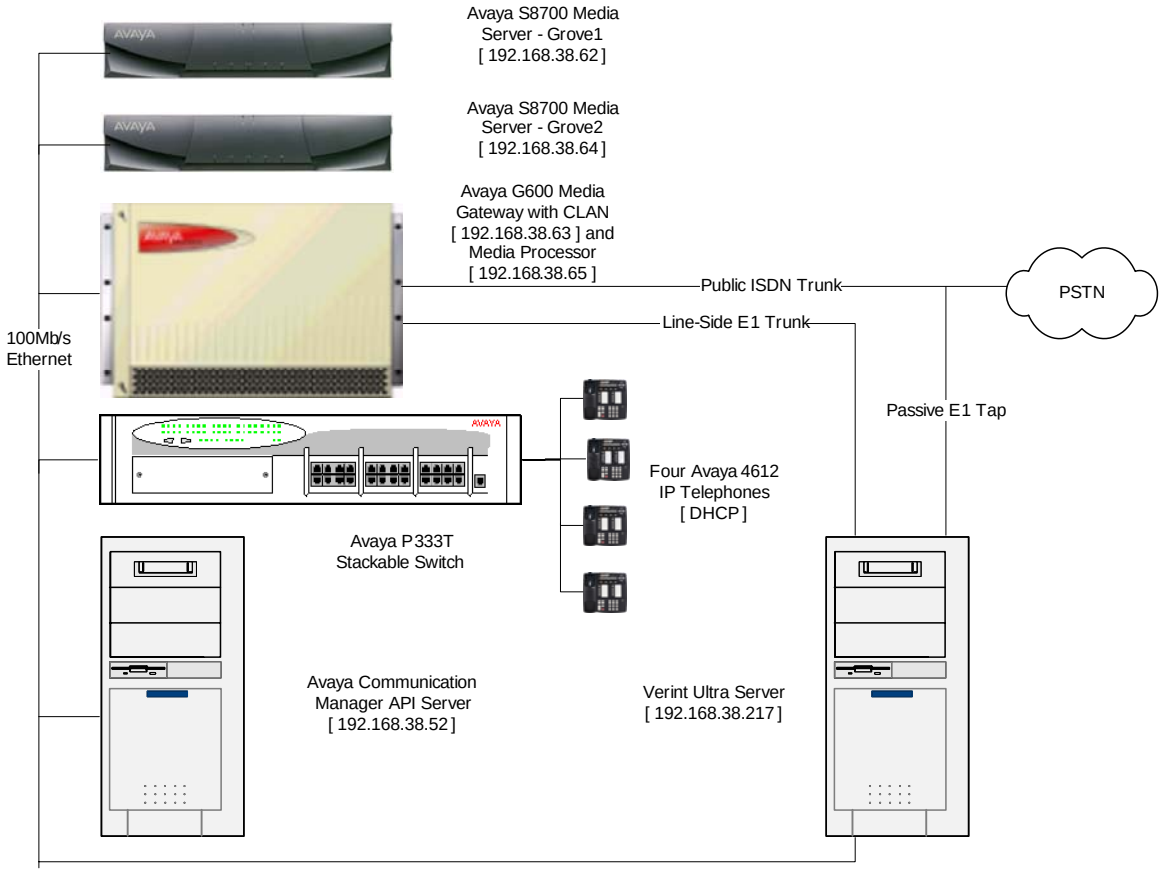

Figure 1: Tested Avaya Communication Manager Configuration with Verint Ultra Server

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2. Equipment and Software Validated

The tested configuration is detailed below.

Equipment	Software
Avaya S8700 Media Server running Avaya Communication Manager 2.1	R012x.01.0.410.0
Avaya G600 Media Gateway	N/A
Avaya P333T Stackable Switch	V4.0.17
Avaya Communication Manager API Server	V2.1 Load 23
Verint Ultra Server	R9.3

3. Configure Avaya Communication Manager

Different features of Avaya Communication Manager need to be configured for the recording modes to be tested. Please refer to the Administration Guide for Avaya Communication Manager for further details – Avaya Document 555-233-506 [1]. The specific options are detailed below.

3.1. Configure the CTI Link

Regardless of the mode of audio recording, a CTI link is required to provide call details for each recording. Ultra supports a native ASAI link to Avaya Communication Manager.

Although both ASAI Link Core and Plus Capabilities were enabled in the hosting PBX, only the Core Capabilities are required by the Ultra solution.

Display System-Parameters Customer-Options (only the relevant page is shown)

```
                              OPTIONAL FEATURES

    Abbreviated Dialing Enhanced List? y           Audible Message Waiting? y
        Access Security Gateway (ASG)? n               Authorization Codes? n
        Analog Trunk Incoming Call ID? n Backup Cluster Automatic Takeover? n
 A/D Grp/Sys List Dialing Start at 01? n                          CAS Branch? n
Answer Supervision by Call Classifier? n                            CAS Main? n
                                 ARS? y                  Change COR by FAC? y
                ARS/AAR Partitioning? y  Computer Telephony Adjunct Links? y
          ARS/AAR Dialing without FAC? y       Co-Res DEFINITY LAN Gateway? y
          ASAI Link Core Capabilities? y   Cvg Of Calls Redirected Off-net? y
          ASAI Link Plus Capabilities? y                       DCS (Basic)? n
       Async. Transfer Mode (ATM) PNC? n                 DCS Call Coverage? n
  Async. Transfer Mode (ATM) Trunking? n               DCS with Rerouting? n
             ATM WAN Spare Processor? n
                                 ATMS? n    Digital Loss Plan Modification? y
                  Attendant Vectoring? n                          DS1 MSP? n
                                                    DS1 Echo Cancellation? n
```


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A CTI Link needs to be configured to provide the logical connection between Avaya Communication Manager and the Ultra Server. The type must be set to "ASAI-IP". The extension number must be valid in the dialplan of the PBX.

Display CTI-Link 4

```
                      Voice System name: Grove - CTI LINK
 CTI Link: 4
Extension: 19104
     Type: ASAI-IP
                                                                  COR: 1
     Name: ASAI Link

FEATURE OPTIONS

      Event Minimization? n        Special Character for Restricted Number? n
```

The Node-Names form must be modified to include the Avaya C-LAN and the Verint Ultra Server, as shown below:

Display Node-Names

```
            Switch name: ASC_Avaya - NODE NAMES

Type     Name              IP Address
IP       Verint            192.168.38 .217
IP       default           0  .0  .0  .0
IP       MEL_CLAN          192.168.38 .63
```

The IP Services need to be configured to enable the co-resident DLG option and to define a link to the Verint Ultra server as shown below:

Display IP Services

```
                      Switch name: ASC_Avaya - IP SERVICES
 Service     Enabled     Local        Local       Remote      Remote
  Type                   Node         Port        Node        Port
DLG           y      MEL_CLAN         5678

   CTI Link   Enabled     Client Name      Client Link   Client Status

      4          y      Verint                  1           in use
```


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3.2. Configure the Active Station-Side E1 Trunk

Station-Side monitoring is provided using the service observing feature over an E1 trunk configured as a Line-Side E1. This consists of a DS1 card, and a range of extensions configured as a type of "DS1FD". Typically, 30 extensions are configured for an E1 trunk, although only one is shown below. This is a standard configuration for a Line-Side E1.

Display DS1 2B06

```
                Voice System name: Grove - DS1 CIRCUIT PACK

           Location: 02B10                          Name: Verint LSE1
           Bit Rate: 2.048                  Line Coding: hdb3

      Signaling Mode: CAS

        Interconnect: pbx                Country Protocol: 10

Interface Companding: alaw                           CRC? y
           Idle Code: 01010100




      Slip Detection? n                Near-end CSU Type: other
```

Display Station 12001

```
                        Voice System name: Grove - STATION

Extension: 12001                           Lock Messages? n          BCC: 0
     Type: DS1FD                           Security Code:             TN: 1
     Port: 02B1001                       Coverage Path 1:            COR: 1
     Name: Verint Port 1                 Coverage Path 2:            COS: 1
                                         Hunt-to Station:          Tests? y

STATION OPTIONS
              Loss Group: 4
    Off Premises Station? y
       R Balance Network? n
                                    STATION
FEATURE OPTIONS
           LWC Reception: spe
          LWC Activation? y                        Coverage Msg Retrieval? y
  LWC Log External Calls? n                                  Auto Answer: none
            CDR Privacy? n                             Data Restriction? n
   Redirect Notification? y                       Call Waiting Indication? y
 Per Button Ring Control? n                  Att. Call Waiting Indication? y
                                                Distinctive Audible Alert? y
        Switchhook Flash? n                           Adjunct Supervision? y
    Ignore Rotary Digits? n
        H.320 Conversion? n          Per Station CPN - Send Calling Number?
       Service Link Mode: as-needed
         Multimedia Mode: basic
    MWI Served User Type:
              AUDIX Name:
                                                Coverage After Forwarding? s
                                                  Multimedia Early Answer? n

 Emergency Location Ext: 12001
```


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3.3. Configure the Active Station-Side Avaya Communication Manager API Device

Station-Side monitoring is provided using the service observing feature and an Avaya Communication Manager API station. The Communication Manager API station is configured as virtual extension in Avaya Communication Manager, and is enabled as an "IP Softphone" so that an Avaya Communication Manager API server is able to take control of this device. An example configuration is shown below.

Display Station 11001

```
                        Voice System name: Grove - STATION

Extension: 11001                            Lock Messages? n          BCC: 0
     Type: 4612                             Security Code: 12345       TN: 1
     Port: S00081                          Coverage Path 1:           COR: 1
     Name: CCE Line 01                     Coverage Path 2:           COS: 1
                                           Hunt-to Station:

STATION OPTIONS
              Loss Group: 19             Personalized Ringing Pattern: 1
                                                   Message Lamp Ext: 11001
           Speakerphone: 2-way                  Mute Button Enabled? y
       Display Language: english

 Survivable GK Node Name:                            Media Complex Ext:
                                                          IP SoftPhone? y
                                     STATION
FEATURE OPTIONS
           LWC Reception: spe              Auto Select Any Idle Appearance? n
         LWC Activation? y                           Coverage Msg Retrieval? y
  LWC Log External Calls? n                                    Auto Answer: none
            CDR Privacy? n                                  Data Restriction? n
   Redirect Notification? y                       Idle Appearance Preference? n
 Per Button Ring Control? n
   Bridged Call Alerting? n                        Restrict Last Appearance? y
  Active Station Ringing: single

       H.320 Conversion? n          Per Station CPN - Send Calling Number?
      Service Link Mode: as-needed
        Multimedia Mode: enhanced
    MWI Served User Type:                        Display Client Redirection? n
             AUDIX Name:                        Select Last Used Appearance? n
            IP Hoteling? n                        Coverage After Forwarding? s
                                                    Multimedia Early Answer? n
 Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y
 Emergency Location Ext: 10051                        IP Audio Hairpinning? y
```

The configuration of the Avaya Communication Manager API server is fully documented on the Avaya support website.

3.4. Configure the Passive Analogue Station Tap

No special configuration of an analogue station is required to be able to tap the audio. However, it should be pointed out that typically the standard patching frame would need to be modified to allow the connection between Avaya Communication Manager and the analogue station to be also connected to the Verint Ultra server.

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3.5. Configure the Passive E1 Trunk

No configuration of the E1 trunk to enable passive monitoring is required, but the details of the DS1, Signaling Group, and Trunk Group are provided for information. The tapped trunk was connected to a Euro-ISDN 30 service from British Telecom.

```
Display DS1 2A07
                  Voice System name: Grove - DS1 CIRCUIT PACK

            Location: 02A07                          Name: BT 01483 5474xx
            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: 01010100
                             DCP/Analog Bearer Capability: 3.1kHz

     Slip Detection? y                Near-end CSU Type: other
```

Display Signaling Group 91

```
                  Voice System name: Grove - SIGNALING GROUP

 Group Number: 91            Group Type: isdn-pri
                   Associated Signaling? y          Max number of NCA TSC: 0
                      Primary D-Channel: 02A0716     Max number of CA TSC: 0
                                                  Trunk Group for NCA TSC: 91
       Trunk Group for Channel Selection: 91      X-Mobility/Wireless Type: NONE
          Supplementary Service Protocol: a
```

Display Trunk Group 91

```
                  Voice System name: Grove - TRUNK GROUP

Group Number: 91                   Group Type: isdn          CDR Reports: y
  Group Name: BT 01483 5474xx/5476xx      COR: 1        TN: 1        TAC: 791
   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
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: a    Digit Handling (in/out): enbloc/overlap

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

TRUNK FEATURES
          ACA Assignment? n            Measured: both      Wideband Support? n
                                                          Maintenance Tests? y
                                Data Restriction? n     NCA-TSC Trunk Member: 1
                                       Send Name: y      Send Calling Number: y
           Used for DCS? n
   Suppress # Outpulsing? n    Format: public
```


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Display Trunk Group 91 (Continued)

```
 Outgoing Channel ID Encoding: preferred     UUI IE Treatment: service-provider

                                                Replace Restricted Numbers? n
                                               Replace Unavailable Numbers? n
                                                     Send Connected Number: y
                                              Modify Tandem Calling Number? n
            Send UUI IE? y
              Send UCID? n
 Send Codeset 6/7 LAI IE? y                          Ds1 Echo Cancellation? n

                                           US NI Delayed Calling Name Update? n

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


                       INCOMING CALL HANDLING TREATMENT
 Service/       Called    Called        Del  Insert           Per Call  Night
 Feature         Len      Number                              CPN/BN    Serv
 public-ntwrk     6   547400            6    17001
 public-ntwrk     6   547499            6    30004
 public-ntwrk     6   547411            6    18011
 public-ntwrk     6   547402            6    15002
 public-ntwrk     6   547401            6    15001
 public-ntwrk     6   547420            6    14999
 public-ntwrk     6   547421            6    10018
 public-ntwrk     6   547429            6    14970
 public-ntwrk     6   547428            6    14971
 public-ntwrk     6   54740             5    1001
 public-ntwrk     6   5475              4    500
 public-ntwrk     6   5476              6    30000

                                    Administered Members (min/max):   1/15
GROUP MEMBER ASSIGNMENTS                Total Administered Members:  15

       Port    Code Sfx Name        Night           Sig Grp
  1: 02A0701  TN2464                                  91
  2: 02A0702  TN2464                                  91
  3: 02A0703  TN2464                                  91
  4: 02A0704  TN2464                                  91
  5: 02A0705  TN2464                                  91
  6: 02A0706  TN2464                                  91
  7: 02A0707  TN2464                                  91
  8: 02A0708  TN2464                                  91
  9: 02A0709  TN2464                                  91
 10: 02A0710  TN2464                                  91
 11: 02A0711  TN2464                                  91
 12: 02A0712  TN2464                                  91
 13: 02A0713  TN2464                                  91
 14: 02A0714  TN2464                                  91
 15: 02A0715  TN2464                                  91
```

3.6. Configure the Passive RTP Capture

No special configuration of a VoIP station is required to be able to tap the audio. However, it should be pointed out that typically the data architecture of a customer install may not allow easy capture of RTP packets from all devices. However, most hubs and switches do have a mechanism to allow data on one port to be “echoed” on another. This is often referred to as Port Mirroring or something similar. If all of the ports connected to Avaya Communication Manager Media Processor cards are mirrored to ports that are available to Verint’s Ultra server, then passive RTP capture becomes a possibility.

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For the purposes of the testing, a simple Port Mirror was established for the single Media Processor in use.

Please note that this technique will only provide an audio stream if the audio stream is configured to always pass through the Media Processor. Avaya Communication Manager supports "shuffling" of the media streams, which allows the media path between two IP devices to be "IP-Direct" between the devices. With the simple RTP capture technique described here, shuffling to IP-Direct can be disabled for any IP devices that are required to be recorded, to ensure the media stream passes through the mirrored Media Processor. For additional considerations, please refer to the Administration Guide for Avaya Communication Manager for further details – Avaya Document 555-233-506 [1].

A screen shot has been included but please note that this configuration is very specific to the lab environment.

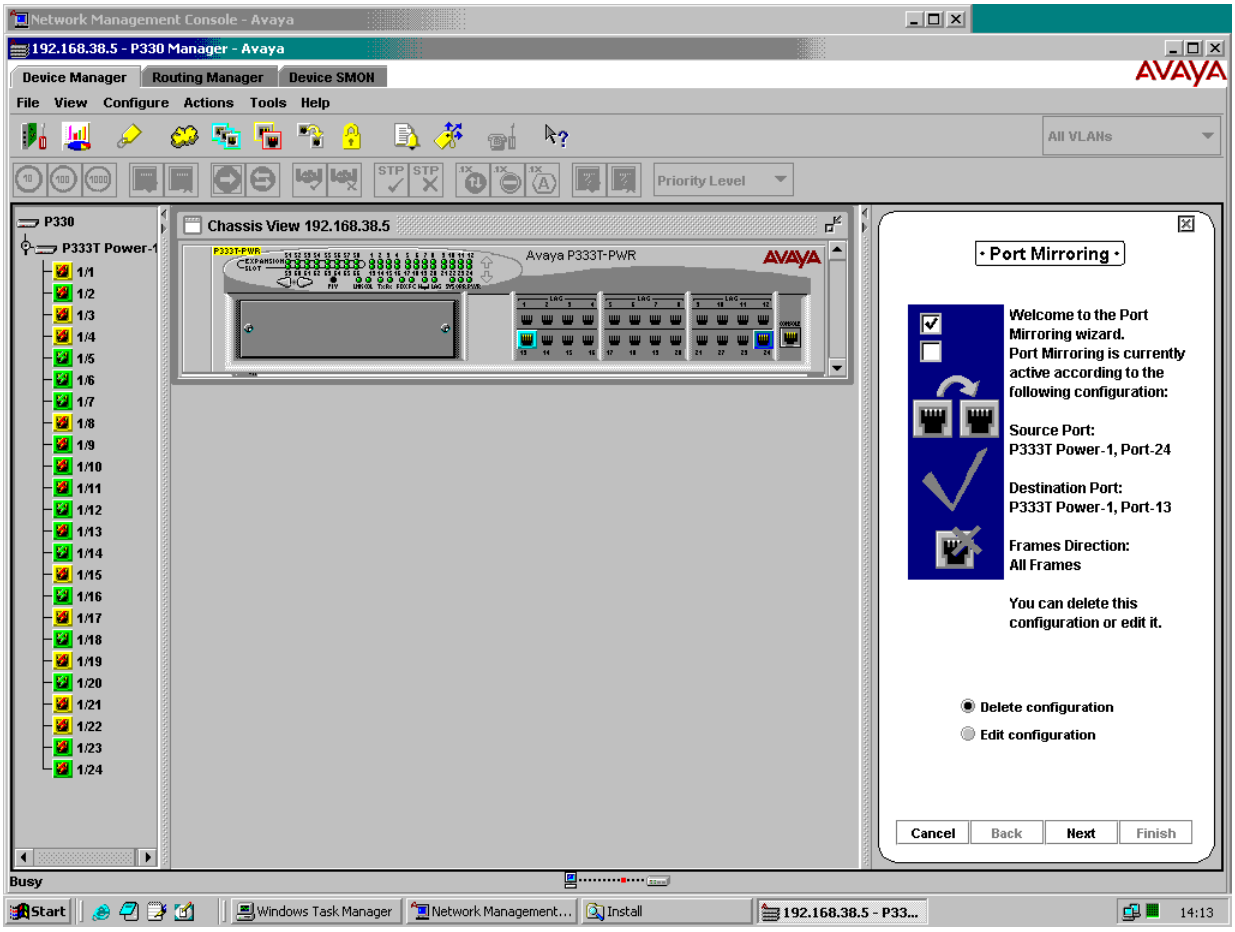

Figure 2: Configure a Port Mirror

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3.7. Configure Service Observing

Avaya Communication Manager must be configured to allow monitoring devices to Service Observe and to allow devices to be monitored to be Service Observable. These permissions are configured by Class of Restriction (COR). COR 1 was assigned to both types of device. The configuration for COR 1 is shown in the following screen:

Display COR 1

```
                Voice System name: Grove - CLASS OF RESTRICTION

               COR Number: 1
          COR Description: Lab User

                      FRL: 7                                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? n
     Restriction Override: none       Facility Access Trunk Test? n
     Restricted Call List? n                 Can Change Coverage? y

            Access to MCT? y            Fully Restricted Service? n
Group II Category For MFC: 7            Hear VDN of Origin Annc.? y
         Send ANI for MFE? n             Add/Remove Agent Skills? n
            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? n
                                    Can Use Directed Call Pickup? n
                                    Group Controlled Restriction: inactive
```

In addition, a Feature Access Code to perform Service Observing must be configured. The configurable access code must match the code used in the configuration of the Verint Ultra Server. The appropriate page of the Feature Access Code configuration is shown below:

Display Feature-access-codes

```
                Voice System name: Grove - FEATURE ACCESS CODE (FAC)
                       Automatic Call Distribution Features

                  After Call Work Access Code: *81
                           Assist Access Code: *82
                         Auto-In Access Code: *83
                        Aux Work Access Code: *84
                           Login Access Code: *80
                          Logout Access Code: #80
                       Manual-in Access Code: *85
     Service Observing Listen Only Access Code: *86
     Service Observing Listen/Talk Access Code: *87
                Add Agent Skill Access Code:
             Remove Agent Skill Access Code:
          Remote Logout of Agent Access Code: *90
```

4. Configure the Avaya P333T Ethernet Switch

No configuration of the P333T Ethernet Switch was required, other than enabling a Port Mirror for the passive RTP capture as shown in Section 3.6.

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5. Configure the Verint Ultra Server

The Verint Ultra Server is configured using configuration wizards on the server. Typically, there is a need to run the Ultra Express Configuration Wizard for the recording mode to be used, and then the IntelliLink Configuration Utility to administer the CTI link.

Since all of the recording modes use the CTI link, this configuration is common for all of the tested modes.

Brochures, Documentation, Downloadable Patches and Support can be found at the Verint web site at http://www.verint.com. For specific information on the Ultra solution [2], refer to: http://www.verint.com/contact_center/gen_ar2a_view.cfm?article_level2_category_id=6

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5.1. Configuring the CTI Link

Configuring the CTI link starts by running the IntelliLink Configuration Wizard. This wizard allows the CTI link to be fully configured for all of the recording modes.

Verint uses the generic switch name of "Avaya ECLIPS" to cover the Avaya Communication Manager product portfolio.

Verint support a large number of CTI link options. The ASAI option was the only one selected and tested.

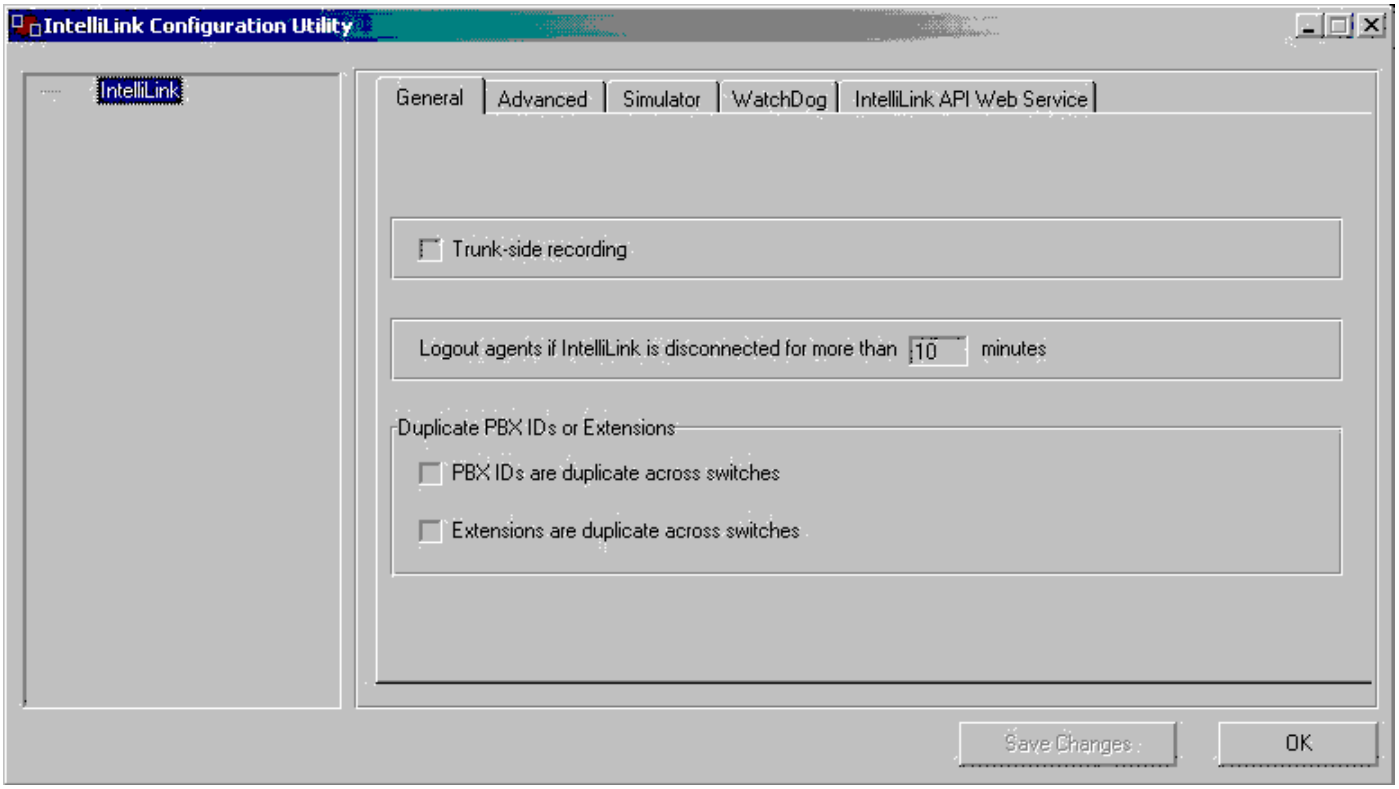

Figure 3: Starting to Configure the Connected Switch

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Since much of the major configuration options are not changeable after this stage has been reached, a warning dialogue box now appears confirming the PBX type and CTI Protocol have been correctly selected.

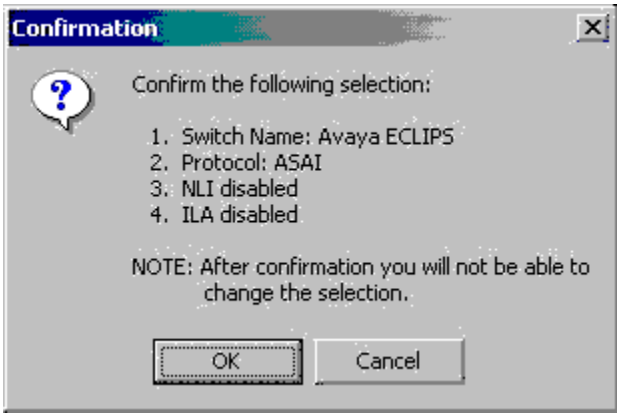

Figure 4: Proceeding with CTI Link Configuration

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Having confirmed an ASAI protocol, the IP Address of the PBX CTI Link now needs to be configured. This requires the IP address of the CLAN card providing a CTI link and the link number as configured in Communication Manager. Verint supports client CTI link numbers of other than one.

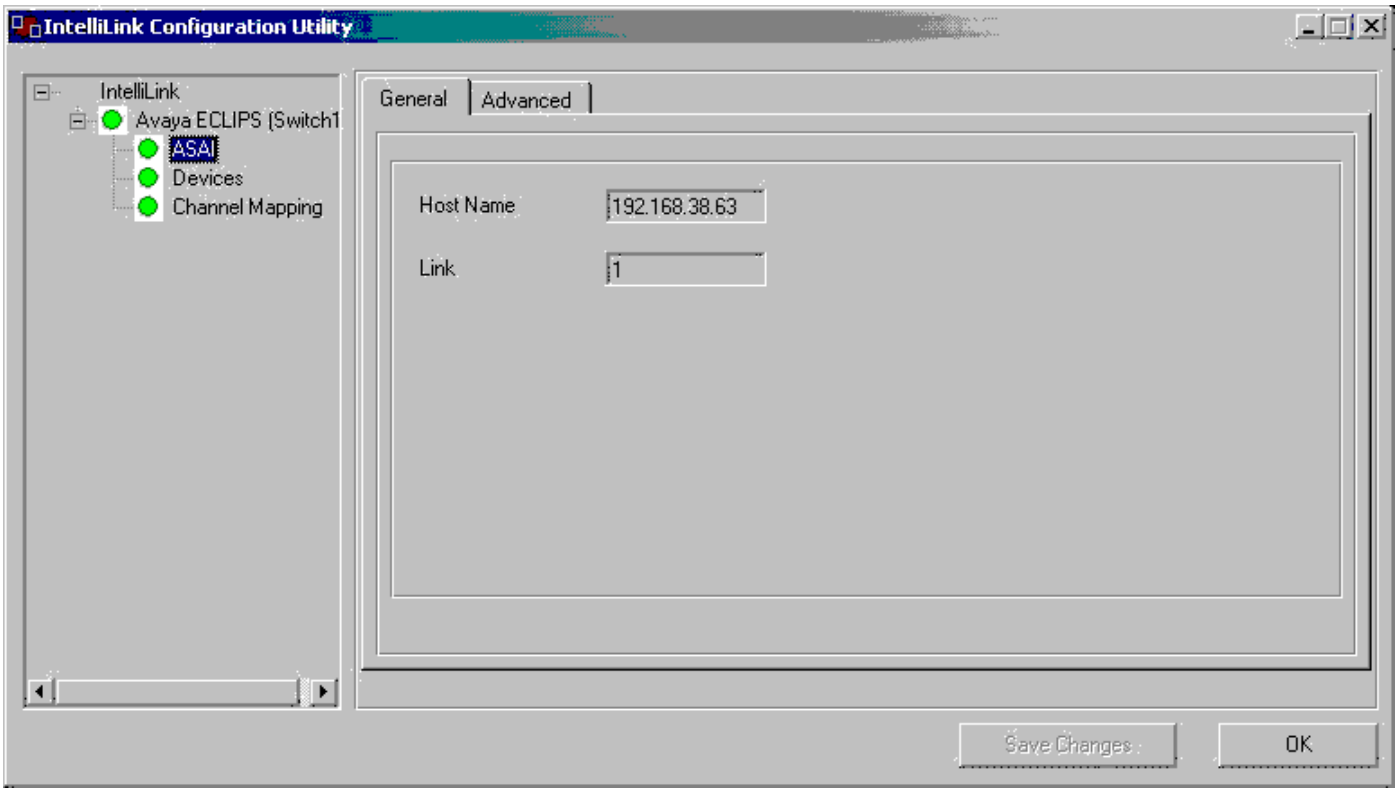

Figure 5: Configuring the PBX CTI Link Address

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The advanced tab on the previous screen allows a variety of additional CTI Link parameters to be modified. The screenshot below shows the defaults values used in the testing.

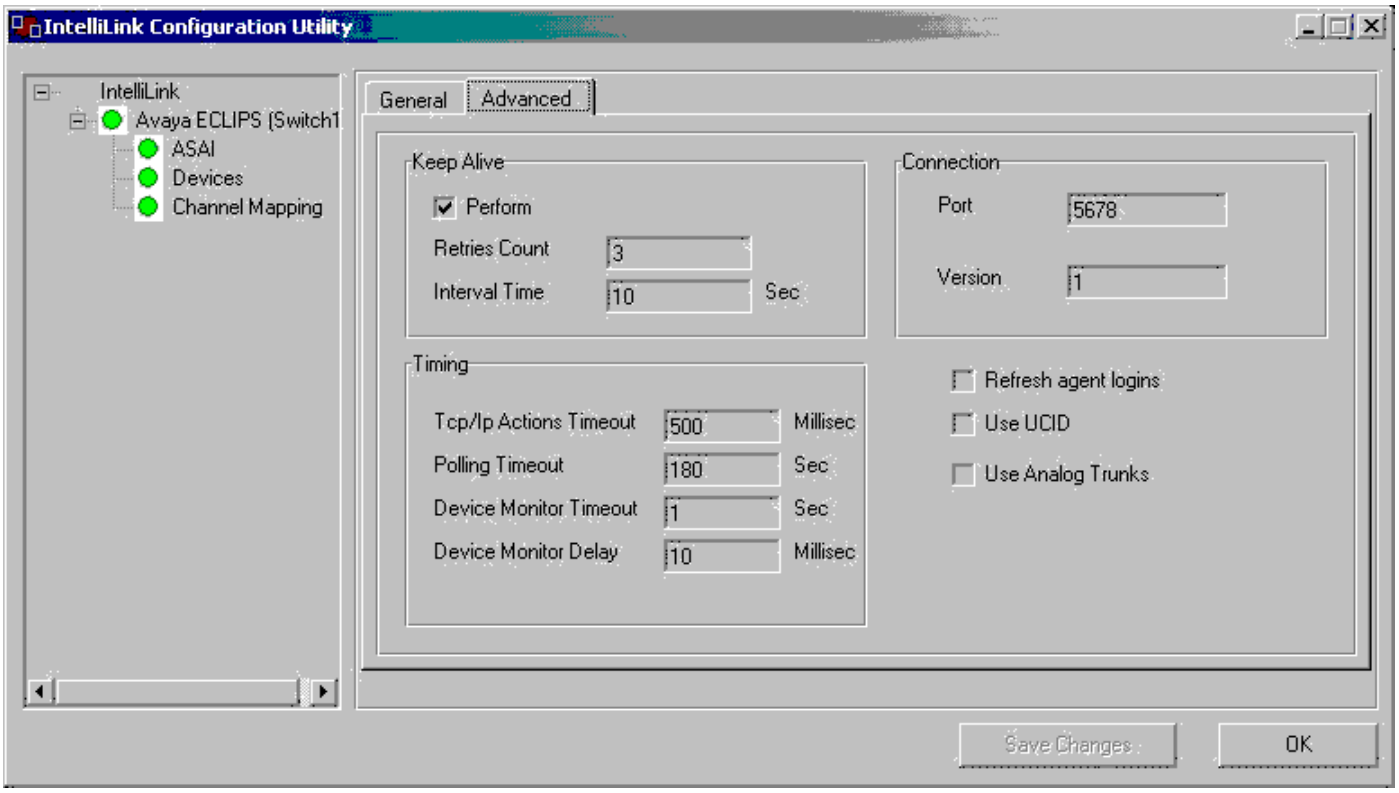

Figure 6: Advanced CTI Link Configuration

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The following screen shows the next stage in the configuration of the CTI link.

Here are lists of devices, which are required to be monitored by the CTI link. This configuration allows the CTI link to monitor these devices for activity, but does not imply that these devices will be recorded. Additional configuration is required for recording.

All of the devices listed are physical extensions with the exception of the last one. X16001 is actually the group extension of a skill, and allows the CTI link to monitor for agent logon and logoff events.

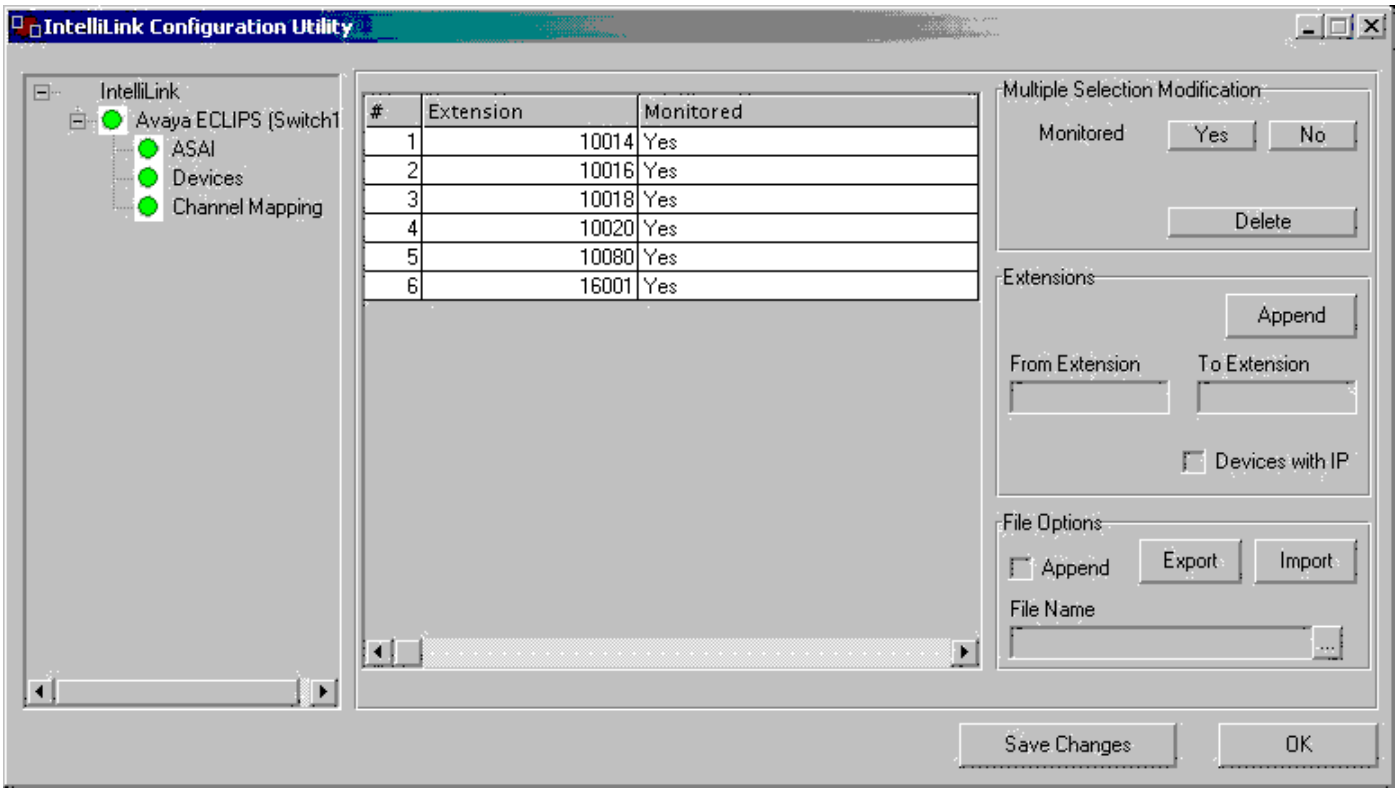

Figure 7: Configuring the Devices to be monitored

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Ultra uses a technique called Channel Mapping to allow a logical channel to be associated with a physical module and device. The mapping defined allows x10014 to be referenced as channel 1 and x10016 as channel 2. The channel numbers will be used extensively in other areas of configuration.

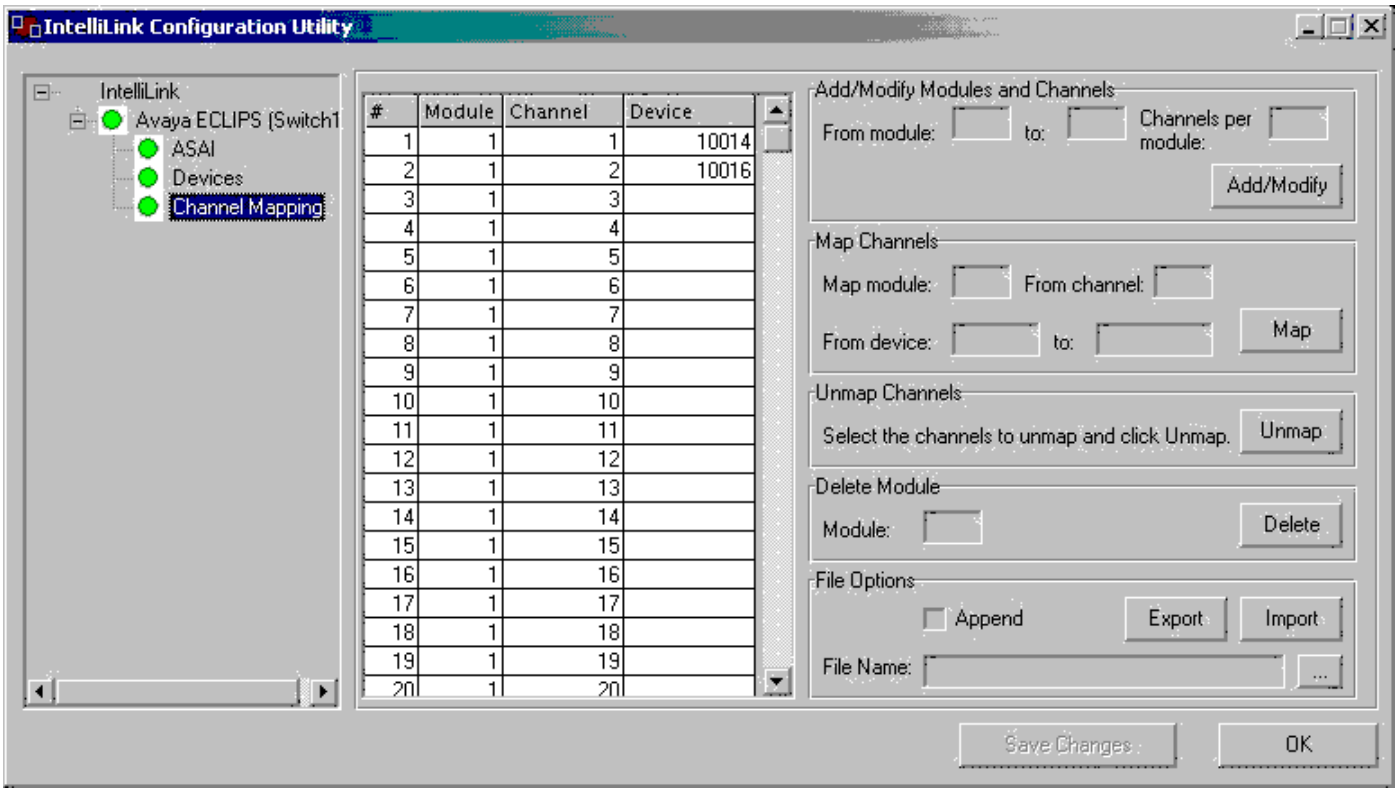

Figure 8: Configuring Channel Mapping

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5.2. Configuring Line-Side E1 Recording

Configuring the Line-Side E1 recording is achieved by running the Ultra Express Configuration Wizard. This is a web browser application that can be accessed from any connected machine, but the Ultra server was used for convenience.

Please note that the Tapping Mode must be set to Line-Side E1. Note that the screen capture depicted in Figure 9 is an illustrative example only and does not match the configuration used to verify these Application Notes. To match the Avaya Communication Manager configuration described in these Application Notes, the Silent Observe code would be configured to "*86" and the audio encoding would be configured to "A-law".

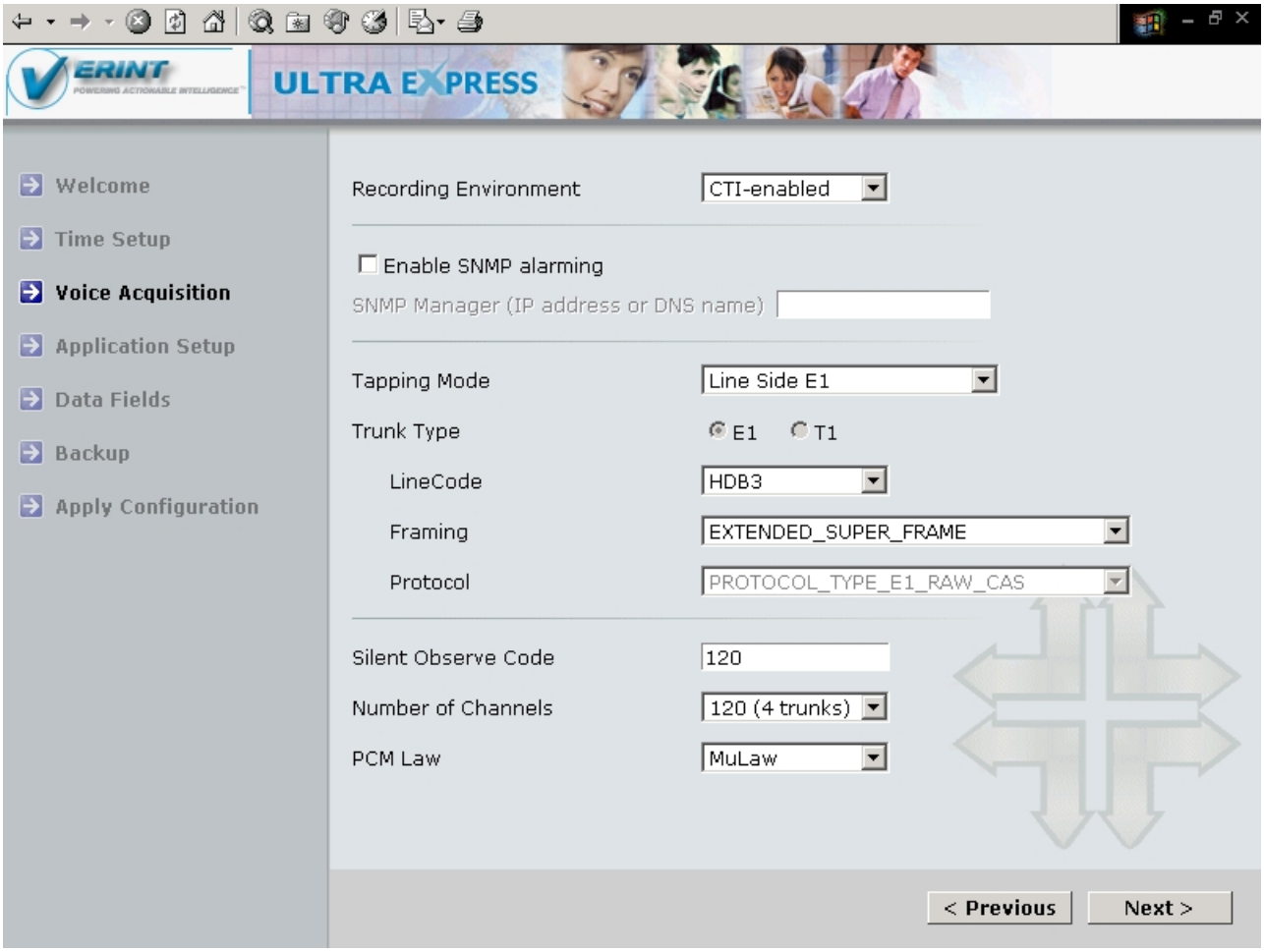

Figure 9: Configuring Line Side E1 Line Recording

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5.3. Configuring Avaya Communication Manager API Recording

Configuring the Avaya Communication Manager API recording is achieved by running the Ultra Express Configuration Wizard. This is a web browser application that can be accessed from any connected machine, but the Ultra server was used for convenience.

The Tapping Mode must be set to "VoIP Delivery – CMAPI". Please note that the following screen is an example for illustration only. To match the Avaya Communication Manager configured described in these Application Notes, the IP address values in the following screen would be configured to those shown in Figure 1. That is, the CMAPI Connector Server IP would be configured to "192.168.38.52", and the Switch IP Address would be configured to "192.168.38.63". The Silent Observe Code would be configured to "*86" to match the feature access code programming in Avaya Communication Manager.

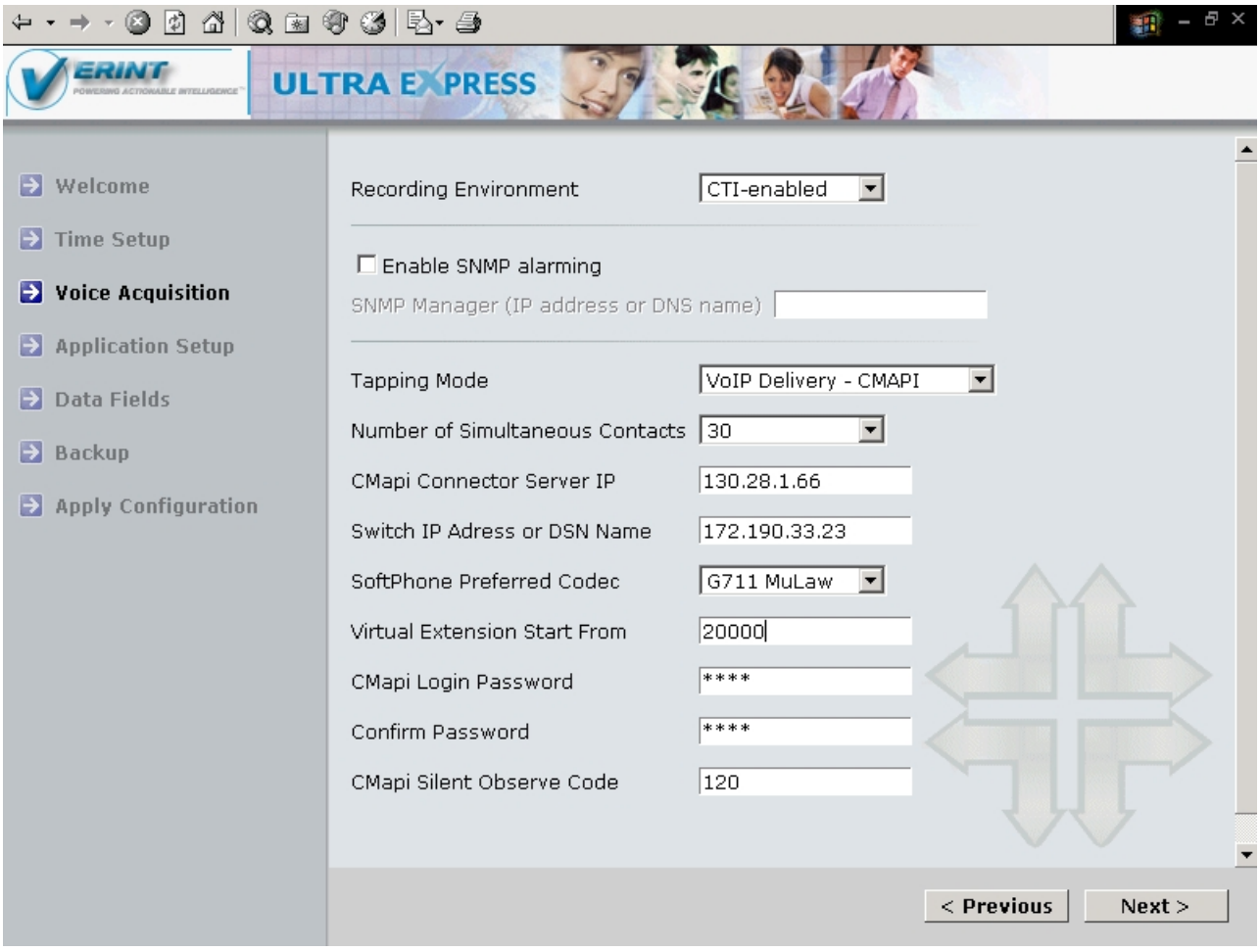

Figure 10: Configuring Avaya Communication Manager API Recording

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5.4. Configuring Passive Analogue Recording

No additional configuration was required for this mode of recording since the Channel Mapping described in the CTI Link configuration contained all of the configuration for the Ultra system.

5.5. Configuring Passive E1 Recording

There is a global configuration option at the start of the IntelliLink Configuration Wizard, which allows trunk-side recording to be enabled. By default this is NOT enabled.

The following screenshot shows this option being enabled.

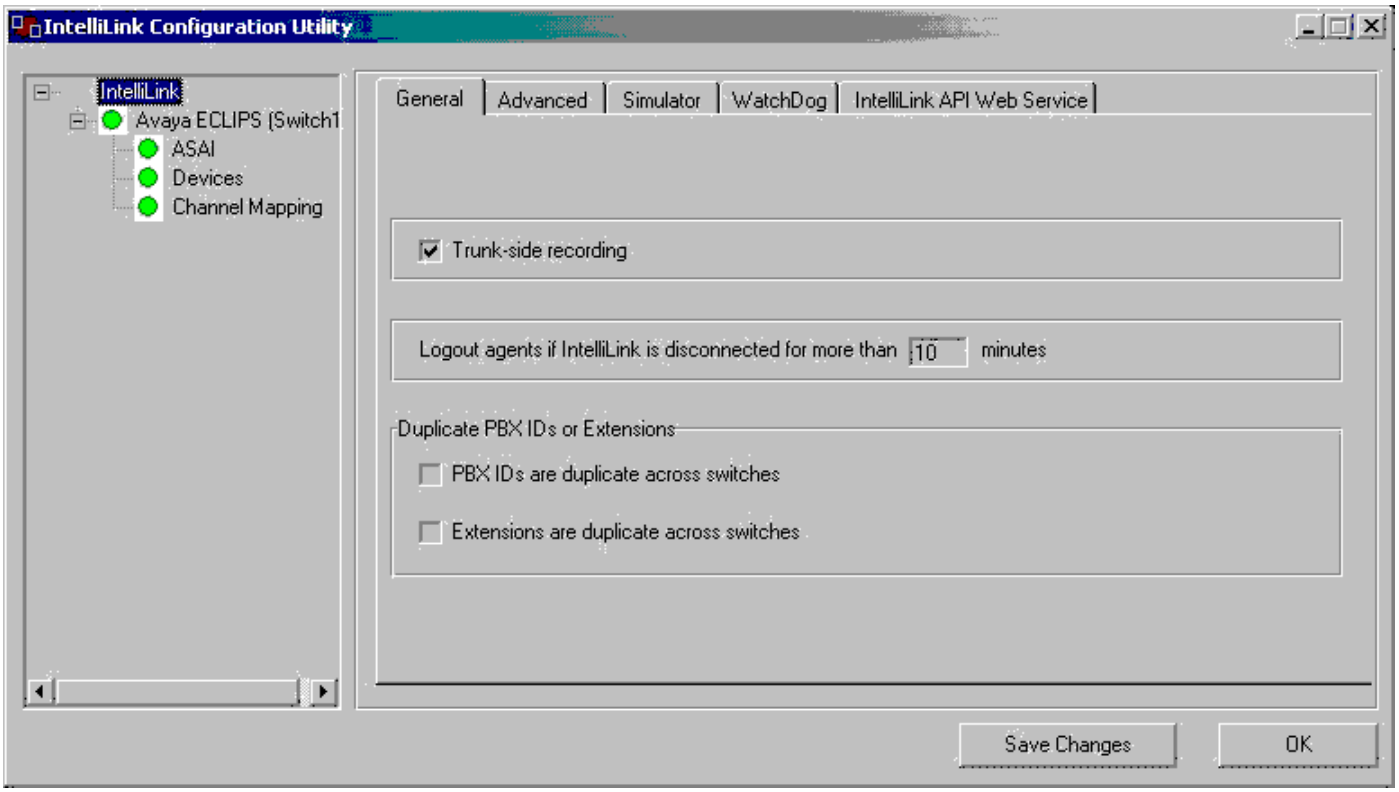

Figure 11: Configuring Trunk-Side Recording

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In addition to enabling Trunk Side Recording, a Channel Mapping must also be defined relating each trunk member with a channel. Verint uses a simple algorithm to derive the trunk identifier, which is the trunk number multiplied by 1000 added to the trunk member. For example, the first member of trunk 91 has an identifier of 91001. This is shown below.

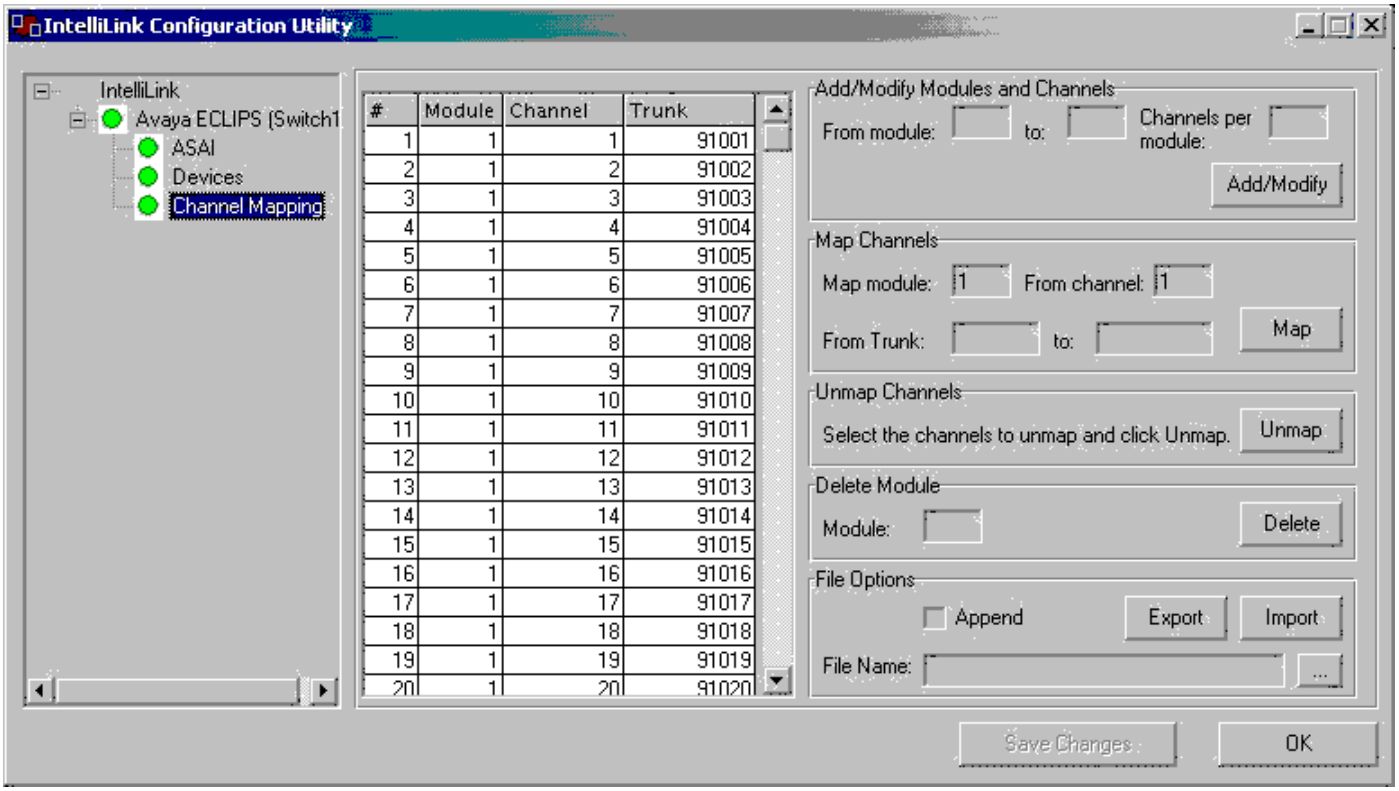

Figure 12: Configuring a Trunk Side Channel Mapping

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5.6. Configuring Passive RTP Capture

The Ultra Configuration Wizard is used to select a Tapping Mode of "VoIP" and a Signaling Protocol of "Avaya H.323". The remaining fields are left at their defaults.

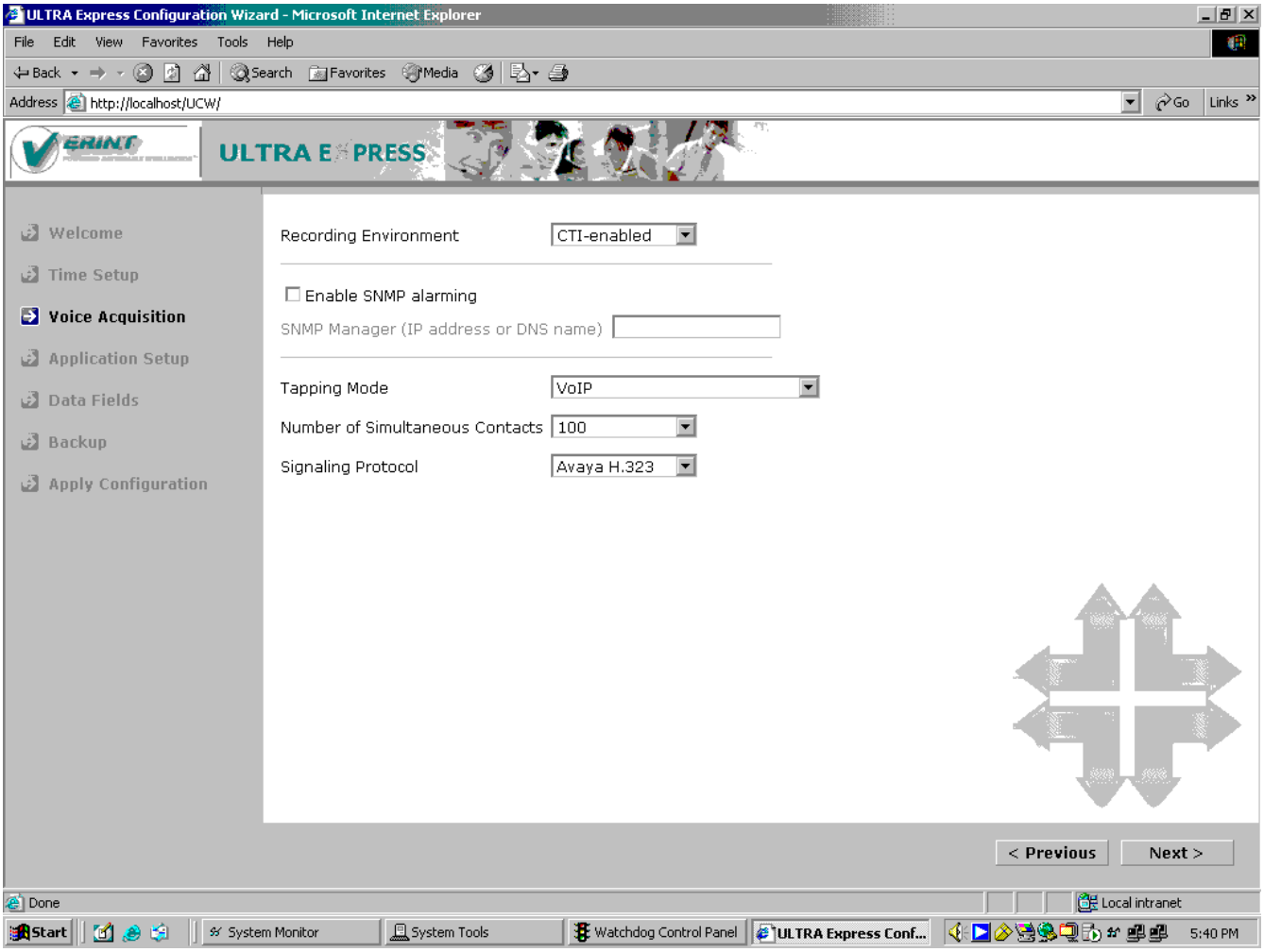

Figure 13: Configuring Passive RTP Capture Recording

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The Passive RTP Capture mode requires identifying which network card in the Ultra server is going to be used for RTP capture.

The following screenshot shows the "Garner" protocol being assigned to the Ultra Server's second NIC. "Garner" is the name given to Verint's RTP capture application.

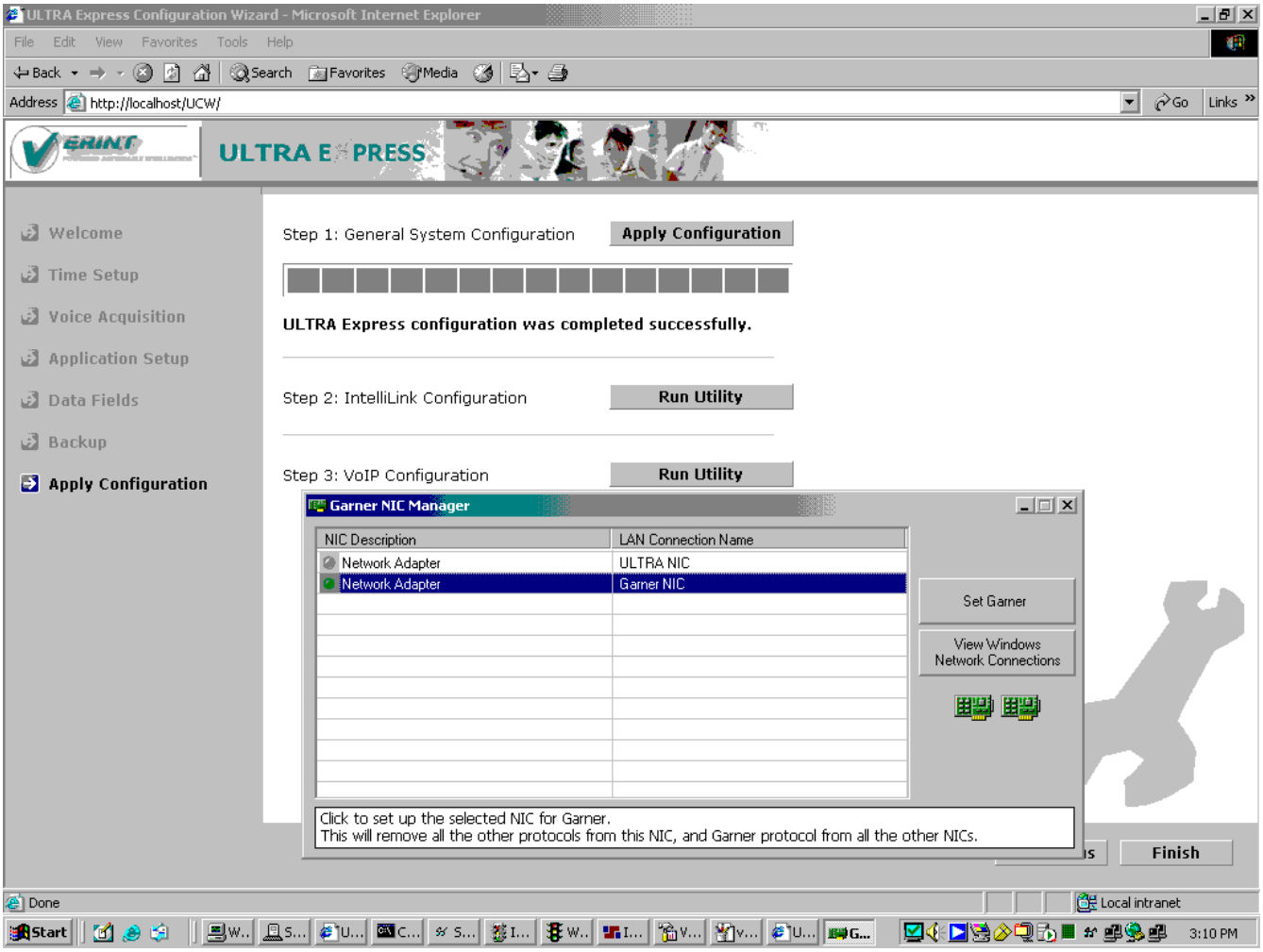

Figure 14: Configuring an RTP Capture NIC

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6. Interoperability Compliance Testing

6.1. General Test Approach

Testing included validation of correct operation of typical Voice Recording functions including Inbound, Outbound, Blind Transfer, Attended Transfer, and Conference calls. These tests were repeated for all tested recording modes. Light load testing and link integrity testing was also carried out.

6.2. Test Results

All tests passed.

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7. Verification Steps

Verint has supplied a variety of tools with the Ultra solution to provide a means of both monitoring and diagnosing potential issues.

The System Monitor provides a hierarchal view of the status of various systems within the recording solution. This is colour coded at both the node and branch levels – green for OK and red for a problem.

A screenshot of the system monitor is shown below indicating a problem with the Avaya Communication Manager API link.

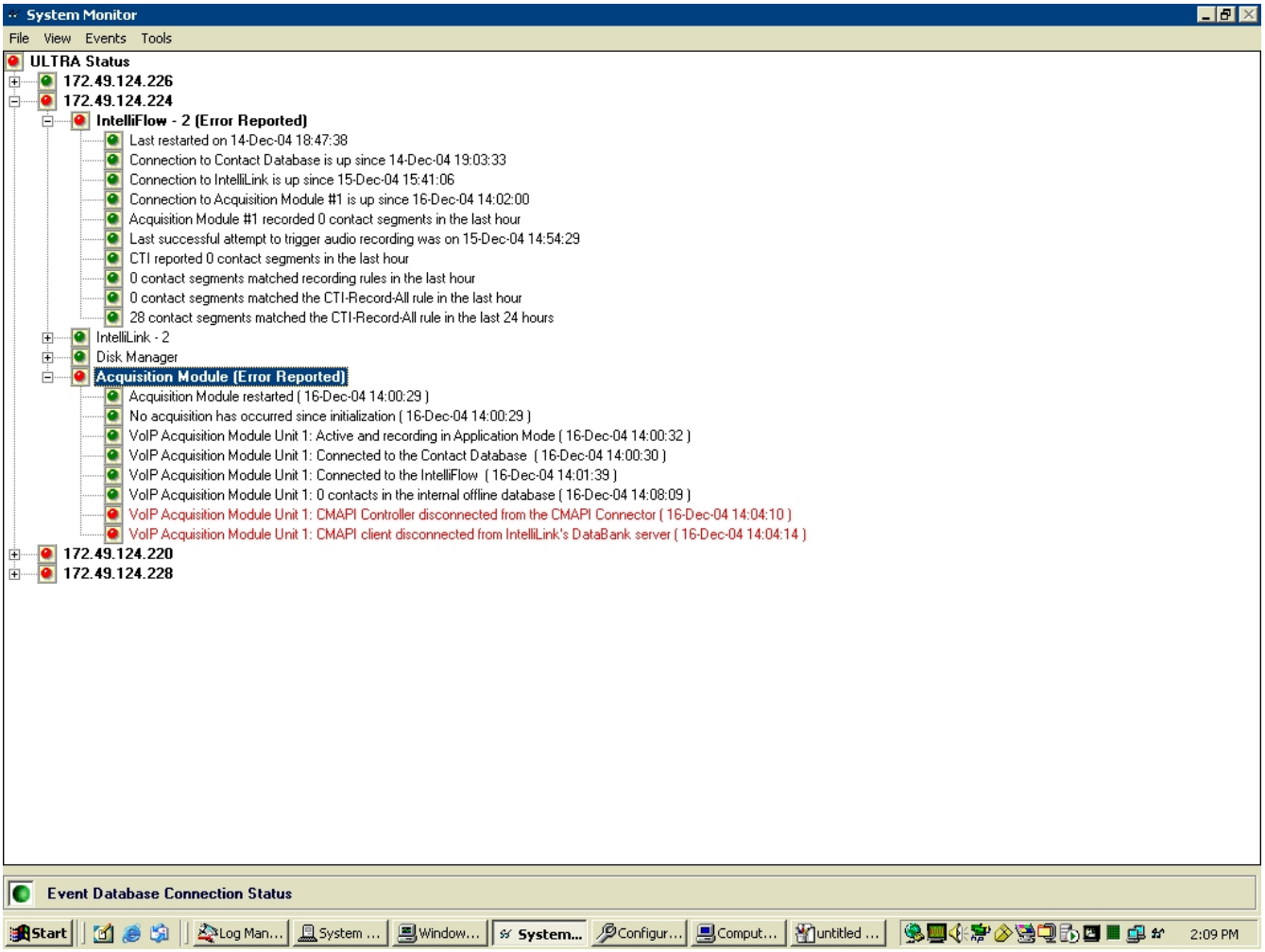

Figure 15: System Monitor Screenshot

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The IntelliLink Analyzer provides a configurable view of the CTI link.

The attached screenshot shows typical activity recorded during testing.

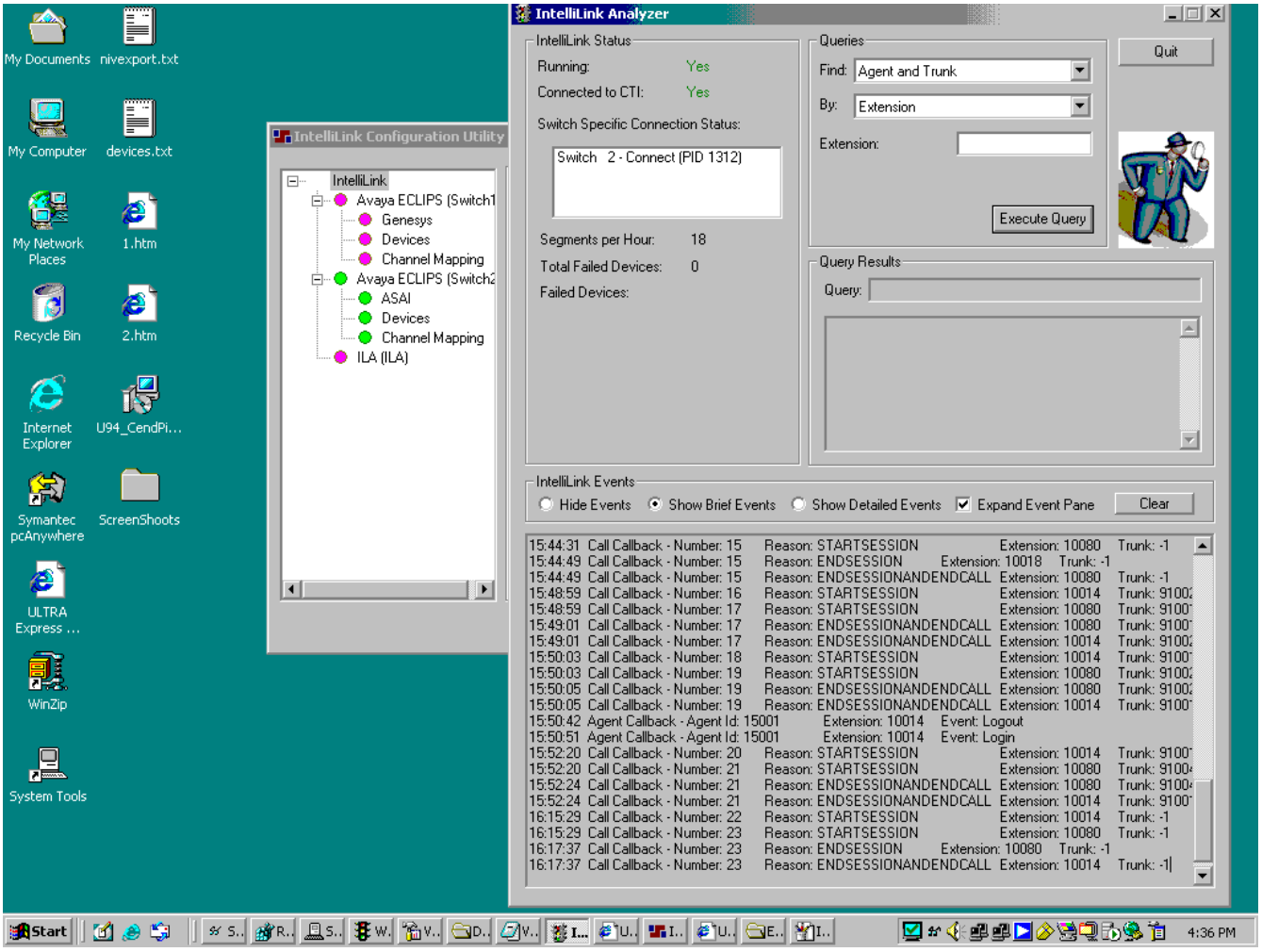

Figure 16: IntelliLink Analyzer Screenshot

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The IntelliPortal is a browser-based application allowing the actual recordings that have taken place to be both inspected for data and voice content.

This utility was used throughout testing to validate successful recording of the various tested call scenarios.

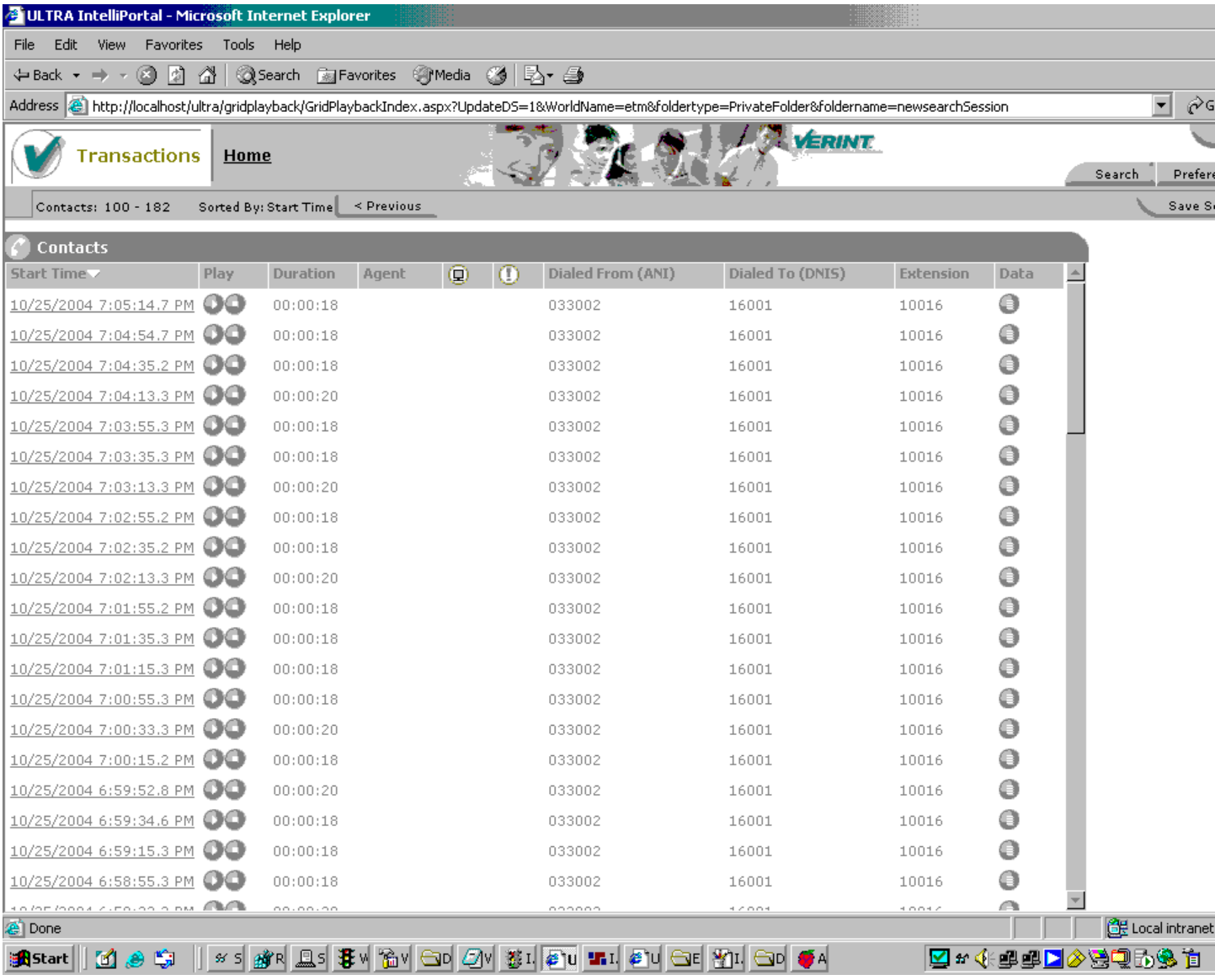

Figure 17: IntelliPortal Screenshot

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8. Support

If technical support is required for the Verint Ultra solution, then please contact their Technical Support Department. Full details are available at http://www.verint.com.

9. Conclusion

These Application Notes describe the configuration steps required for Verint Ultra Suite to successfully interoperate with Avaya Communication Manager. An Avaya S8700 Media Server with an Avaya G600 Media Gateway running Avaya Communication Manager 2.1 was used as the hosting PBX. Features and functionality were validated and performance testing was conducted in order to verify operation under light load. The configuration described in these Application Notes has been successfully compliance tested.

10. Additional References

The following references are relevant to the configuration described in these Application Notes:

[1] Administrators Guide for Avaya Communication Manager (Doc ID: 555-233-506) can be found at http://support.avaya.com.
[2] Verint Brochures, Documentation, Downloadable Patches and Support can be found at http://www.verint.com. For items specific to the Ultra solution, refer to the following: http://www.verint.com/contact_center/gen_ar2a_view.cfm?article_level2_category_id=6

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