Avaya Solution & Interoperability Test Lab

Application Notes for Upstream Works Software eMedia CT with Avaya Communication Manager – Issue 1.0

Abstract

Upstream Works Software eMedia CT V700 call center solution was compliance tested with Avaya Communication Manager 2.2. The objective of the test was to evaluate interoperability of these products in a call center environment. All test cases completed successfully. 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.

1. Introduction

These Application Notes describe the compliance test configuration used to test Upstream Works Software eMedia CT V700 call center solution, herein referred to as eMedia CT, with the Avaya S8700 Media Server and Avaya MCC1 Media Gateway. **Figure 1** provides a high level topology.[1] Note that actual configurations may vary.

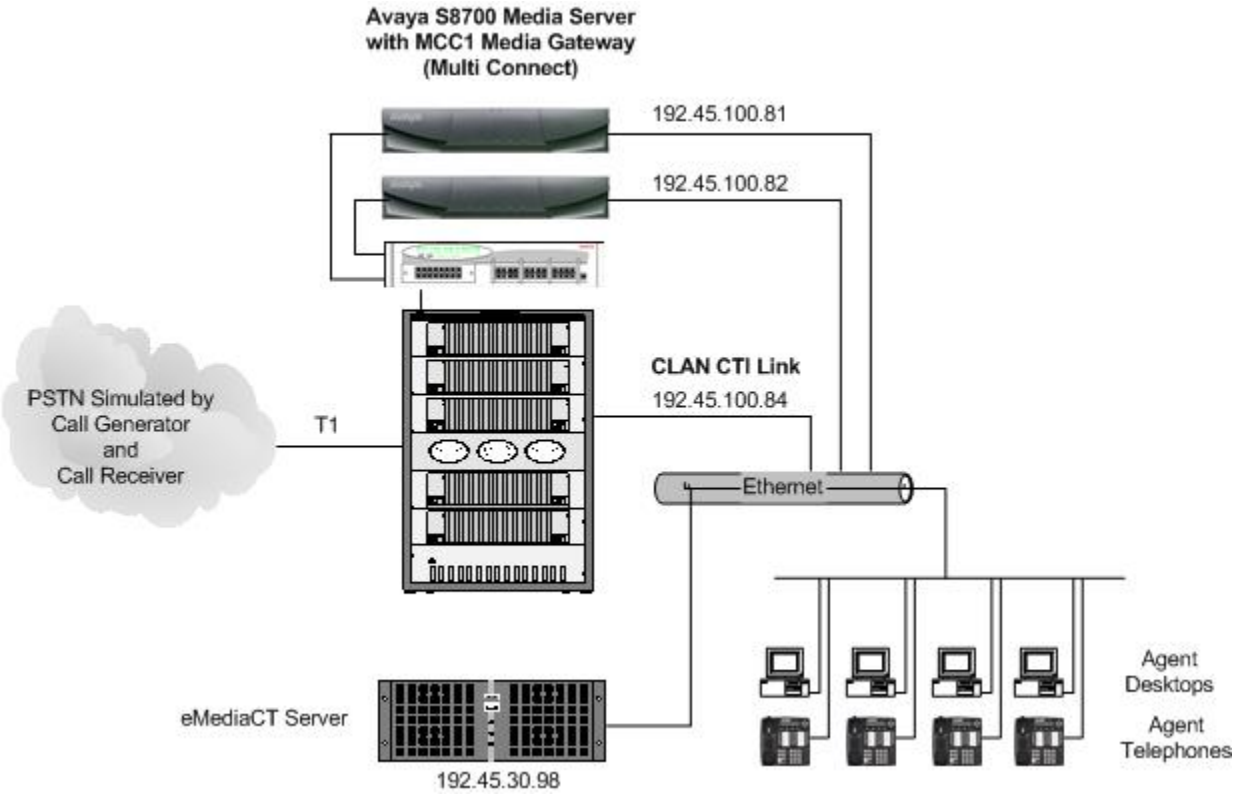


Figure 1: Avaya Developer*Connection* Compliance Test Configuration

The eMedia CT Server is connected by an API to Avaya Communication Manager, and by TCP/IP to a Local Area Network. The server receives telephony information from the switch, and allows switch commands to be executed from networked computer applications. The eMedia CT Server provides data structures that correspond to calls on the switch, and assigns them internal IDs. The server provides definition of events within calls, and allows data to be attached to calls.

The server is designed to send telephony data to networked client stations, and to coordinate the attachment of computer data to calls. This allows data that has been attached to a call through an IVR system or through direct agent entry to remain with the call as it is routed through a system.

[1] Tests focused on a single-site configuration. However, delivery of Universal Call ID and call data tracked by eMediaCT across a multi-site configuration was verified.

The server is also designed to allow information deriving from third party applications to be attached to the call.

In a typical eMedia CT site configuration, PCs on agent desktops are associated with telephones. Each phone may have one or more lines attached to it. The lines can be configured either as direct extensions or as queued lines on an ACD queue.

Agents at networked stations are able to log on to the CTI server. Information is collected on agent logons and logoffs. The server maintains a dynamic record of agent to workstation associations, and agent associations to the phones and lines that are associated to workstations.

Internally, the eMedia CT Server consists of a number of modules that communicate through a protocol that is defined by the eMedia CT messaging layer. The eMedia CT Client is the module that allows applications resident on networked PCs to use eMedia messaging to communicate with the server.

Integration with Avaya Communication Manager 2.2 is achieved using the ASAI protocol. On the Avaya MCC1 Media Gateway, the physical interface can be provided using a TN799DP C-LAN board. The Co-RES Definity Lan Gateway feature was enabled within Avaya Communication Manager. On Avaya Communication Manager, ASAI Core and ASAI Plus software features were enabled.

2. Equipment and Software Validated

The following equipment and software were used for the test configuration.

Equipment	Software
Avaya S8700 Media Server with an Avaya MCC1 Media Gateway	Avaya Communication Manager 2.2 (R012x.02.0.111.4)
Avaya TN799DP C-LAN Interface	HW01 FW012
Avaya 4600 Series IP Telephones	1.8.3 and 2.1.3
eMedia CT SWIF – ASAI DLL	Version 7.00.0
eMedia CT XSDB – MAPS DLL	Version 7.00.0
eMedia CT XRDI – MAPS DLL	Version 7.00.0
eMedia CT CALLPICK – VQ DLL	Version 7.00.0
eMedia CT Client	Version 7.00.0

3. Configure Avaya Communication Manager

3.1. Computer Telephony Integration (CTI) Link

The eMedia CT Server communicates with Avaya Communication Manager via a Computer Telephony Integration (CTI) link. Implementation of the required CTI link type on Avaya Communication Manager can be achieved using the following series of steps. These steps are performed through the System Access Terminal (SAT) interface. The Avaya Site Administration program can be used to access the SAT interface.

Step	Description
1.	Verify that **ASAI Link Core Capabilities, ASAI Link Plus Capabilities**, and **Co-Res DEFINITY LAN Gateway** are set to "y" on the "display system-parameters customer-options" form. If they are not set to "y", contact your Avaya sales team or business partner. A system license file controls the settings on the customer-options form. `display system-parameters customer-options` Page 3 of 11 OPTIONAL FEATURES Abbreviated Dialing Enhanced List? y — Audible Message Waiting? y Access Security Gateway (ASG)? n — Authorization Codes? y Analog Trunk Incoming Call ID? y — Backup Cluster Automatic Takeover? n A/D Grp/Sys List Dialing Start at 01? y — CAS Branch? n Answer Supervision by Call Classifier? y — CAS Main? n ARS? y — Change COR by FAC? n 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)? y Async. Transfer Mode (ATM) PNC? n — DCS Call Coverage? y Async. Transfer Mode (ATM) Trunking? y — DCS with Rerouting? y ATM WAN Spare Processor? n ATMS? y — Digital Loss Plan Modification? n Attendant Vectoring? n — DS1 MSP? n DS1 Echo Cancellation? n (NOTE: You must logoff & login to effect the permission changes.)
2.	Add a CTI link and set the values as shown using the "add cti-link 1" command. Note that the CTI link number will vary. Enter a valid extension number in the **Extension** field. Enter "ASAI-IP" in the **Type** field. The CTI link number and extension number may vary. Enter a descriptive name in the **Name** field. The rest of the values may be left at their defaults. Submit these changes. `add cti-link 1` Page 1 of 2 CTI LINK CTI Link: 1 Extension: 24199 Type: ASAI-IP COR: 1 Name: eMediaCT

Step	Description
3.	Go to Page 2. Set the **Event Minimization field** to "y". The rest of the values may be left at their defaults. Submit these changes. add cti-link 1 Page 2 of 2 CTI LINK FEATURE OPTIONS **Event Minimization? y** Special Character for Restricted Number? n
4.	Add an entry for the C-LAN card and the eMedia CT Server in the node-names form using the "change node-names ip" command. In this case "clan-1b04" and "192.45.100.84" were entered as the node name and IP address of the C-LAN card. Also, "emediact" and "192.45.30.98" were entered as the node name and IP address of the eMedia CT Server. The node names and IP addresses will vary. Submit these changes. change node-names ip Page 1 of 1 IP NODE NAMES Name IP Address Name IP Address **clan-1b04 192.45 .100.84** . . . clanP2-1a04 192.168.61 .21 . . . clanP27-2a03 172.16 .252.200 . . . clanP7-3a04 192.168.1 .10 . . . default 0 .0 .0 .0 . . . devcon32-1a03 192.45 .100.36 . . . devcon33-1a03 192.45 .100.16 . . . **emediact 192.45 .30 .98** . . . medpro-1b05 192.45 .100.85 . . . procr 192.45 .100.81 . . . prowlerP2-1a05 192.168.61 .22 . . . prowlerP27-2b04 172.16 .252.201 . . . prowlerP7-3b04 192.168.1 .20 . . . testroom3 192.45 .30 .240 . . . tr3cvlanr9 192.45 .30 .100 . . .

Step	Description

5.	Add the C-LAN card to the system configuration using the "add ip-interface 1b04" command. Note that the slot number will vary. Enter the node name assigned in Step 4 for the C-LAN card in the **Node Name** field. The values to be entered in the **Subnet Mask**, **Gateway Address, Network Region, VLAN, Auto** and **Number of CLAN Sockets Before Warning** fields will be determined by the network administrator. Set the **Enable Ethernet Port** field to "n". The C-LAN interface will be enabled later. Submit these changes.
	
	`add ip-interface 1b04 Page 1 of 1`
	
	`IP INTERFACES`
	
	`Type: C-LAN ETHERNET OPTIONS`
	`Slot: 01B04 Auto? y`
	`Code/Suffix: TN799 D`
	`Node Name: clan-1b04`
	`IP Address: 192.45 .100.84`
	`Subnet Mask: 255.255.255.0`
	`Gateway Address: 192.45 .100.1`
	`Enable Ethernet Port? n`
	`Network Region: 2`
	`VLAN: n`
	
	`Number of CLAN Sockets Before Warning: 400`

6.	Add a new data module using the "add data-module 20032" command. Note that the extension number will vary. Enter a descriptive name in the **Name** field. Enter "ethernet" in the **Type** field. Ethernet connections must be assigned to port 17 on the C-LAN circuit pack. Therefore, enter the slot location and port 17 in the **Port** field as shown. Note that the slot location will vary. Enter a link number not previously assigned on this switch in the **Link** field. Submit these changes.
	
	`add data-module 20032 Page 1 of 1`
	`DATA MODULE`
	
	`Data Extension: 20032` **`Name: data module for clan`**
	`Type: ethernet`
	`Port: 1b0417`
	`Link: 6`
	
	`Network uses 1's for Broadcast Addresses? y`

Step	Description
7.	Enter the "change ip-interface 1b04" command. Set the **Enable Ethernet Port** field to "y". Submit this change. change ip-interface 1b04 Page 1 of 1 IP INTERFACES Type: C-LAN ETHERNET OPTIONS Slot: 01B04 Auto? y Code/Suffix: TN799 D Node Name: clan-1b04 IP Address: 192.45 .100.84 Subnet Mask: 255.255.255.0 Gateway Address: 192.45 .100.1 **Enable Ethernet Port? y** Network Region: 2 VLAN: n
8.	Add a new IP service using the "change ip-services" command. Enter "DLG" in the **Service Type** field and "y" in the **Enabled** field. Enter the node name added in Step 4 above for the C-LAN card in the **Local Node** field. The local port field cannot be edited for this application. change ip-services Page 1 of 3 IP SERVICES Service Type / Enabled / Local Node / Local Port / Remote Node / Remote Port SAT y clanP27-2a03 5023 any 0 SAT y clan-1b04 5023 any 0 **DLG y clan-1b04** 5678
9.	Go to Page 3. Enter "1" in the **CTI Link** field, "y" in the **Enabled** field, the node name assigned in Step 4 for the eMedia CT Server in the **Client Name** field and "1" in the **Client Link** field. Note that the CTI Link number, the Client Name and the Client Link number may vary. Submit these changes. change ip-services Page 3 of 3 DLG Administration CTI Link / Enabled / Client Name / Client Link / Client Status **1 y emediact 1 in use** 15 y testroom3 3 in use 16 y tr3cvlanr9 1 in use

Step	Description
10.	Enter the "change system-parameters features" command. On Page 5, set the **Create Universal Call ID (UCID)** field to "y" and enter "27" into the **UCID Network Node ID** field. Note that the UCID Network Node ID is coordinated with the eMedia CT configuration and will vary based on site configuration. Refer to Step 5 of Section 4.1.
11.	Navigate to Page 12. Set the **Send UCID to ASAI** field to "y". Submit these changes.

```
change system-parameters features                                Page   5 of  14
                        FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS
              System Printer Endpoint: 55898              Lines Per Page: 60


 Emergency Extension Forwarding (min): 10

SYSTEM-WIDE PARAMETERS
                           Switch Name: SIL-pbx27



MALICIOUS CALL TRACE PARAMETERS
               Apply MCT Warning Tone? n   MCT Voice Recorder Trunk Group:
      Delay Sending RELease (seconds)? 0
SEND ALL CALLS OPTIONS
     Send All Calls Applies to: station    Auto Inspect on Send All Calls? n

UNIVERSAL CALL ID
     Create Universal Call ID (UCID)? y    UCID Network Node ID: 27
```

```
change system-parameters features                                Page  12 of  14
                        FEATURE-RELATED SYSTEM PARAMETERS

  AGENT AND CALL SELECTION
                         MIA Across Splits or Skills? y
                          ACW Agents Considered Idle? y
                          Call Selection Measurement: current-wait-time
    Service Level Supervisor Call Selection Override? y
                                Auto Reserve Agents: none
  ASAI
            Copy ASAI UUI During Conference/Transfer? n
       Call Classification After Answer Supervision? n
                                  Send UCID to ASAI? y
  CALL MANAGEMENT SYSTEM
                                Adjunct CMS Release:

                              BCMS/VuStats LoginIDs? y
                  BCMS/VuStats Measurement Interval: half-hour
           BCMS/VuStats Abandon Call Timer (seconds):
                     Validate BCMS/VuStats Login IDs? n
                            Clear VuStats Shift Data: on-login
                 Remove Inactive BCMS/VuStats Agents? n
```

3.2. Expert Agent Selection and Call Vectoring

While the Expert Agent Selection (EAS) feature is not required to interoperate with eMedia CT, EAS was used in the test configuration. The screens below demonstrate how to configure basic call center functionality with EAS enabled.

3.2.1. Sample Call Vectoring for Inbound Calls and Adjunct Routing

Step	Description
1.	Add a hunt-group and set the ACD and Vector fields to "y". Enter a descriptive group name in the Group Name field and a valid extension in the Group Extension field. Other field values can be set based on customer requirements.
2.	Navigate to Page 2 and set the Skill field to "y". eMedia CT is compatible with the Timed ACW and Redirect on No Answer features and these fields can be set based on customer requirements. Other field values can be set based on customer requirements.

```
add hunt-group 29                                          Page   1 of   3
                                  HUNT GROUP

            Group Number: 29                               ACD? y
              Group Name: Agent Sk 29                    Queue? y
         Group Extension: 51149                        Vector? y
              Group Type: ucd-mia
                      TN: 1
                     COR: 1                    MM Early Answer? n
           Security Code:
     ISDN Caller Display:

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

```
add hunt-group 29                                          Page   2 of   3
                                  HUNT GROUP

                    Skill? y      Expected Call Handling Time (sec): 180
                      AAS? n        Service Level Target (% in sec): 80 in 30
                 Measured: internal
     Supervisor Extension:


      Controlling Adjunct: none


        VuStats Objective:
 Timed ACW Interval (sec): 2
   Multiple Call Handling: none

                                     Redirect on No Answer (rings): 4
                                                   Redirect to VDN: 24200
                  Forced Entry of Stroke Counts or Call Work Codes? n
```

Step	Description

3.	Add an Agent Login-ID. Enter a descriptive name in the **Name** field and enter an appropriate password in the **Password** and **Password (enter again)** fields.
	
	`add agent-loginID 25715 Page 1 of 2`
	`AGENT LOGINID`
	
	`Login ID: 25715 AAS? n`
	`Name: Agent ID 25715 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 Display? n`
	`Password: 12345`
	`Password (enter again): 12345`
	`Auto Answer: station`
	
	`WARNING: Agent must log in again before skill changes take effect`

4.	Navigate to Page 2. Set the Skill Number (SN) field to the hunt group number assigned in Step 1 above. The Skill Level (SL) field can be set to 1 or other values based on customer requirements.
	
	`add agent-loginID 25715 Page 2 of 2`
	`AGENT LOGINID`
	`Direct Agent Skill:`
	`Call Handling Preference: skill-level`
	
	`SN SL SN SL SN SL SN SL`
	`1: 29 1 16: 31: 46:`
	`2: 17: 32: 47:`
	`3: 18: 33: 48:`
	`4: 19: 34: 49:`
	`5: 20: 35: 50:`
	`6: 21: 36: 51:`
	`7: 22: 37: 52:`
	`8: 23: 38: 53:`
	`9: 24: 39: 54:`
	`10: 25: 40: 55:`
	`11: 26: 41: 56:`
	`12: 27: 42: 57:`
	`13: 28: 43: 58:`
	`14: 29: 44: 59:`
	`15: 30: 45: 60:`

Step	Description

5.	Modify a call vector to deliver calls to the skill number defined in Step 1.
	
	`change vector 242 Page 1 of 3`
	`CALL VECTOR`
	
	`Number: 242 Name: agent sk 29`
	`Multimedia? n Meet-me Conf? n 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? n Holidays? n`
	`Variables? n`
	`01 wait-time 6 secs hearing ringback`
	`02 queue-to skill 29 pri m`
	`03`
	`04`
	`05`
	`06`
	`07`
	`08`
	`09`
	`10`
	`11`

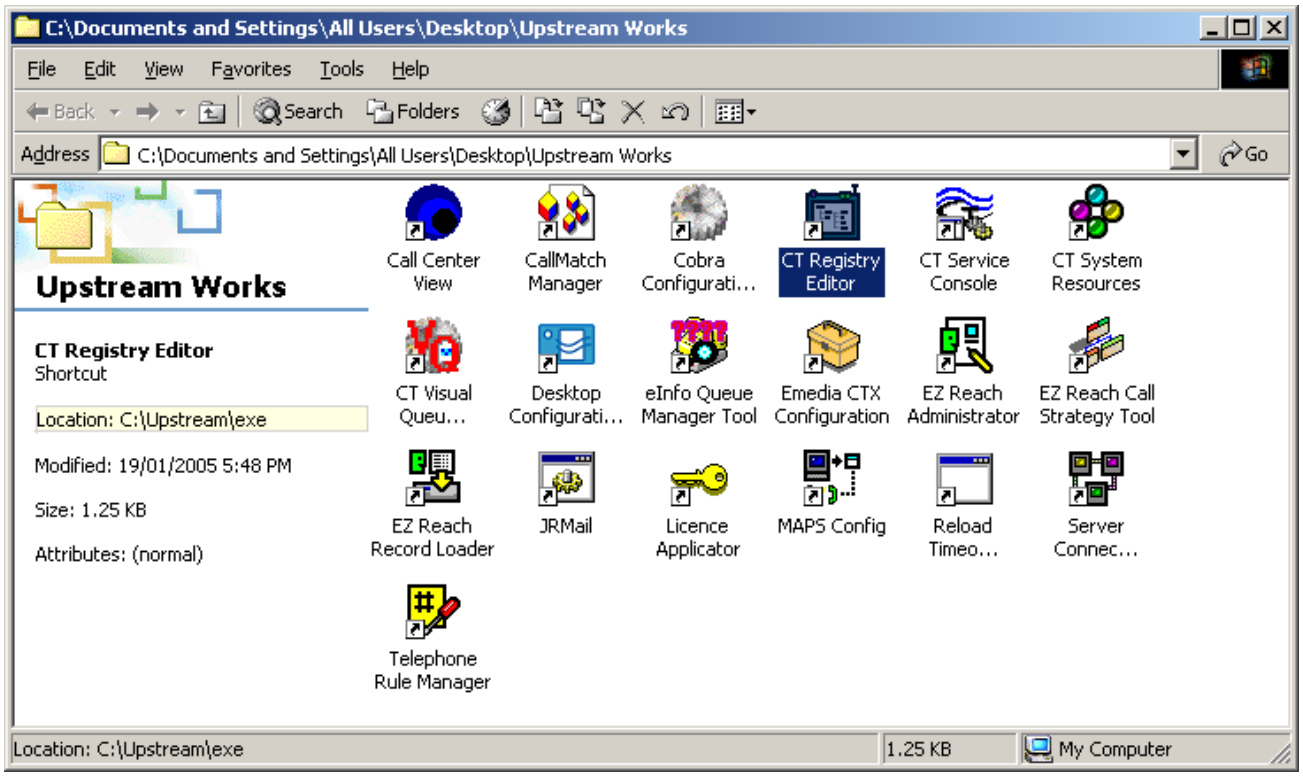
6.	Add a Vector Directory Number (VDN) and set the **Vector Number** field to the call vector number assigned in Step 5 above.
	
	`add vdn 24200 Page 1 of 2`
	`VECTOR DIRECTORY NUMBER`
	
	`Extension: 24200`
	`Name: skill 29`
	`Vector Number: 242`
	
	`Meet-me Conferencing? n`
	`Allow VDN Override? n`
	`COR: 1`
	`TN: 1`
	`Measured: internal`
	`Acceptable Service Level (sec): 100`
	
	`VDN of Origin Annc. Extension:`
	`1st Skill:`
	`2nd Skill:`
	`3rd Skill:`

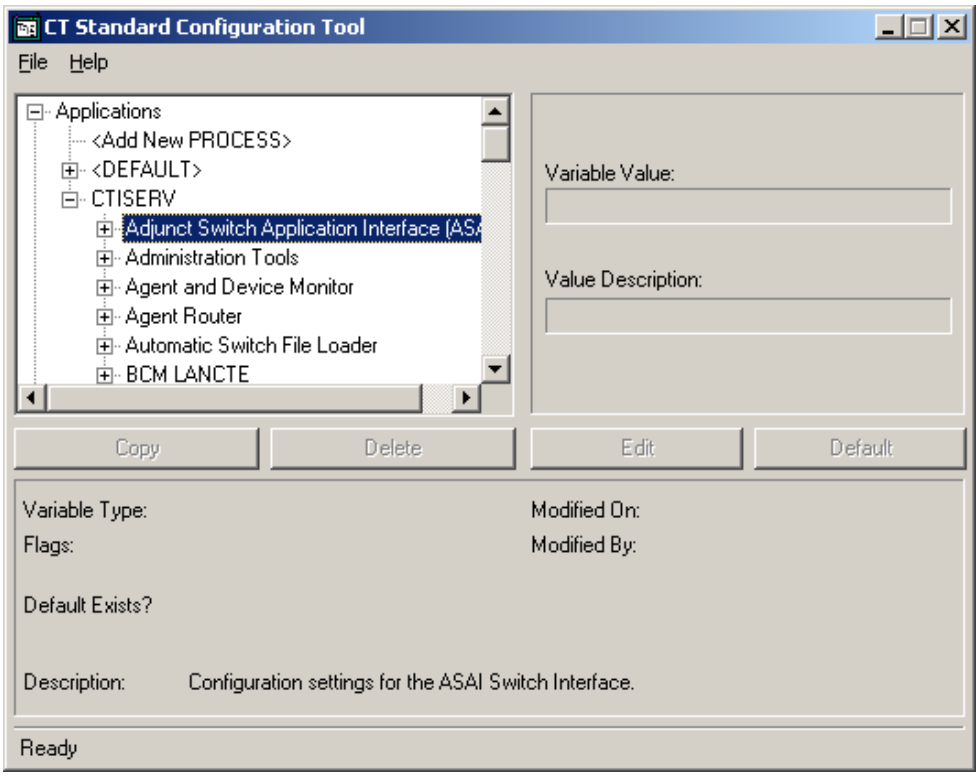
Step	Description
7.	Modify a call vector to send adjunct route requests to the CTI link defined in Step 2 of Section 3.1. Note that this vector is a sample vector only and can be modified as needed. change vector 243 Page 1 of 3 CALL VECTOR Number: 243 Name: adjunct route Multimedia? n Meet-me Conf? n 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? n Holidays? n Variables? n 01 wait-time 6 secs hearing ringback **02 adjunct routing link 1** 03 wait-time 999 secs hearing ringback 04 busy 05 06 07 08 09 10 11
8.	Add a Vector Directory Number (VDN) and set the **Vector Number** field to the call vector number assigned in Step 7 above. add vdn 24201 Page 1 of 2 VECTOR DIRECTORY NUMBER Extension: 24201 Name: adjunct route vdn **Vector Number: 243** Meet-me Conferencing? n Allow VDN Override? n COR: 1 TN: 1 Measured: internal Acceptable Service Level (sec): 20 VDN of Origin Annc. Extension: 1st Skill: 2nd Skill: 3rd Skill:

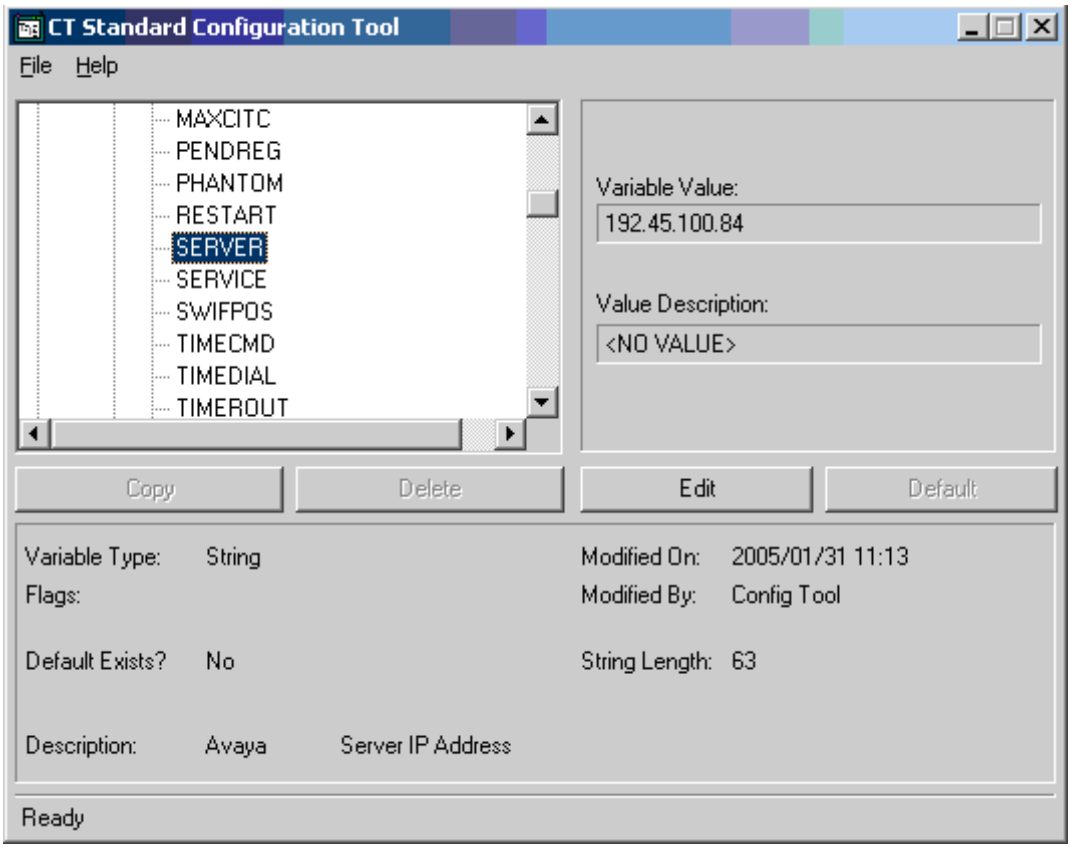
4. Configure the eMedia CT System

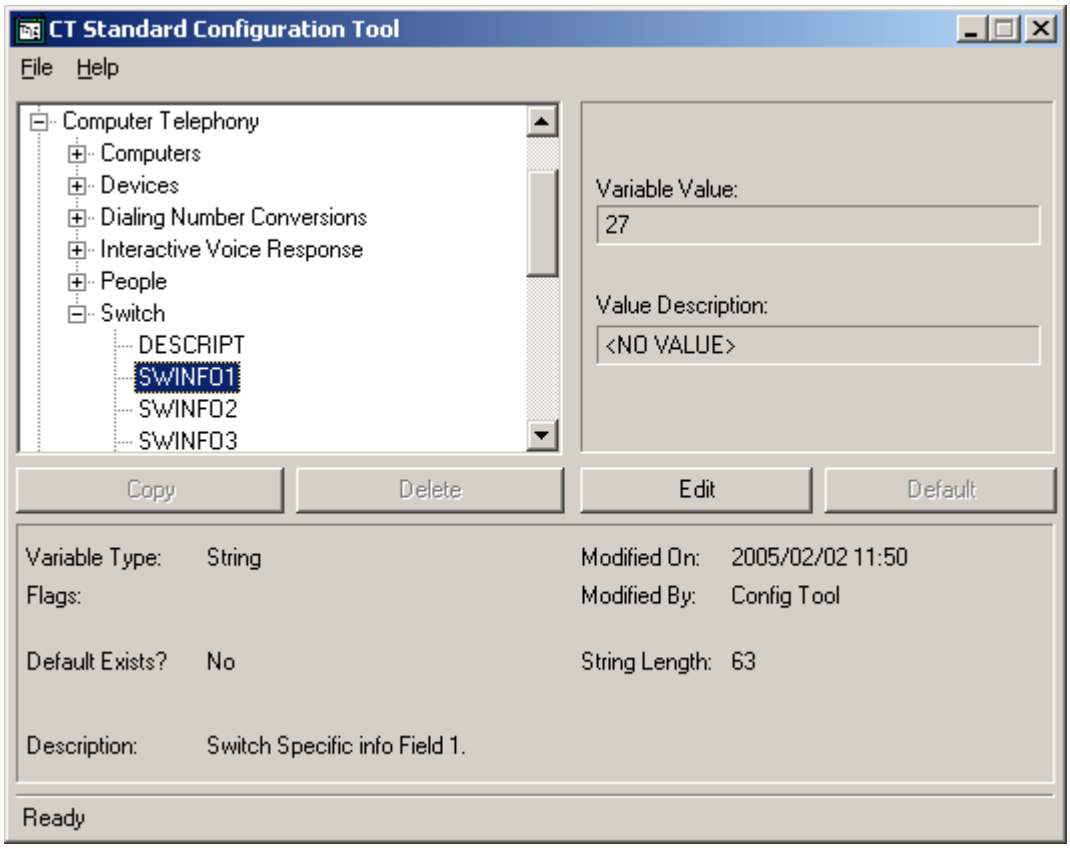
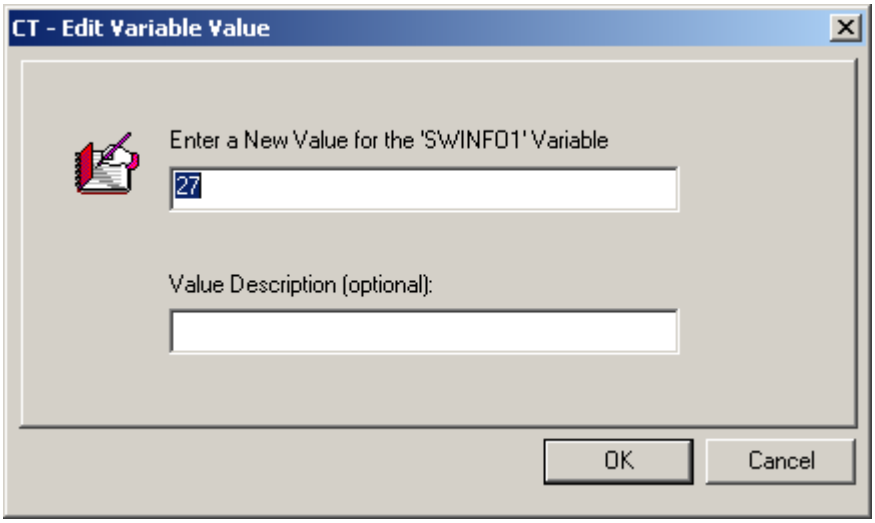
Initial provisioning of the eMedia CT Server is done by Upstream Works Software on behalf of their customers. The following steps provide an overview of the configuration steps necessary for the CTI link, Agents, Workstations, and Phones. Basic configuration is accomplished by the install package. Configuration changes can also be made using the CT Registry Editor program.

4.1. Configure the eMedia CT CTI Link

Step	Description
1.	Run the **CT Registry Editor** program. 

Step	Description
2.	Expand the **CTISERV** branch. Highlight and expand the **Adjunct Switch Application Interface** branch. 

Step	Description
3.	Highlight the **SERVER** field and click *Edit*. Enter the IP address or resolvable host name of the C-LAN circuit pack defined in Step 4 of Section 3.1. Click *OK*. 

Step	Description
4.	Navigate to and expand the **Computer Telephony** and **Switch** branches. Highlight the **SWINFO1** field and click *Edit*. 
5.	Enter the UCID Network Node ID into the **Enter a New Value for the 'SWINFO1' Variable** field. This UCID Network Node ID was defined in Step 10 of Section 3.1. Click *OK*. 

4.2. Configure eMedia CT System Resources

Upstream Works Software recommends that the Avaya Site Administration program be used to export a list of hunt groups, VDN's, and stations. Refer to the Avaya Site Administration help files for information on how to export data from a voice system.

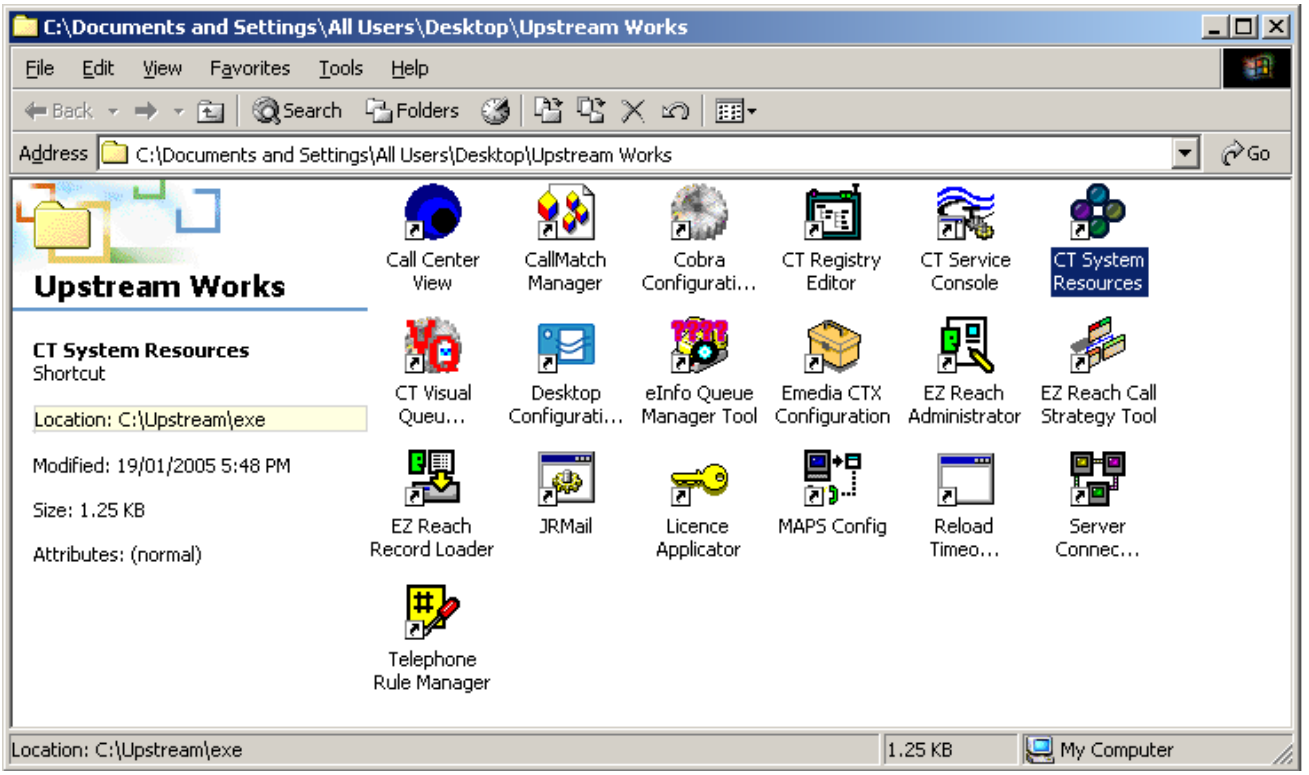
Required columns in each export file (at a minimum) are:

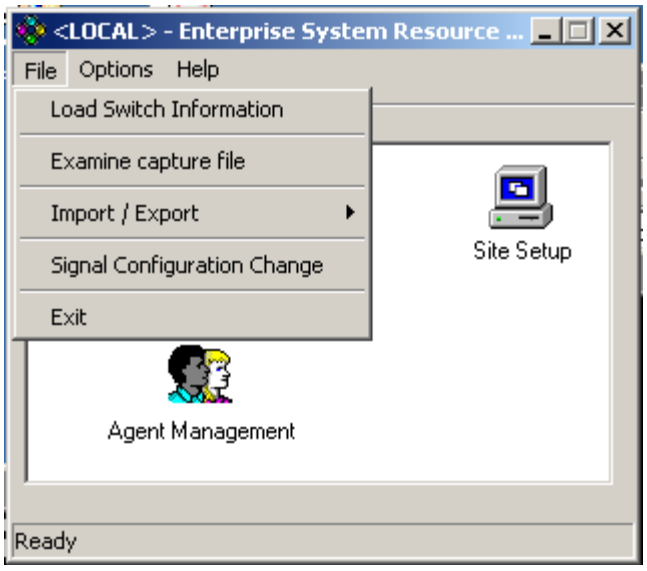
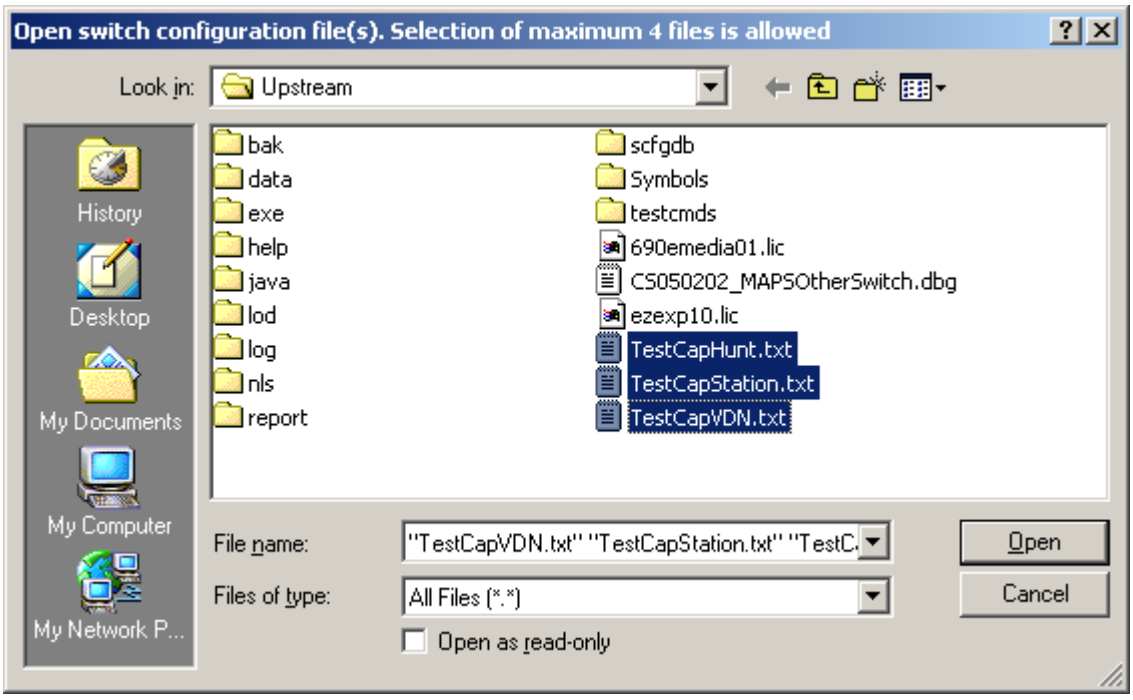
Station: "Extension","Type","Port","Name"

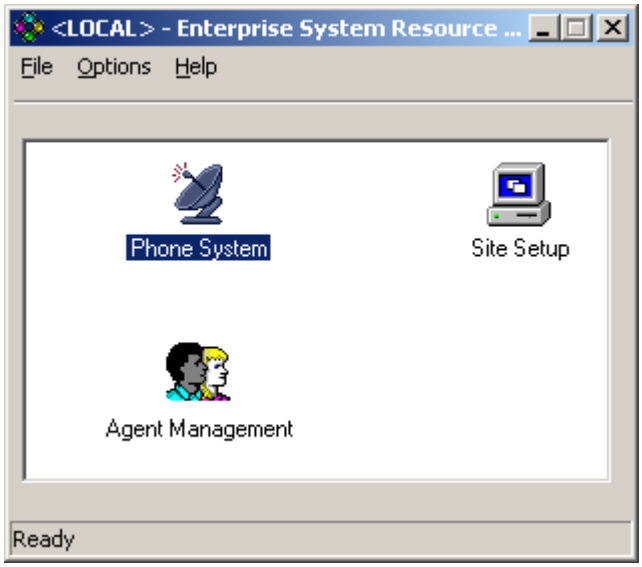
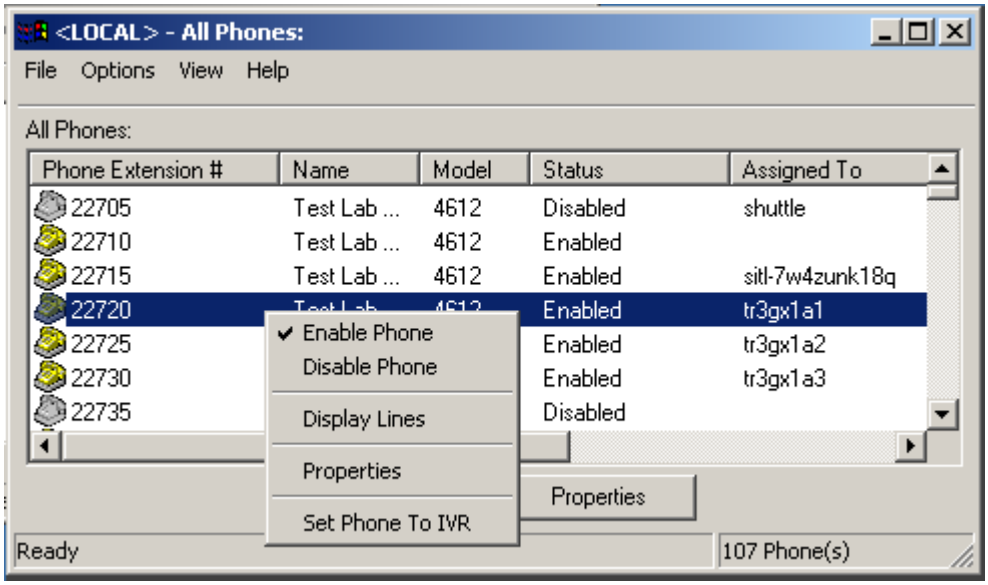
VDN: "Extension","Name","Vector Number"

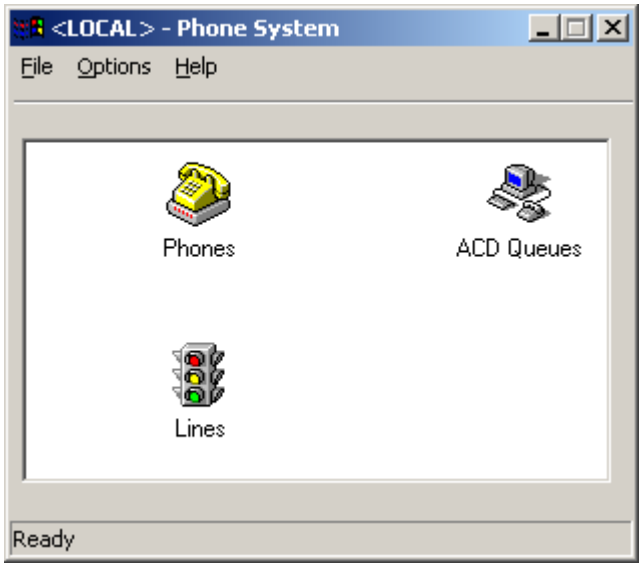
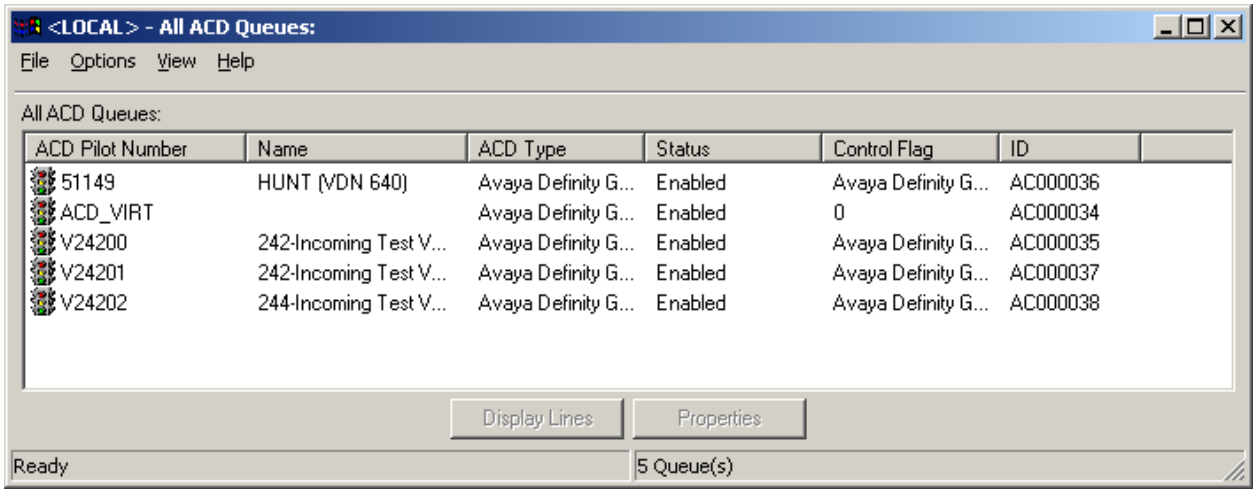
Hunt: "Group Number","Group Name","Group Extension","Skill"

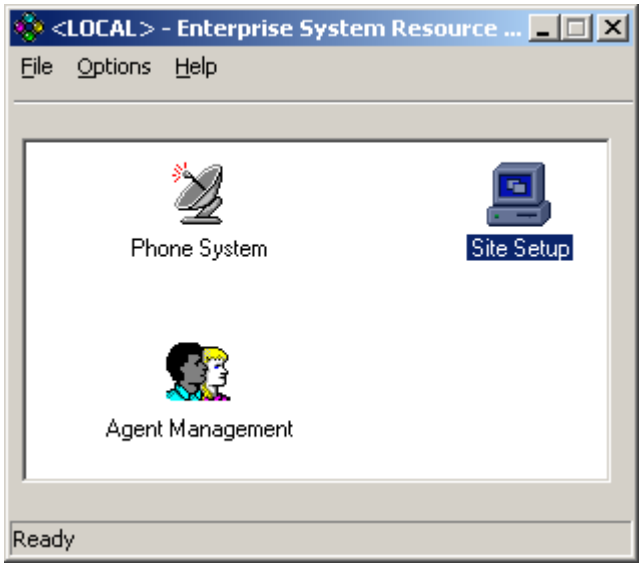
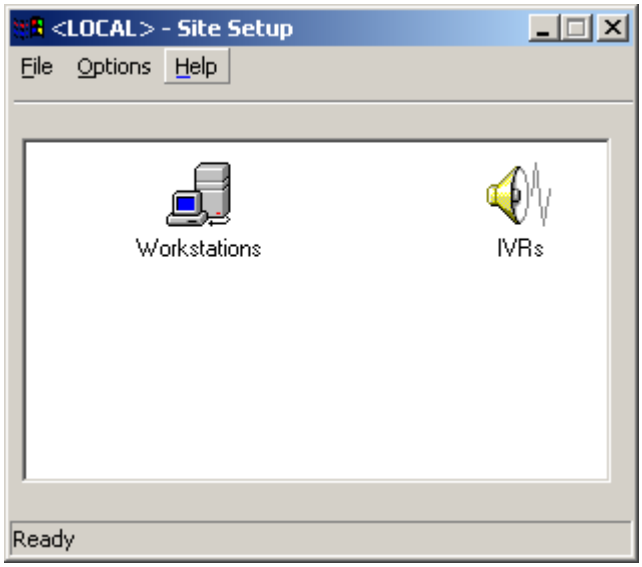
The files should be comma separated (default settings).

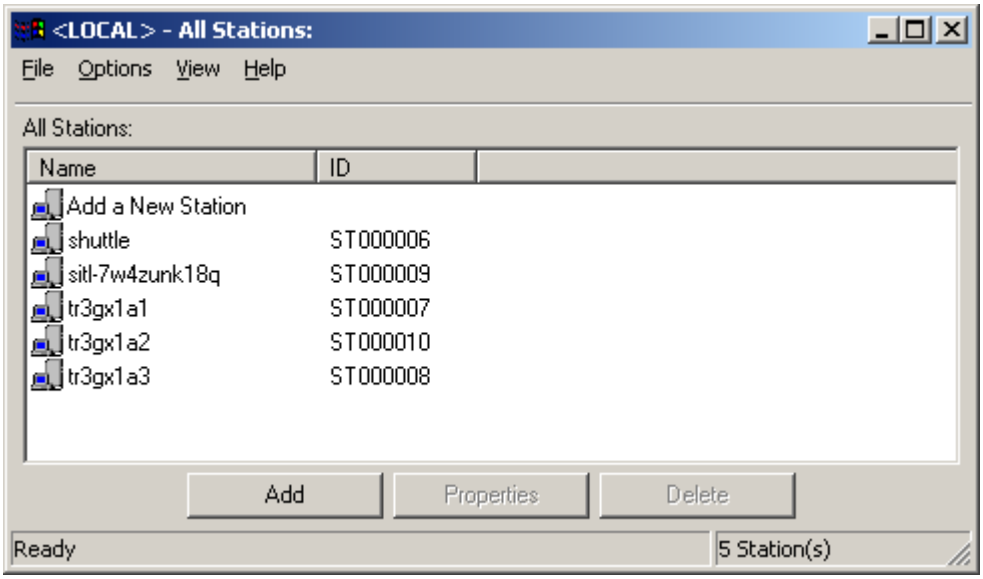
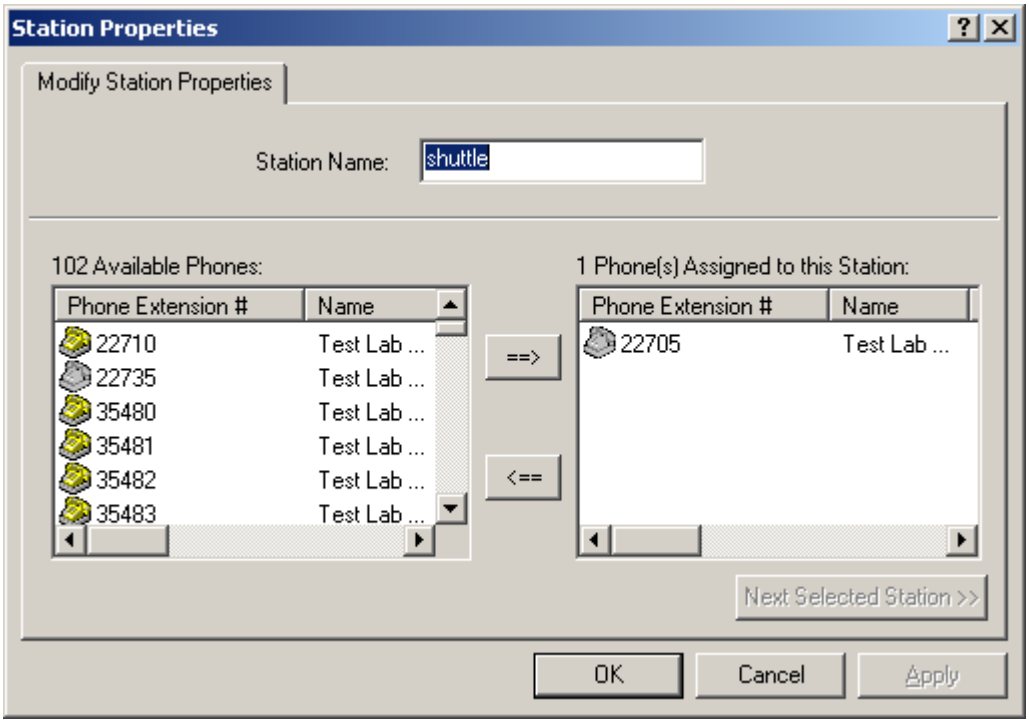
Step	Description
1.	Run the **CT System Resources** program. 

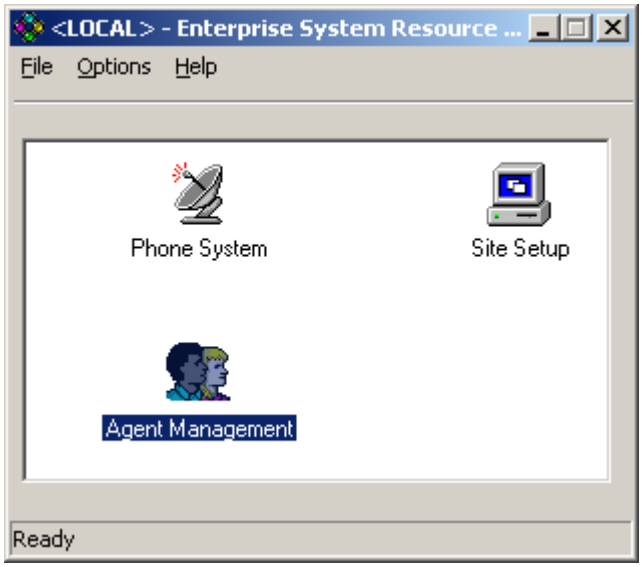
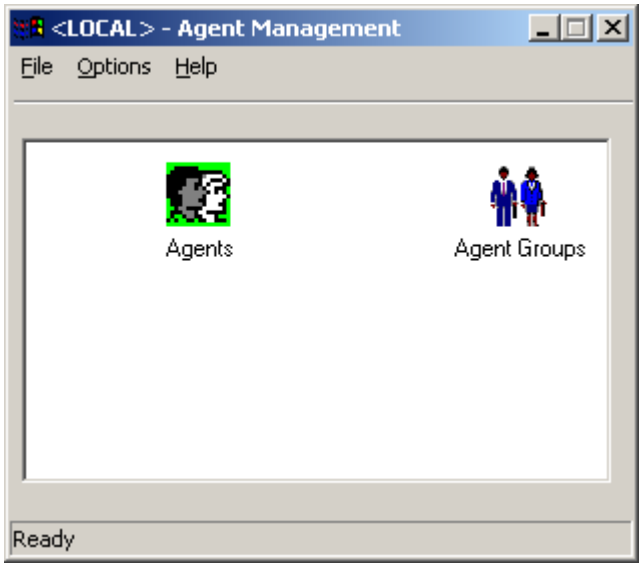
Step	Description
2.	Click the *File* menu and select **Load Switch Information**. 
3.	Select the export files that were created using the Avaya Site Administration program. Click *Open*. 

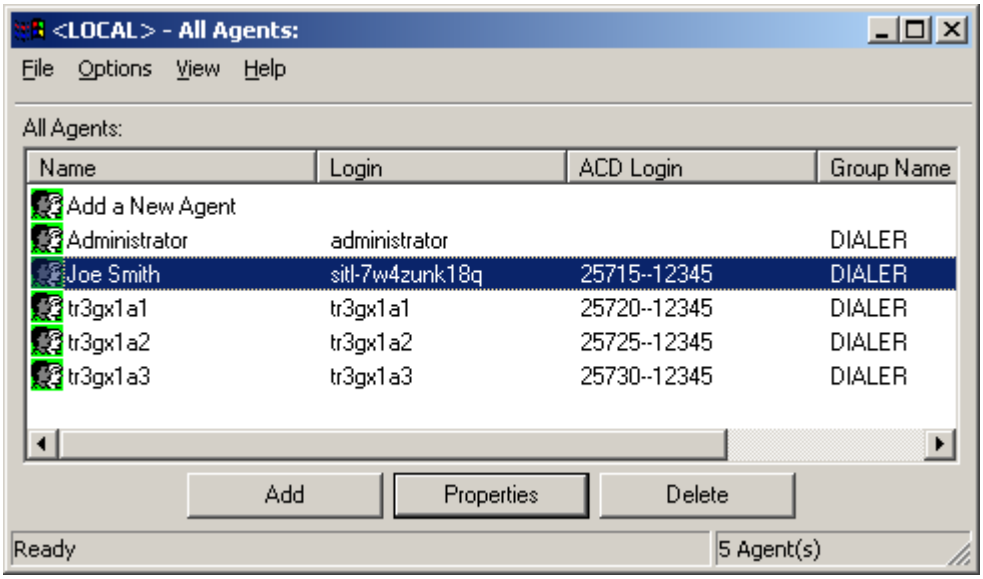
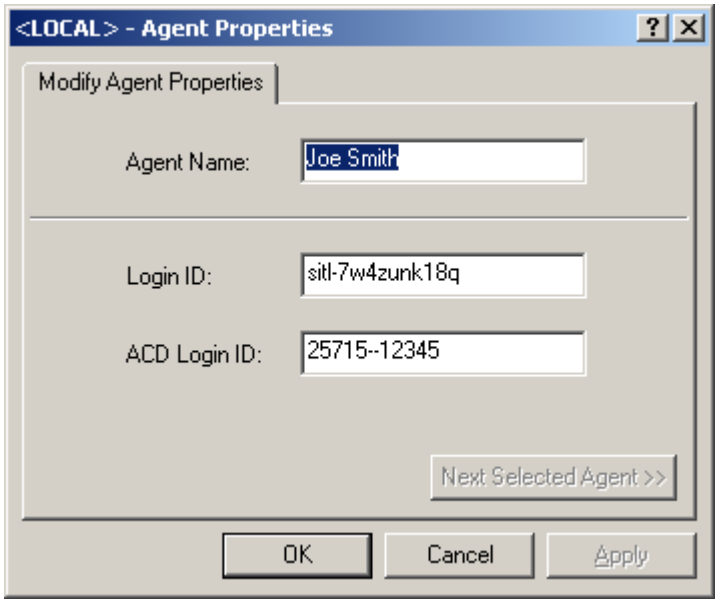
Step	Description
4.	Double-click on the **Phone System** icon. 
5.	Verify that the list of stations has been properly imported. Phones that are not required can be disabled by right-clicking on the extension number and clicking *Disable Phone*. Click the X button to close this window. 

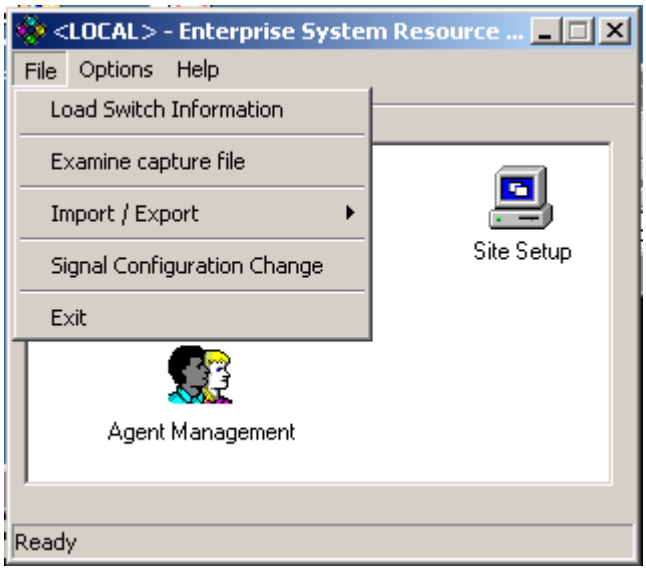
Step	Description
6.	Double-click on the **ACD Queues** icon. 
7.	Verify that the ACD hunt groups and VDNs have been properly imported. Hunt groups and VDNs that are not required can be disabled by right-clicking on the extension number and clicking *Disable ACD Queue*. Click the X button to close this window. 

Step	Description
8.	Switch back to the **Enterprise System Resources** window. Double-click on **Site Setup**. 
9.	Double-click on the **Workstations** icon. 

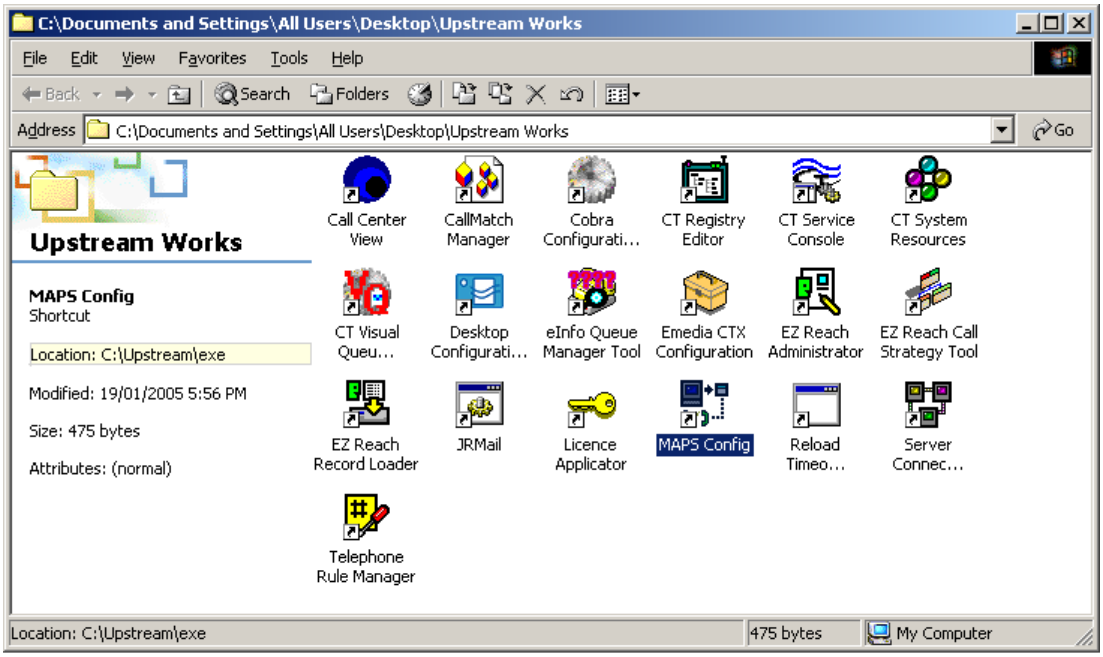
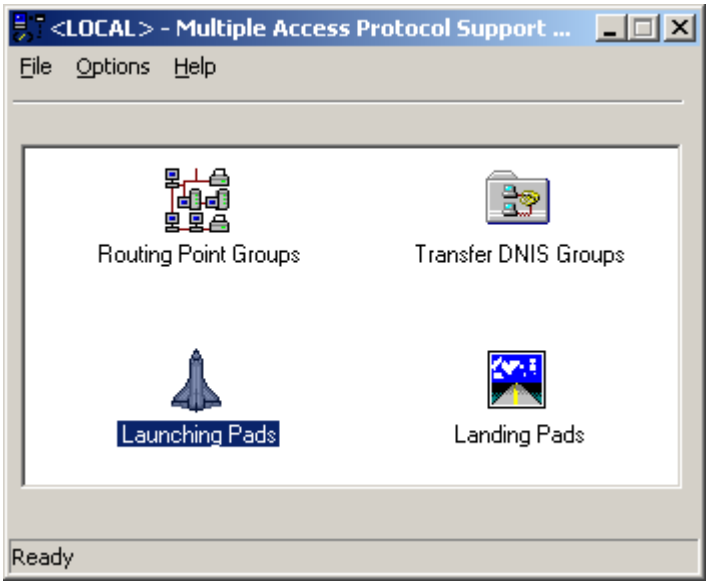
Step	Description
10.	Click *Add* to add a workstation. 
11.	Enter the workstation name in the **Station Name** field. Assign an available Phone Extension to the Station by highlighting a Phone Extension and clicking on the right arrow button. Click *OK*. 

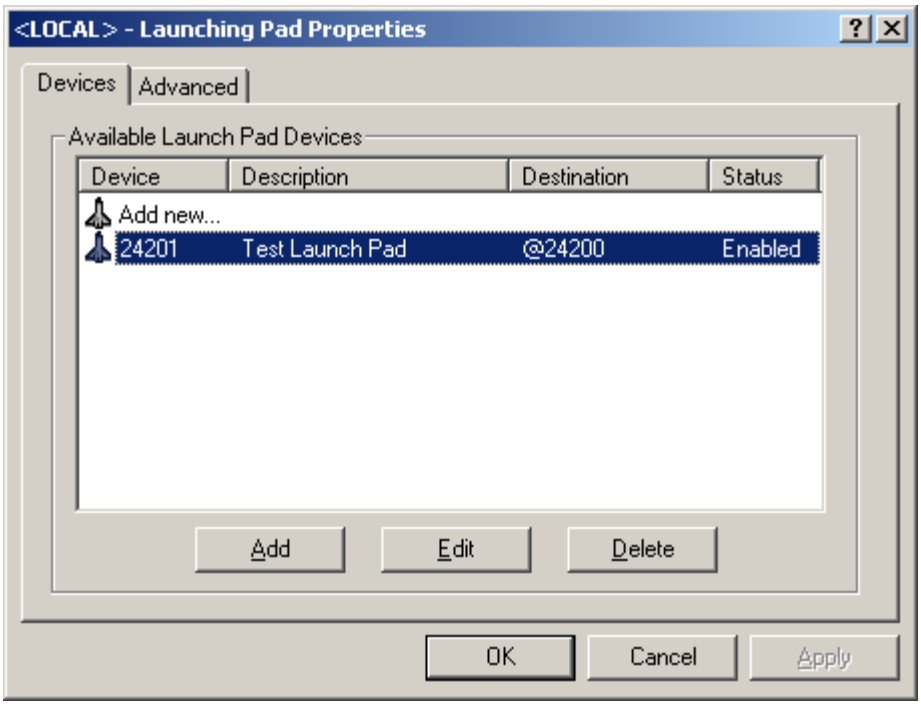
Step	Description
12.	Switch back to the **Enterprise System Resources** window. Double-click on **Agent Management**. 
13.	Double-click on the **Agents** icon. 

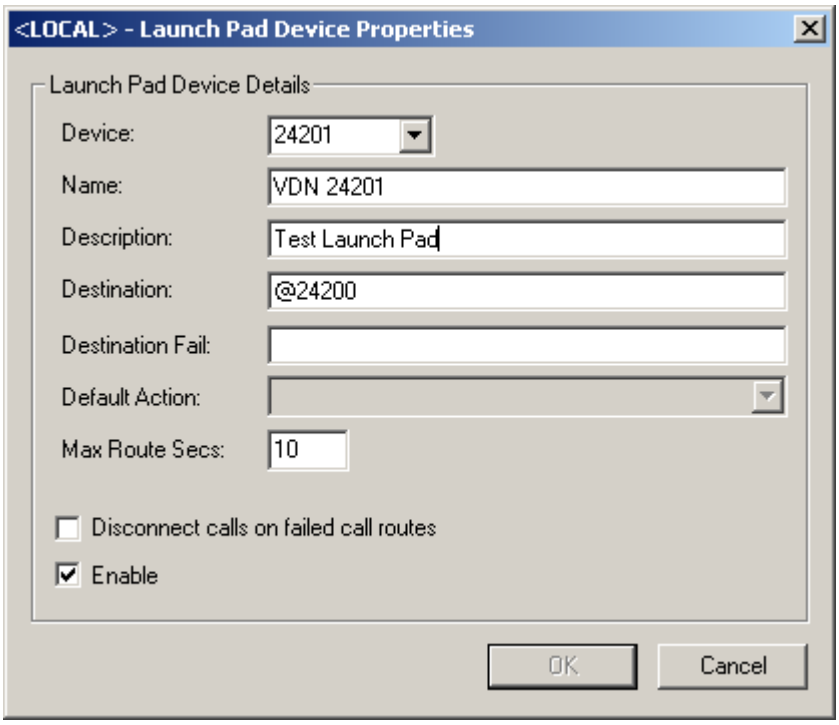
Step	Description
14.	Click *Add* to add an agent. 
15.	Enter a descriptive name in the **Agent Name** field. Enter the Windows Logon Name used by the agent into the **Login ID** field. Enter the ACD Login ID, followed by a dash, followed by the Skill Extension (if applicable), followed by a dash, followed by the Agent's password as defined in Step 3 of Section 3.2.1. With Expert Agent Selection enabled on Avaya Communication Manager, the Skill Extension is not required. Therefore, **25715--12345** was entered into the **ACD Login ID** field 

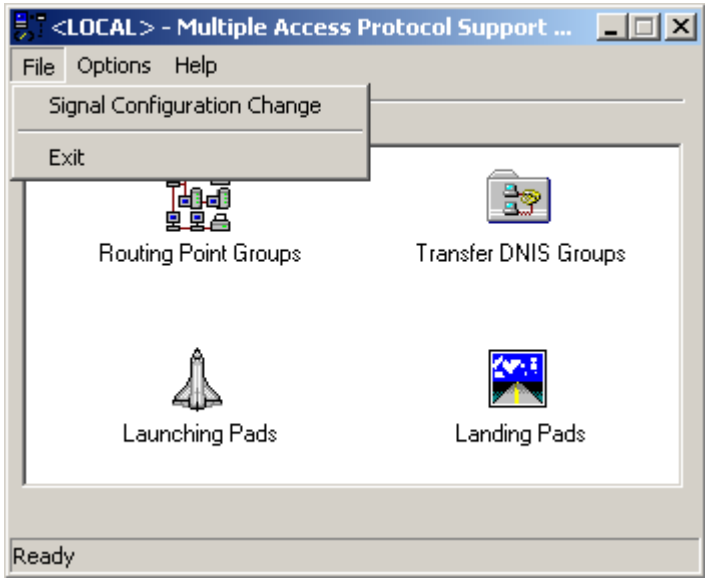
Step	Description
16.	In the **Enterprise System Resources** window, click on **Signal Configuration Change** from the *File* Menu. 

4.3. Configure Adjunct Routing

Step	Description
1.	Run the **MAPS Config** program. 
2.	Double-click on the **Launching Pads** icon. 

Step	Description
3.	Click *Add* to add a launching pad. 

Step	Description
4.	From the Device drop-down list select the VDN as defined in Step 8 of Section 3.2.1. Enter a descriptive name in the **Name** and **Description** fields. Enter the routing destination into the **Destination** field. By entering **@24200** in the **Destination** field, calls to VDN 24201 will be routed by eMedia CT to 24200. Click *OK*. 

Step	Description
5.	In the **Multiple Access Protocol Support** window, click on **Signal Configuration Change** from the *File* Menu. 

5. Interoperability Compliance Testing

This Interoperability Compliance Test included load and serviceability testing. Basic feature functionality was exercised as part of the load test scenarios. Load data was collected from the Avaya S8700 Media Servers and the eMedia CT system.

5.1. General Test Approach

Serviceability and basic functionality test cases were performed manually. During the manual tests, routing of calls as well as screen pops to the agent workstation using inbound calls to the pilot VDNs were verified. Calls were also transferred from agent to agent using the eMedia CT application, and screen pop with caller information was verified. Outbound calls were launched via a test tool at the agent desktop.

During the load testing, a call generator was used to generate incoming calls to the system for sustained periods. Outbound calls were launched using a test tool at the agent desktop.

5.2. Test Results

All test cases passed successfully. No errors were detected.

6. Verification Steps

6.1. CTI Link via Avaya Communication Manager

The CTI link status can be verified on Avaya Communication Manager through the System Access Terminal (SAT) interface. The Avaya Site Administration program can be used to access the SAT interface.

Step	Description
1.	Enter "status dlg cti-link". Verify that the **Service State** column for the CTI Link assigned in Step 3 of Section 3.1 says **established**.

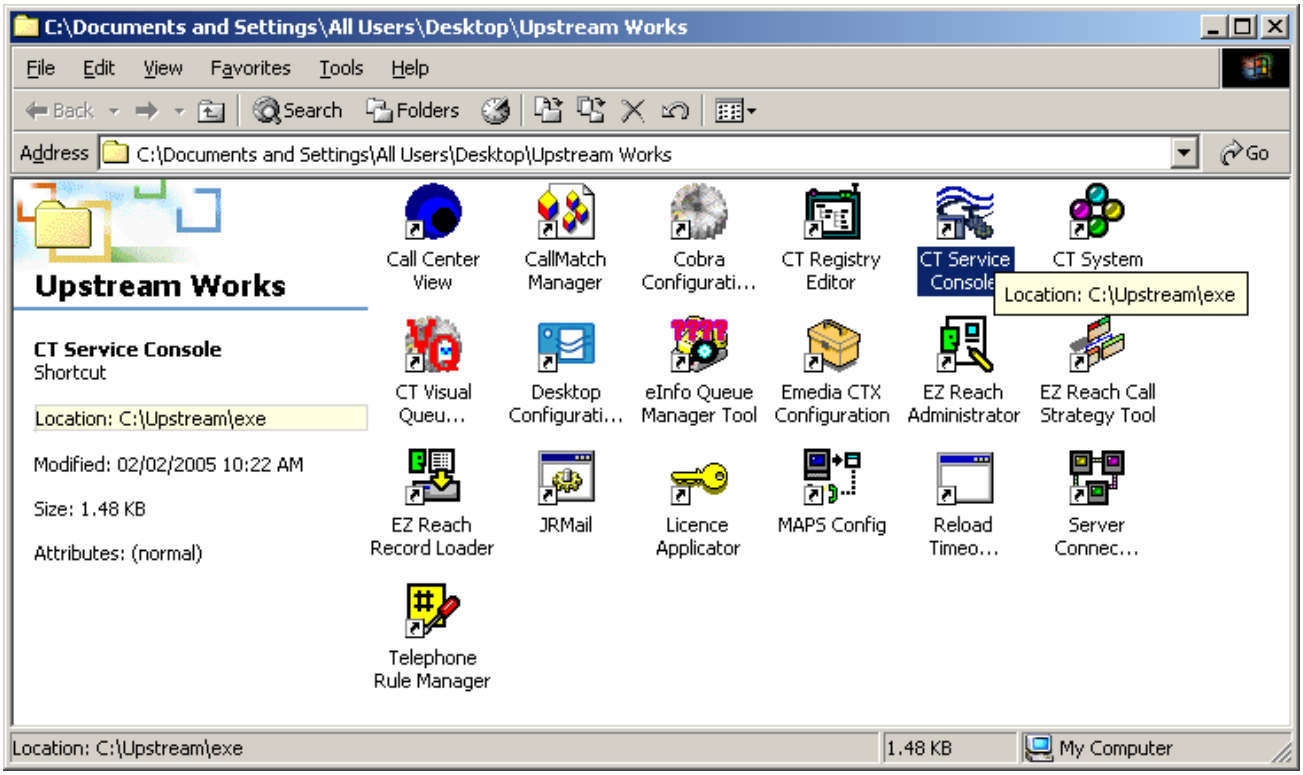
```
status dlg cti-link

                              DLG CTI LINK STATUS

CTI  Client            Vers Mnt  Local Node       Service       Msgs    Msgs
Lnk  Name/Link              Busy                   State         Sent    Rcvd

1    emediact/1          4   no   clan-1b04        established   1299    476
15   testroom3/3         4   no   clan-1b04        established   15      15
16   tr3cvlanr9/1        4   no   clan-1b04        restarted     30      15
```

6.2. CTI Link via eMedia CT

Step	Description
1.	Run the **CT Service Console** program. 

Step	Description
2.	From within the CT Service Console, enter "start ctiserv" to start the CTI server and enter "dcmd asai dump 30" to check the CTI link status. Verify that the Service Console reports "ASAI Link fully UP".

```
Version 7.00.0
CT Service Console, Version 7.00.0, Jan 10 2005
Copyright (C) 1997-2005 Upstream Works Software Ltd.
Thu Feb 03 17:31:19 2005

CTISERV> ?

Upstream CT Service Console.

Commands:

      HELP : Display commands.
         ? : Display commands.
     START : START <name>: Start Specified Service.
      STOP : STOP  <name>: Stop Specified Service.
     WATCH : WATCH <name>: Watch Specified Service.
      LIST : List Installed Services, And Their Status
      QUIT : Shut Down The Service Console.

Upstream Works CT Server
CTISERV> start ctiserv
Version 7.00.0
CTI Server Service, Version 7.00.0, Jan 10 2005
Copyright (C) 1997-2005 Upstream Works Software Ltd.
Thu Feb 03 17:31:46 2005
The Upstream Works CT Server Has Connected
Successfully Sent Start Request For CTISERV
CTISERV>
Initialization starting...
Switch connection <SWITCH01> is DOWN
Switch connection <SWITCH01> is DOWN
RS: Counting records for GM
ASAI connection established.
Initialization finished
ASAI alarms are being resumed...
Switch registrations all finished.
Switch connection <SWITCH01> is UP

CTISERV> dcmd asai dump 30
CTISERV> ASAI TCP Status: 'ASAI Link fully UP'
  Term: NO, Connected: YES (hSock: 2000)
  TCP Tunnel Heartbeat pending: NO, Last heartbeat invokeID sent: 0
CheckTCPLink  : 1 secs since last msg From Switch
CheckTCPLink  : 1 secs since last msg To Switch
CheckASAILink : 41 secs since last ASAI msg From Switch
```

7. Support

For technical support on Upstream Works Software eMedia CT, contact Upstream Works Software Customer Support at (905) 660-0969 or via e-mail at support@upstreamworks.com. Support is also available at the Upstream Works Software web site: http://www.upstreamworks.com

8. Conclusion

Upstream Works Software EMedia CT V700 call center solution was compliance tested with Avaya Communication Manager 2.2. All feature functionality and load test cases completed successfully.

9. Additional References

The following documents can be found at http://support.avaya.com:

1. Administrator's Guide for Avaya Communication Manager, Issue 9, January 2005; Doc ID: 555-233-506
2. Feature Description and Implementation for Avaya Communication Manager, Issue 2, January 2005; Doc ID: 555-245-205
3. Administration for Network Connectivity for Avaya Communication Manager, Issue 9.1, January 2005; Doc ID: 555-233-504
4. Avaya Communication Manager Call Center Software Call Vectoring and Expert Agent Selection (EAS) Guide, Issue 1, June 2004; Doc ID: 07-300186

The following documents can be found on the eMedia CT installation cd:

1. System Administration Guide, October 2004
2. Installation Workbook, October 2004

9.1. Glossary

Technical Term	Definition as it pertains to this document.
ACD	Automatic Call Distribution
ASAI	Adjunct Switch Application Interface
CTI	Computer Telephony Integration
DNIS	Dialed Number Identification Service
PSTN	Public Switched Telephone Network
EAS	Expert Agent Selection
MAPS	Multiple Access Protocol Support
VDN	Vector Directory Number

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 Developer*Connection* Program at devconnect@avaya.com.