

Avaya Solution & Interoperability Test Lab

Sample Witness Quality Call and Desktop Recording Configuration - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Witness Quality to record customer calls on Avaya Communication Manager as well as their corresponding desktop activities. Call Recording is achieved using Avaya Communication Manager Application Programming Interface (CMAPI) running on a Witness ContactStore server. Intelligent monitoring and recording is also supported through an Avaya Computer Telephony server using the Telephony Server API (TSAPI). Desktop recording is achieved natively on the Witness Quality server. A sample configuration along with the configuration parameters for Witness Quality, Witness ContactStore, Avaya Computer Telephony server, and Avaya Communication Manager is provided to help implement this capability.

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1. Introduction

These Application Notes describe the procedures for configuring Witness Quality to record customer calls on Avaya Communication Manager as well as their corresponding desktop activities. Call Recording is achieved using Avaya's Communication Manager Application Programming Interface (CMAPI) running on a Witness ContactStore server. Intelligent monitoring and recording is also supported through the Avaya Computer Telephony server using the Telephony Server API (TSAPI). Desktop recording is achieved natively on the Witness Quality server.

Witness Quality for Communication Manager enables administrators to selectively or randomly record call center agents' voice interactions with customers, as well as their corresponding computer desktop activities, such as data entry, screen navigation and data retrieval. By capturing voice and data activity and synchronizing them during replay, administrators can achieve thorough and objective customer interaction recording.

Figure 1 illustrates a sample contact center configuration consisting of an Avaya S8700 Media Server pair with an Avaya G650 Media Gateway, an Avaya Computer Telephony server, Avaya Interaction Center, Witness ContactStore, and Witness Quality. Although the Avaya Communication Manager software described in these Application Notes run on the Avaya S8700 Media Servers, the solution described herein is also extensible to other Avaya Media Servers and Media Gateways.

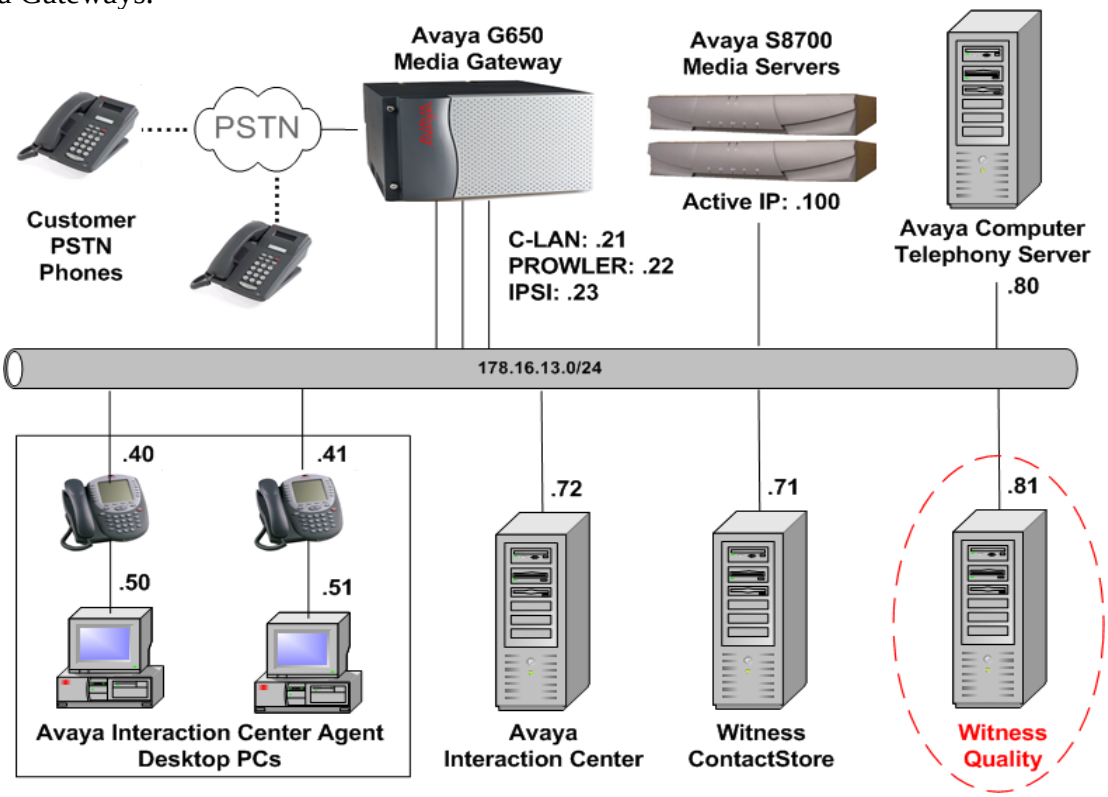


Figure 1: Sample Witness Quality Configuration

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Note: These Application Notes assume that the Avaya Interaction Center server and agents are already in place. The Avaya Interaction Center shown in **Figure 1** was used to test the Witness desktop recording functionality and is not a required component for this configuration. Please consult the Avaya Interaction Center installation guide [1] for detailed instructions on how to install Avaya Interaction Center.

2. Equipment and Software Validated

The following hardware and software versions were used for this configuration:

Equipment	Version
Avaya S8700 Media Servers	2.1.1
Avaya G650 Media Gateway • Avaya TN2312BP IPSI Circuit Packs • Avaya TN799DP C-LAN Circuit Pack • Avaya TN2302AP MEDPRO Circuit Pack	 HW03 – FW0009 HW01 – FW0011 HW03 – FW0075
Avaya Computer Telephony server	1.3
Avaya Interaction Center	6.1.3
Avaya 4620SW IP Telephones	2.1.1
Avaya 6210 Analog Telephones	---
Avaya IP Agents	5.0
Witness ContactStore for Communication Manager	7.2
Witness Quality for Communication Manager	5.3
Microsoft SQL 2000 Server (running on Witness Quality server)	SP3a

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3. Configuring Avaya Communication Manager

This section describes the steps for configuring Avaya Communication Manager to work with Witness ContactStore for call recording and Witness Quality (through the Avaya Computer Telephony) for desktop recording. The steps are performed through the System Access Terminal (SAT) interface.

Note: These notes assume the C-LAN, IP Media Processor (also known as Prowler), and IPSI circuit packs in the Avaya G650 Media Gateway and Avaya S8700 Media Server have been previously administered. Please refer to the appropriate Administration for Network Connectivity Guide [2] for additional details.

3.1. Communication Manager Configuration for Witness ContactStore

The following Avaya Communication Manager configuration describes the steps needed to connect to Witness ContactStore.

3.1.1. Checking Avaya Communication Manager Licenses

To run the Witness ContactStore call capture engine, certain Avaya Communication Manager licenses must be obtained and activated. The next series of steps can be performed to check if Avaya Communication Manager has sufficient licenses to run the call capture engine. Contact an Avaya representative if any of the highlighted features below are not enabled.

Step	Description
1.	From the Avaya Communication Manager SAT screen, issue the command **display system-parameters customer-options**. Go to Page 4 and verify that the **Enhanced Conferencing** feature is set to **y**.

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

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

        (NOTE: You must logoff & login to effect the permission changes.)
```


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Step	Description
2.	Go to Page 6 and verify that the **Service Observing (Basic)** and **Service Observing (Remote/By FAC)** features are set to **y**. display system-parameters customer-options Page 6 of 11 CALL CENTER OPTIONAL FEATURES Call Center Release: 12.0 ACD? y PASTE (Display PBX Data on Phone)? y BCMS (Basic)? y Reason Codes? y BCMS/VuStats Service Level? y Service Level Maximizer? n BSR Local Treatment for IP & ISDN? y **Service Observing (Basic)? y** Business Advocate? y **Service Observing (Remote/By FAC)? y** Call Work Codes? y Service Observing (VDNs)? n DTMF Feedback Signals For VRU? y Timed ACW? y Dynamic Advocate? y Vectoring (Basic)? y Expert Agent Selection (EAS)? y Vectoring (Prompting)? y EAS-PHD? y Vectoring (G3V4 Enhanced)? y Forced ACD Calls? n Vectoring (ANI/II-Digits Routing)? y Vectoring (G3V4 Advanced Routing)? y Lookahead Interflow (LAI)? y Vectoring (CINFO)? y Multiple Call Handling (On Request)? y Vectoring (Best Service Routing)? y Multiple Call Handling (Forced)? y Vectoring (Holidays)? y Vectoring (Variables)? y (NOTE: You must logoff & login to effect the permission changes.) **Note:** Service Observing is required for the following Witness recording modes: Station Bulk Recording and Executive Recording.
3.	Go to Page 10 and verify that Communication Manager has the appropriate number of **IP_API_A** licenses for each Communication Manager CMAPI station used by the Witness call capture engine. The **IP_API_A** licenses field is equal to the number of simultaneous recordings supported by the server. display system-parameters customer-options Page 10 of 11 MAXIMUM IP REGISTRATIONS BY PRODUCT ID Product ID Rel. Limit Used **IP_API_A : 200** 21 IP_API_B : 200 0 IP_API_C : 200 0 IP_Agent : 1000 0 IP_Phone : 1000 2 IP_ROMax : 1000 0 IP_Soft : 1000 0 IP_eCons : 28 0 : 0 0 (NOTE: You must logoff & login to effect the permission changes.)

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3.1.2. Enabling Communication Manager Features

The following features must be assigned for Witness ContactStore to work with Avaya Communication Manager.

Step	Description

1.	From the Avaya Communication Manager SAT screen, issue the command **change system-parameters features**. Go to Page 4 and verify that the **Create Universal Call ID (UCID)** feature is set to **y**.
	
	`change system-parameters features Page 4 of 14`
	`FEATURE-RELATED SYSTEM PARAMETERS`
	
	`SYSTEM PRINTER PARAMETERS`
	`System Printer Endpoint: Lines Per Page: 60`
	`Emergency Extension Forwarding (min): 10`
	`SYSTEM-WIDE PARAMETERS`
	`Switch Name: s8700`
	`Emergency Numbers - Internal: External: 911`
	`No-License Incoming Call Number:`
	`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? y`
	`UNIVERSAL CALL ID`
	`Create Universal Call ID (UCID)? y` `UCID Network Node ID: 1`

2.	Go to Page 10 and verify the **Service Observing: Warning Tone** feature is set to **y**.
	
	`change system-parameters features Page 10 of 14`
	`FEATURE-RELATED SYSTEM PARAMETERS`
	
	`CALL CENTER SYSTEM PARAMETERS`
	`EAS`
	`Expert Agent Selection (EAS) Enabled? y`
	`Minimum Agent-LoginID Password Length: 4`
	`Direct Agent Announcement Extension: Delay:`
	`Message Waiting Lamp Indicates Status For: station`
	`VECTORING`
	`Converse First Data Delay: 0 Second Data Delay: 2`
	`Converse Signaling Tone (msec): 100 Pause (msec): 70`
	`Prompting Timeout (secs): 10`
	`Interflow-qpos EWT Threshold: 2`
	`Reverse Star/Pound Digit For Collect Step? y`
	`Available Agent Adjustments for BSR? y`
	`SERVICE OBSERVING`
	`Service Observing: Warning Tone? y` `or Conference Tone? n`
	`ASAI`
	`Call Classification After Answer Supervision? y Send UCID to ASAI? y`
	
	Note: Avaya Communication Manager or Witness ContactStore can generate the warning tone. In these Application Notes, Communication Manager generates the warning tone.

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3.1.3. Administering Service Observing Access Codes

Administer Communication Manager service observing feature access codes for Witness Station and Executive recording.

Step	Description
1.	From the Avaya Communication Manager SAT screen, issue the command **change system-parameters features**. Go to Page 5 and administer the **Service Observing Listen Only Access Code** and **Service Observing Listen/Talk Access Code**.

```
change feature-access-codes                                  Page   5 of   9
                              FEATURE ACCESS CODE (FAC)

                         Automatic Call Distribution Features

                    After Call Work Access Code: 111
                            Assist Access Code: 112
                          Auto-In Access Code: 113
                         Aux Work Access Code: 114
                            Login Access Code: 115
                           Logout Access Code: 116
                        Manual-in Access Code: 117
      Service Observing Listen Only Access Code: 118
      Service Observing Listen/Talk Access Code: 119
                  Add Agent Skill Access Code: 120
               Remove Agent Skill Access Code: 121
            Remote Logout of Agent Access Code: 122
```


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3.1.4. IP Interface and Node-Names Configuration

Step	Description

1.	Define the IP interface for the C-LAN and MedPro circuit packs being used for Witness ContactStore.
	
	At the terminal command prompt, enter **change ip-interface** and match the parameters shown below. Then apply the changes. The window below shows a list of configured IP interfaces.
	
	`list ip-interface`
	
	`IP INTERFACES`
	
	`ON Type Slot Code Sfx Node Name Subnet Mask Gateway Address Net Rgn VLAN`
	`y C-LAN 01A04 TN799 D clan 255.255.255.0 178.16.13.1 1 n`
	`y MEDPRO 01A05 TN2302 medpro 255.255.255.0 178.16.13.1 1 n`

2.	Assign node names and IP addresses to each node in the network.
	
	At the terminal command prompt, enter **change node-names ip** and match the parameters shown below. Then apply the changes.
	
	Note: The C-LAN and MedPro circuit packs must have unique names and IP addresses assigned in the node names list. These values must match the node names used in Step 1 for each interface. Remember to use the specified names consistently throughout the remaining tasks.
	
	`change node-names ip Page 1 of 1`
	`IP NODE NAMES`
	`Name IP Address Name IP Address`
	`clan 178.16 .13 .21`
	`medpro 178.16 .13 .22`
	`witness 178.16 .13 .71`

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3.1.5. Tone Detection Configuration

Witness ContactStore supports “out-of-band” and “in-band” tone detection. The configuration depicted in these Application Notes uses “out-of-band” tone detection.

Step	Description
1.	At the terminal command prompt, enter **change system-parameters ip-options** to configure intra-system tone detection. Make sure the **Intra-system IP DTMF Transmission Mode** parameter is set to **out-of-band**.

```
change system-parameters ip-options                              Page   1 of   1
                          IP-OPTIONS SYSTEM PARAMETERS

 IP MEDIA PACKET PERFORMANCE THRESHOLDS
    Roundtrip Propagation Delay (ms)    High: 800      Low: 400
                    Packet Loss (%)     High: 40       Low: 15
                    Ping Test Interval (sec): 20
    Number of Pings Per Measurement Interval: 10

 RTCP MONITOR SERVER
                   Default Server IP Address:    .   .   .
                         Default Server Port: 5005
             Default RTCP Report Period(secs): 5

 IP DTMF TRANSMISSION MODE
      Intra-System IP DTMF Transmission Mode: out-of-band
      Inter-System IP DTMF: See Signaling Group Forms

 H.248 MEDIA GATEWAY                 H.323 IP ENDPOINT
  Link Loss Delay Timer (min): 5      Link Loss Delay Timer (min): 5
                                        Primary Search Time (sec): 75
```


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Step	Description
2.	Inter-system tone detection is configured through the signaling group forms associated with trunks. The figure below shows the tone detection configuration for a signaling group associated with a trunk connected to another switch.

```
change signaling-group 20                                      Page   1 of   5
                                SIGNALING GROUP

 Group Number: 20             Group Type: h.323
                            Remote Office? n          Max number of NCA TSC: 0
                                      SBS? n           Max number of CA TSC: 0
                                                    Trunk Group for NCA TSC:
      Trunk Group for Channel Selection: 20      X-Mobility/Wireless Type: NONE
         Supplementary Service Protocol: a          Network Call Transfer? n

        Near-end Node Name: clan             Far-end Node Name: HT
     Near-end Listen Port: 1720           Far-end Listen Port: 1720
                                       Far-end Network Region: 1
             LRQ Required? n            Calls Share IP Signaling Connection? n
             RRQ Required? n                  H245 Control Addr On FACility? n
        Media Encryption? n                Bypass If IP Threshold Exceeded? n

             DTMF over IP: out-of-band       Direct IP-IP Audio Connections? n
                                                   IP Audio Hairpinning? y
                                             Interworking Message: PROGress
```

3.1.6. IP Services Configuration

The Witness ContactStore server connects to Communication Manager via the Communication Manager API (CMAPI) interface. The configuration below assumes that the "witness" node name has been previously configured as the IP address of the Witness ContactStore server.

Step	Description
1.	Use the **change ip-services** command to administer a DAPI interface to the Witness ContactStore server.

```
change ip-services                                             Page   1 of   3

                                    IP SERVICES
 Service      Enabled      Local        Local       Remote      Remote
  Type                     Node         Port        Node        Port
DAPI           y       clan            0        witness        0
```


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3.1.7. IP Codec-Set and Network Region/Map Configuration

The Communication Manager API (CMAPI) and Witness ContactStore stations must be in an IP network region that supports the G.729A and/or G.711MU codecs.

Step	Description

1.	Specify the type of codec used for voice encoding and compression/decompression.
	
	The main difference between codecs is in the compression algorithm used. Compression results in lower bandwidth requirements but also introduces delay and lowers voice quality. The Witness ContactStore does not support codec compression; therefore the G.711MU or G.729A codecs must be used. In addition, make sure **Silence Suppression** is set to **n**.
	
	At the terminal command prompt, enter **change ip-codec-set 1** and match the parameters shown below. Then apply the changes.
	
	Note: Please make sure to use this codec-set number for the witness ip-network region. Administrators may need to use a different codec-set number, if codec 1 is already being used. If this is the case, the Administrator must be sure to set the codec-set value to G.711MU and G.729A.
	
	`change ip-codec-set 1 Page 1 of 1`
	
	`IP Codec Set`
	
	`Codec Set: 1`
	
	`Audio Silence Frames Packet`
	`Codec Suppression Per Pkt Size(ms)`
	`1: G.711MU n 2 20`
	`2: G.729A n 2 20`
	`3:`
	
	`Media Encryption`
	`1: none`

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Step	Description

2.	Define the IP Network Region for the Witness IP stations.
	
	At the terminal command prompt, enter **change ip-network-region 1** and match the parameter shown below. Then apply the changes.
	
	Note: Administrators may need to use a different network region number depending on the configuration used. Be sure the parameters for both servers are configured as follows to allow each system the ability to establish media paths.
	
	S8700 Media Server ip-network-region:
	Codec Set = 1
	
	`change ip-network-region 1 Page 1 of 19`
	`IP NETWORK REGION`
	`Region: 1`
	`Location: 1 Home Domain:`
	`Name: Domain 1`
	`Intra-region IP-IP Direct Audio: yes`
	`AUDIO PARAMETERS Inter-region IP-IP Direct Audio: yes`
	`**Codec Set: 1** IP Audio Hairpinning? n`
	`UDP Port Min: 2048`
	`UDP Port Max: 65535 RTCP Reporting Enabled? y`
	`RTCP MONITOR SERVER PARAMETERS`
	`DIFFSERV/TOS PARAMETERS Use Default Server Parameters? y`
	`Call Control PHB Value: 34`
	`Audio PHB Value: 46`
	`802.1P/Q PARAMETERS`
	`Call Control 802.1p Priority: 7`
	`Audio 802.1p Priority: 6 AUDIO RESOURCE RESERVATION PARAMETERS`
	`H.323 IP ENDPOINTS RSVP Enabled? n`
	`H.323 Link Bounce Recovery? y`
	`Idle Traffic Interval (sec): 20`
	`Keep-Alive Interval (sec): 5`
	`Keep-Alive Count: 5`

3.	Go to Page 3 and verify codec connectivity for intra-region calls. All recordings will use the codec-set configured for network region 1 since **Direct IP-IP Audio Connections** was set to **n** on Page 1 of the IP Network Region form.
	
	`change ip-network-region 1 Page 3 of 19`
	`Inter Network Region Connection Management`
	`src dst`
	`rgn rgn codec-set direct-WAN WAN-BW-limits Intervening-regions`
	`**1 1 1**`
	`1 2 2 y :NoLimit`
	`1 3 2 y :NoLimit`

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Step	Description

4.	Add the IP address used by the Witness stations to the network region administered in Steps 2 and 3.
	
	`change ip-network-map` `Page 1 of 32`
	`IP ADDRESS MAPPING`
	
	`From IP Address (To IP Address Subnet or Mask) Region VLAN Emergency Location Extension`
	`178.16 .13 .71 178.16 .13 .71 1 n`
	`. . . . . . n`

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3.1.8. IP Station Configuration for Witness ContactStore

Each Witness ContactStore port must have a corresponding station configured on Avaya Communication Manager. All stations should be administered identically since Witness ContactStore uses the same administration page for all stations.

Step	Description

1.	Define a Class of Restriction (COR) for the stations assigned to Witness ContactStore for call recording.
	
	At the terminal command prompt, enter **change cor** and make sure the **Can Be A Service Observer** parameter is set to **y**. Then apply the changes.
	
	`change cor 5 Page 1 of 5`
	`CLASS OF RESTRICTION`
	
	`COR Number: 5`
	`COR Description: Witness`
	
	`FRL: 0 APLT? y`
	`Can Be Service Observed? n Calling Party Restriction: none`
	`Can Be A Service Observer? y` `Called Party Restriction: none`
	`Time of Day Chart: 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? n`
	
	`Access to MCT? y Fully Restricted Service? n`
	`Group II Category For MFC: 7 Hear VDN of Origin Annc.? n`
	`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`

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Step	Description

2.	Defines a Class of Restriction (COR) for the stations being recorded.
	
	At the terminal command prompt, enter **change cor** and match the **Can Be Service Observed** parameter is set to **y**. Then apply the changes.
	
	`change cor 1` … `Page 1 of 5`
	`CLASS OF RESTRICTION`
	`COR Number: 1`
	`COR Description: Default`
	`FRL: 0` … `APLT? y`
	`Can Be Service Observed? y` … `Calling Party Restriction: none`
	`Can Be A Service Observer? n` … `Called Party Restriction: none`
	`Time of Day Chart: 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? n`
	`Access to MCT? y` … `Fully Restricted Service? n`
	`Group II Category For MFC: 7` … `Hear VDN of Origin Annc.? n`
	`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`

3.	Add the stations used by Witness ContactStore.
	
	At the terminal command prompt, enter **add station** to add a station for Witness ContactStore. Enter **4624** for the station type, set the **IP Softphone** parameter to **y**, enter a numeric security code, and select the COR configured in Step 1.
	
	`add station 38180` … `Page 1 of 5`
	`STATION`
	`Extension: 38180` … `Lock Messages? n` … `BCC: 0`
	`Type: 4624` … **`Security Code: 1234`** … `TN: 1`
	`Port: IP` … `Coverage Path 1:` … **`COR: 5`**
	`Name: CC Port 38180` … `Coverage Path 2:` … `COS: 1`
	`Hunt-to Station:`
	`STATION OPTIONS`
	`Loss Group: 19` … `Personalized Ringing Pattern: 1`
	`Message Lamp Ext: 38180`
	`Speakerphone: 2-way` … `Mute Button Enabled? y`
	`Display Language: english`
	`Media Complex Ext:`
	`IP SoftPhone? y`
	
	Note: The same security code must be used for all stations used by Witness ContactStore.

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Step	Description

4.	Go to Page 3 and assign **conf-dsp** and **serv-obsrv** feature buttons. Then apply the changes.
	
	`change station 38180 Page 3 of 5`
	`STATION`
	`SITE DATA`
	`Room: Headset? n`
	`Jack: Speaker? n`
	`Cable: Mounting: d`
	`Floor: Cord Length: 0`
	`Building: Set Color:`
	
	`ABBREVIATED DIALING`
	`List1: List2: List3:`
	
	`BUTTON ASSIGNMENTS`
	`1: call-appr 7:`
	`2: call-appr 8:`
	`3: call-appr 9:`
	`4: **conf-dsp** 10:`
	`5: **serv-obsrv** 11:`
	`6: 12:`

5.	Repeat Steps 4-5 to add as many stations as required. Stations 38180 through 38239 were configured for these Application Notes. Stations 38180 through 38209 were used for Witness Quality.

6.	Make sure all stations being recorded are assigned a COR with the **Can Be Service Observed** parameter set to **y**. Please refer to the example below:
	
	`change station 38102 Page 1 of 4`
	`STATION`
	
	`Extension: 38102 Lock Messages? n BCC: 0`
	`Type: 4620 Security Code: 1234 TN: 1`
	`Port: S00000 Coverage Path 1: **COR: 1**`
	`Name: Agent 1 Phone Coverage Path 2: COS: 1`
	`Hunt-to Station:`
	
	`STATION OPTIONS`
	`Loss Group: 19 Personalized Ringing Pattern: 1`
	`Message Lamp Ext: 38102`
	`Speakerphone: 2-way Mute Button Enabled? y`
	`Display Language: english Expansion Module? n`
	
	`Media Complex Ext:`
	`IP SoftPhone? n`

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3.2. Communication Manager Configuration for Avaya Computer Telephony

The following Avaya Communication Manager configuration describes the steps needed to connect an Avaya Computer Telephony server for the Witness Quality intelligent call monitoring and recording capabilities.

3.2.1. CTI Link

The Avaya Computer Telephony server communicates with the Avaya Communication Manager via a CTI link. The following steps demonstrate the configuration of the Avaya Communication Manager side of the CTI link.

Step	Description
1.	Enter the **display system-parameters customer-options** command and verify that **Computer Telephony Adjunct Links** and **Co-Res DEFINITY LAN Gateway** are set to **y**. display system-parameters customer-options Page 3 of 11 OPTIONAL FEATURES Abbreviated Dialing Enhanced List? n Audible Message Waiting? n 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? n ARS/AAR Partitioning? y **Computer Telephony Adjunct Links? y** ARS/AAR Dialing without FAC? n **Co-Res DEFINITY LAN Gateway? y** ASAI Link Core Capabilities? n Cvg Of Calls Redirected Off-net? n ASAI Link Plus Capabilities? n 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? n Attendant Vectoring? n DS1 MSP? n DS1 Echo Cancellation? n (NOTE: You must logoff & login to effect the permission changes.)
2.	Enter the **add cti-link m** command, where m is a number between 1 and 16, inclusive. Enter a valid **Extension** under the provisioned dial plan in Avaya Communication Manager, set **Type** to **ADJ-IP**, and assign a descriptive **Name** to the CTI link. add cti-link 1 Page 1 of 2 CTI LINK CTI Link: 1 **Extension: 38999** **Type: ADJ-IP** COR: 1 **Name: CTI Link to Avaya Computer Telephony**

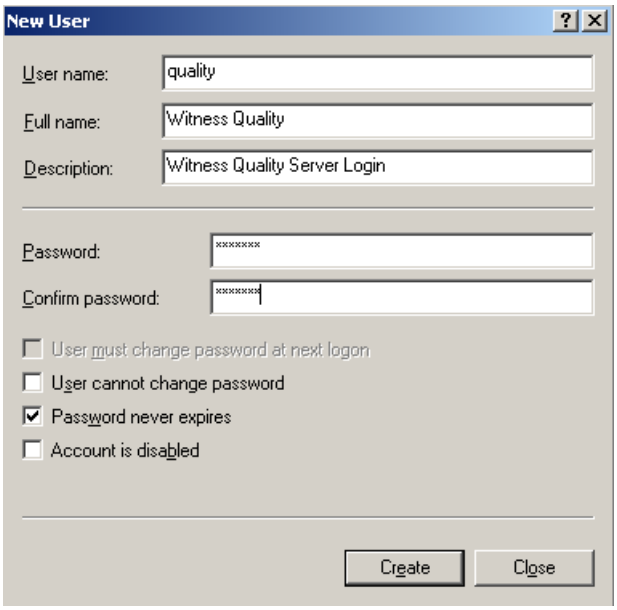
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Step	Description
3.	Enter the **change node-names ip** command. Specify node for the Avaya Computer Telephony server and its IP address. `change node-names ip` Page 1 of 1 IP NODE NAMES Name IP Address Name IP Address clan 178.16 .13 .21 . . . medpro 178.16 .13 .22 . . . witness 178.16 .13 .71 . . . **AvayaCT 178.16 .13 .80**
4.	Enter the **change ip-services** command. On Page 1 of the **ip-services** form, configure and enable a **DLG Service Type** and specify **clan** as the **Local Node**. The **Local Port** should be fixed at **5678**. `change ip-services` Page 1 of 3 IP SERVICES Service Type / Enabled / Local Node / Local Port / Remote Node / Remote Port **DLG y clan 5678** DAPI y clan 0 witness 0 On Page 3 of the **ip-services** form, configure and enable a CTI link with the same link number in Step 2. For **Client Name**, enter the node name configured in Step 3 for the Avaya Computer Telephony server. `change ip-services` Page 3 of 3 DLG Administration CTI Link / Enabled / Client Name / Client Link / Client Status **1 y AvayaCT 1**

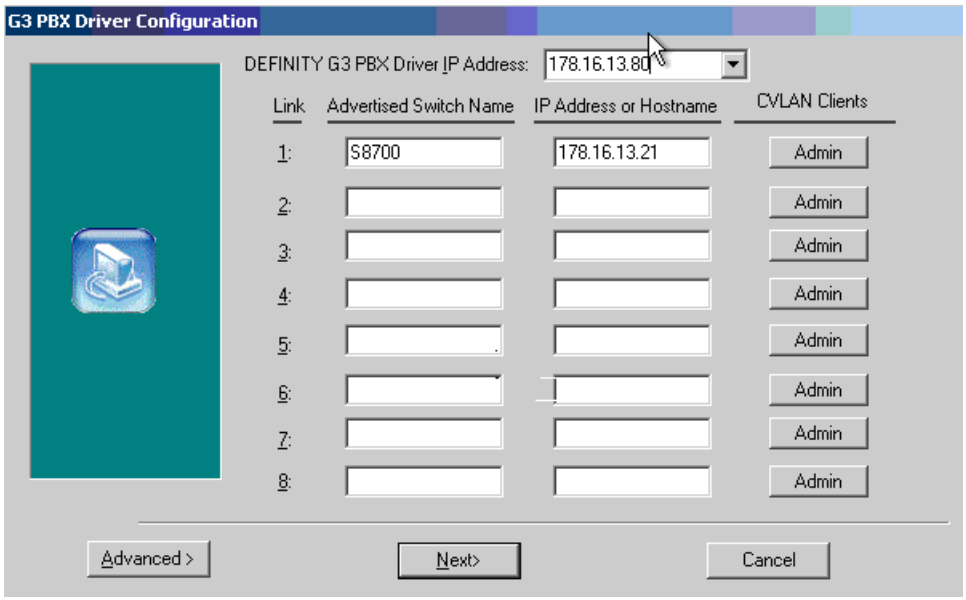
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4. Configuring the Avaya Computer Telephony Server

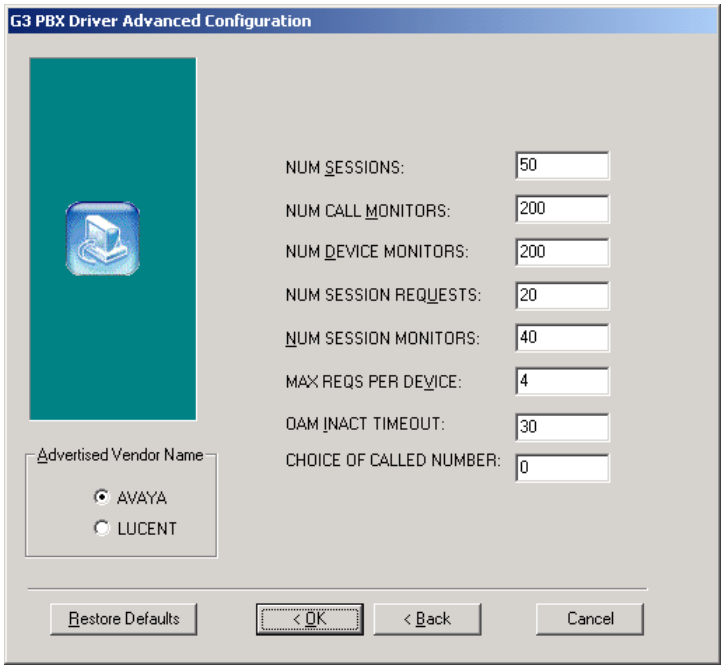
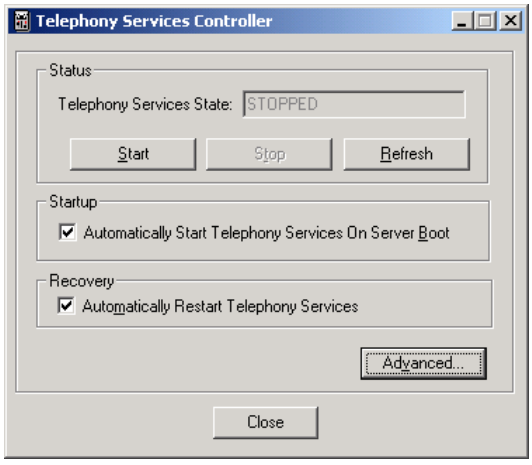
Avaya Computer Telephony enables CTI applications to control and monitor telephony resources on Avaya Communication Manager. Avaya Computer Telephony consists of two components: a DEFINITY G3 PBX Driver and a Telephony Services Server (Tserver). The DEFINITY G3 PBX Driver maintains CTI links between the Avaya Computer Telephony server and Avaya Communication Manager and forwards messages between the two systems. The Tserver receives requests from CTI applications, like Witness Quality, and forwards them to Avaya Communication Manager via the DEFINITY G3 PBX Driver. Conversely, the Tserver receives responses and events from Avaya Communication Manager via the DEFINITY G3 PBX Driver and forwards them to Witness Quality. The Tserver also secures CTI application access to telephony resources based on the logins and permissions configured for the CTI applications.

Step	Description
1.	Right click on the **My Computer** icon on the Avaya Computer Telephony server desktop and select "**Manage**" to display the **Computer Management** window. From the **Computer Manager** window, right click on the **Users** folder under **Local Users and Accounts** and select "**New User…**" Add a new user account for Witness Quality as shown below. 

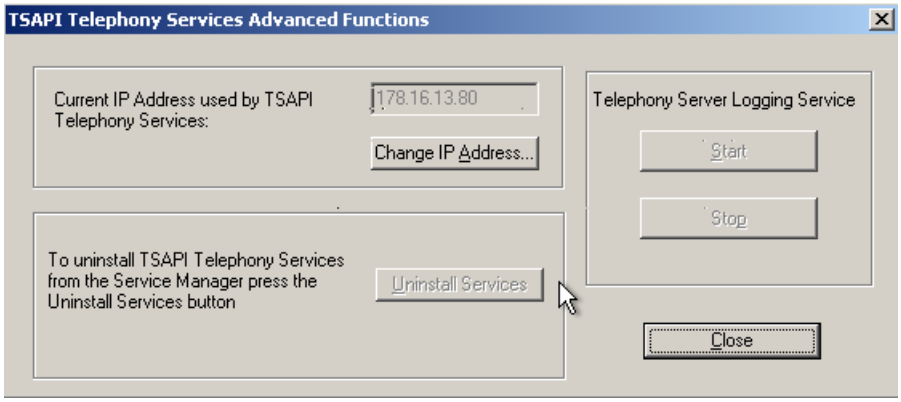
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Step	Description
2.	On the Avaya Computer Telephony server, select **Start→Programs→Avaya Computer Telephony→DEFINITY G3 PBX Driver→G3 PBX Driver Configuration**. Set the **DEFINITY G3 PBX Driver IP Address** to the IP address of the Avaya Computer Telephony server interface connected to the S8300/G700. Define a CTI link to the S8700/G700 by entering an **Advertised Switch Name** and the **IP Address** of the C-LAN on the G650. Click on "**Advanced**". 

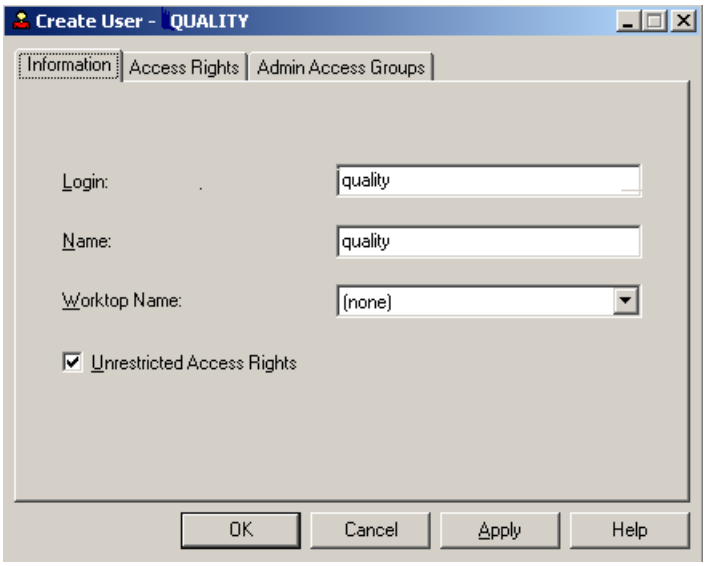
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Step	Description
3.	Set **Advertised Vendor Name** to "**AVAYA**" and click on "**OK**" to return to the **G3 PBX Driver Configuration** window. 
4.	In the **G3 PBX Driver Configuration** window, click on "**Next**" and follow the rest of the configuration wizard steps until a message is displayed indicating that the DEFINITY G3 PBX driver configuration has been updated.
5.	On the Avaya Computer Telephony server, select **Start→Programs→Avaya Computer Telephony→TS Controller** to display the **Telephony Services Controller** window. Check the **Automatically Start Telephony Services on Server Boot** and **Automatically Restart Telephony Services** checkboxes and click on "**Advanced**" to invoke the **TSAPI Telephony Services Advanced Functions** window. 

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Step	Description
6.	Verify that **Current IP Address used by TSAPI Telephony Services** is set with the correct IP address of the Avaya Computer Telephony server; if not, click on **Change IP Address…** and change it accordingly. Click on "**Close**" to return to the **Telephony Services Controller** window.  In the **Telephony Services Controller** window, click on "**Start**". If the start is successful, a message stating "TSAPI Telephony Services started successfully" is displayed. Verify that the CTI link is up by using the **status dlg cti-link** command on the SAT.
7.	The Telephony Services Administrator application is used to administer the Telephony Services Server (Tserver) and may be installed on the Avaya Computer Telephony server or on another computer. Select **Start→Programs→Avaya Computer Telephony→TS Win32 Client→Telephony Services Admin**. The **Open Tserver** dialog box is displayed. Select the Avaya Computer Telephony server from the **Tserver** drop-down list and log into the Avaya Computer Telephony server with Administrator permissions.

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Step	Description
8.	Create a user object for Witness Quality. The permissions defined for the Witness Quality user object determines which telephony resources, i.e. calls and devices Witness Quality can control and/or monitor. In the **Telephony Services Administrator** window, select the "**Create User**" icon from the toolbar or the "**Create User**" option from the **Admin** menu. In the **Information** tab of the **Create User** window, enter the **Login** that was created for Witness Quality in Step 1 and check the **Unrestricted Access Rights** checkbox.  Click "**OK**" when done.

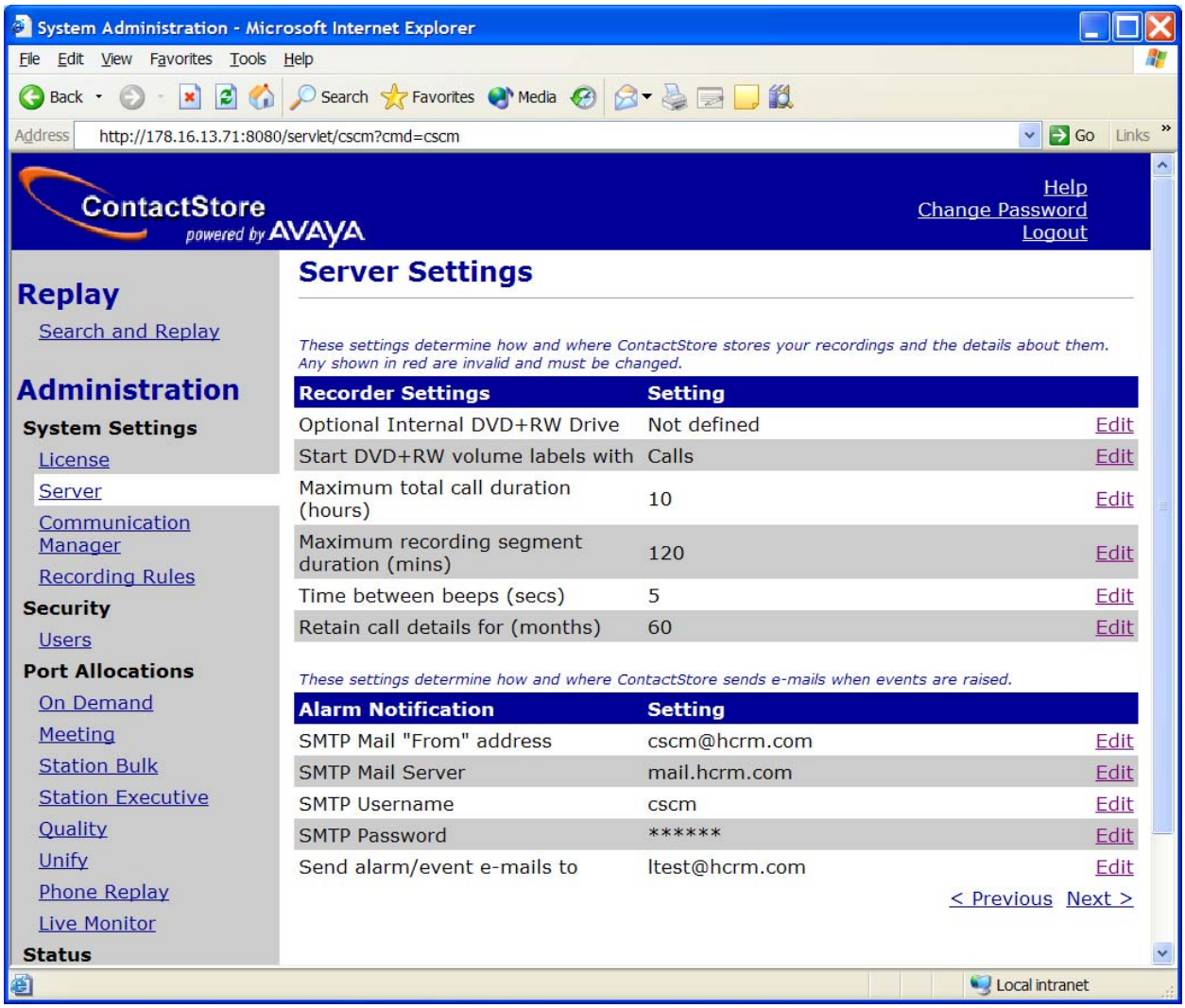
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5. Configuring Witness ContactStore

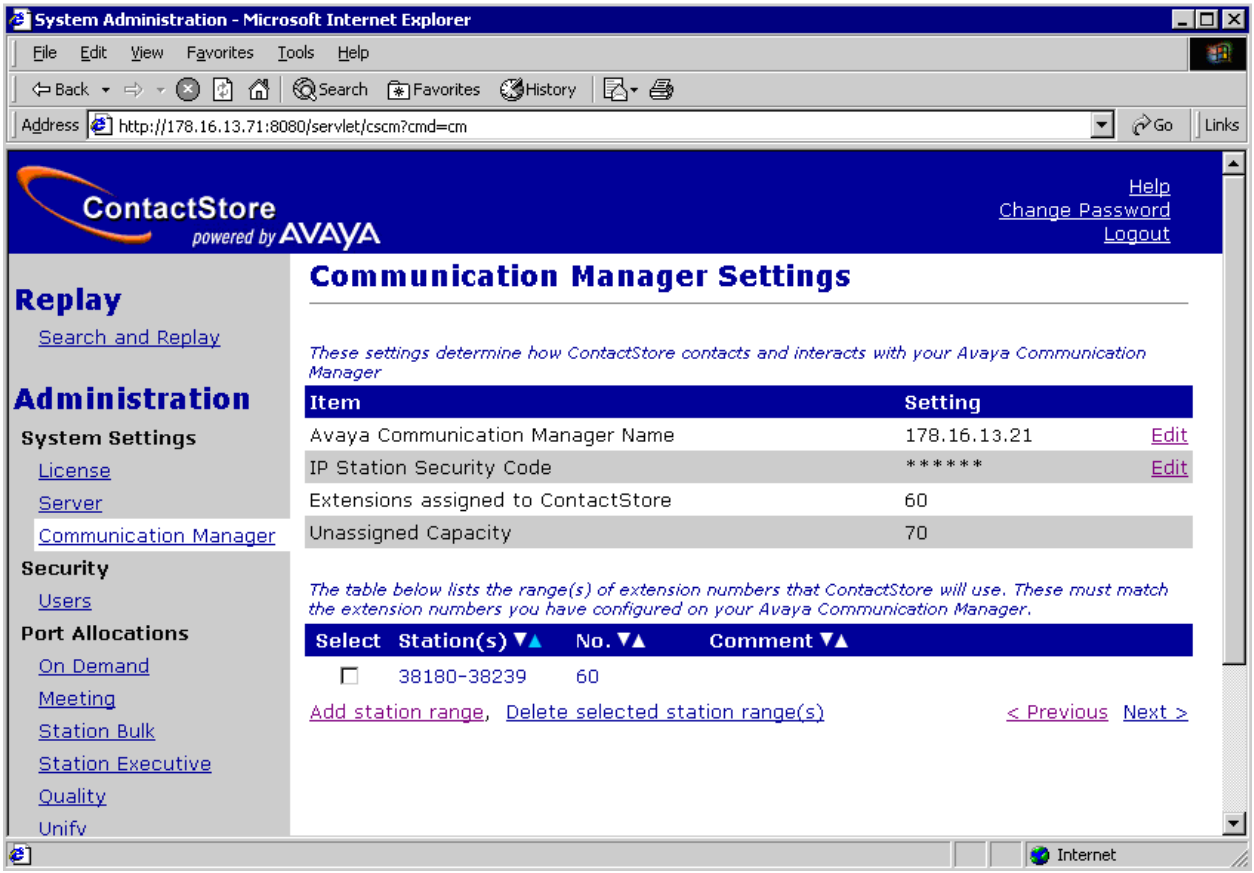
The steps in the section describe the Witness ContactStore configuration for use with the Witness Quality server. Ports allocated to Witness Quality are not under the direct control of the Witness ContactStore but rather respond to commands sent from the Witness Quality server. The Witness Quality server uses the overall pool of ports for both record and telephony replay tasks. The configuration assumes that appropriate licensing has been previously administered on ContactStore.

Step	Description
1.	Bring up a web browser and navigate to http://Witness-Server:8080 (where Witness-Server is the host name or IP address of the Witness ContactStore server). Log in using a username and password with administrator credentials.  The "ContactStore System Administration" page is displayed.

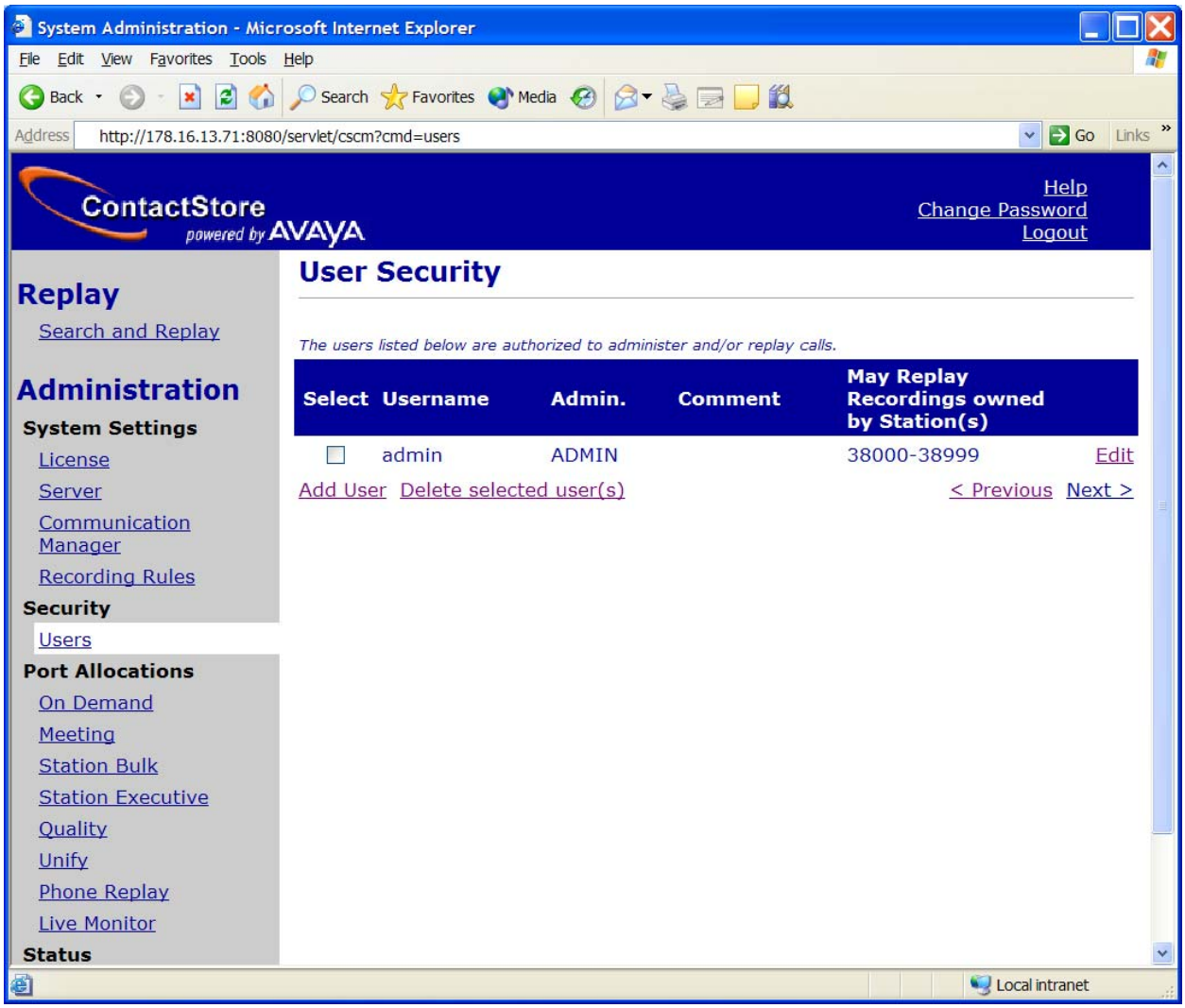
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Step	Description
2.	Configure the Witness ContactStore Server Settings. These settings determine how the ContactStore recorder operates and how to forward alarms and events via e-mail. The window below shows the default recorder settings and alarm notification configuration. The window is displayed by navigating to "**Administration**" → "**System Settings**" → "**Server**".  Click "**Next >**" on the bottom right side of the page to continue. The **Communication Manager Settings** window is displayed

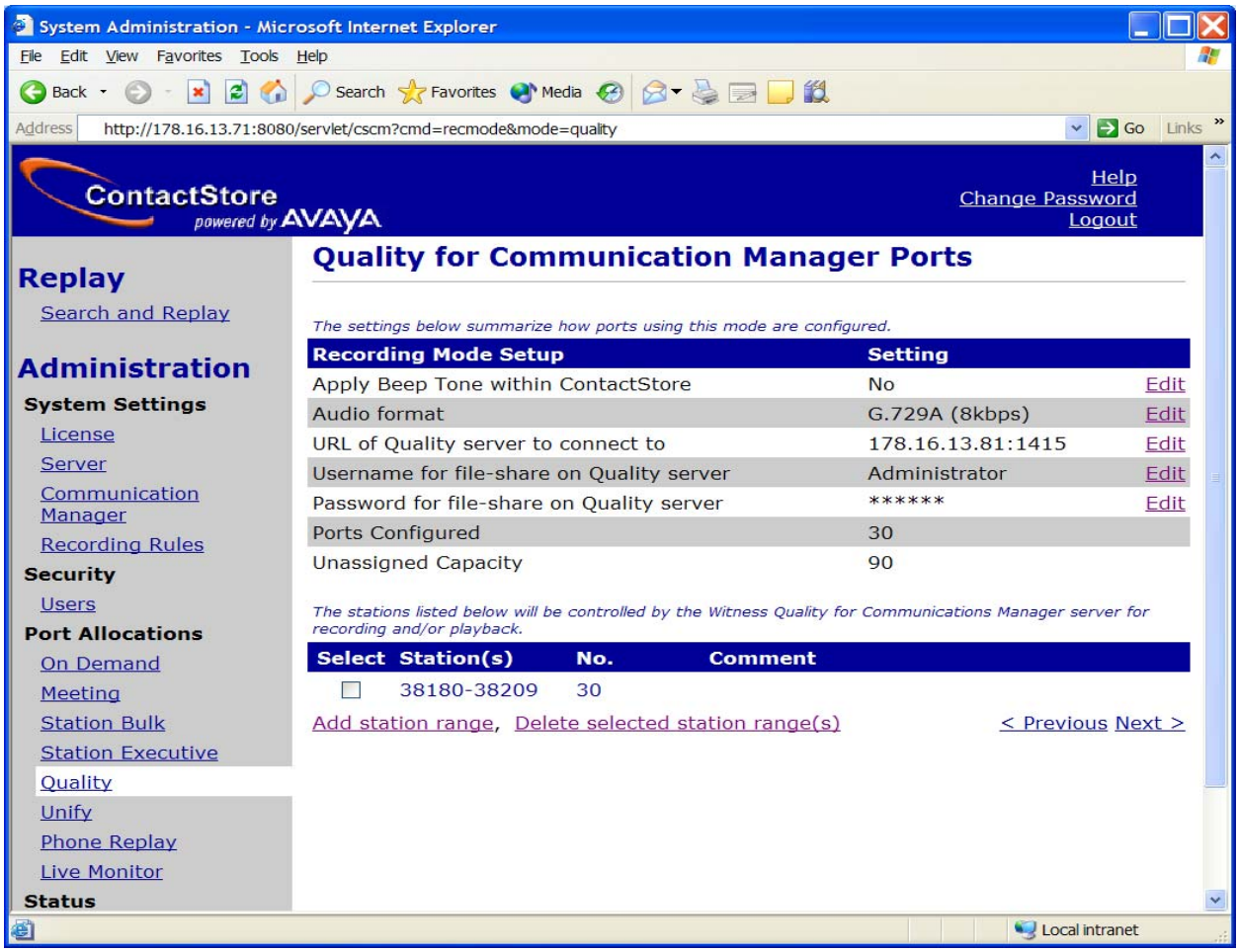
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Step	Description
3.	Communication Manager Configuration: This page lets users specify how Witness ContactStore interacts with Avaya Communication Manager. • **Avaya Communication Manager Name** – Enter the IP address of the C-LAN card configured in Section 3.1.4. • **IP Station Security Code** - Enter the password for the stations assigned to work with the ContactStore server configured in Section 3.1.8, Step 3. • **Station Range(s)** – Add the station ranges that were previously configured in Section 3.1.8, Steps 1-5 to work with Witness ContactStore. 

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Step	Description
4.	User Configuration. The **User Security** page manages the access rights of each authorized user. The configuration below shows that the "admin" user is allowed to replay recordings owned by stations 38000-38999.  Click "**Next >**" button until the **Quality for Communication Manager Ports** window is displayed.

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Step	Description
5.	Quality for Communication Manager Ports Configuration: Ports allocated to this pool are not under the direct control of the Witness ContactStore but rather respond to commands sent from the Witness Quality server. The Witness Quality server uses the overall pool of ports for both record and telephony replay tasks. This page lets users specify how Witness ContactStore interacts with Witness Quality. • **Apply Beep Tone within ContactStore** – Set to "**No**" since Avaya Communication Manager was previously configured in Section 3.1.2 Step 2 to generate the beep tone. • **Audio Format** – Select G.729A or G.711MU. (G.729A was used) • **URL of Quality server to connect to** – Enter URL and port of the Quality Server. • **Username for file-share on Quality server** – Enter a username with read, write, and execute permission on the Witness Quality "voice" file shared folder. • **Password for file-share on Quality server –** Enter the username password. • **Station Range(s)** – Add a station range for the Witness Quality server. The range has to be within the station range previously configured in Section 3.1.8, Steps 1-5. 

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6. Configure Witness Quality

Witness Quality for Communication Manager is made up of three different components: the server, the client, and the agent. The server component is controlled by a Windows-type service, named WitnessService. The client is an application used for Witness Quality administration. The agent is the software component that runs on an agent's PC for desktop recording. In addition to these three components, Microsoft SQL 2000 Server SP3a and Avaya TSAPI client 1.3 software must also be installed on the Witness Quality server.

6.1. Microsoft SQL 2000 Server Installation

Follow the instructions provided with the Microsoft SQL 2000 server SP3a CD to install Microsoft SQL 2000 server. When installing Microsoft SQL 2000 server, make sure the following procedures are followed for Witness Quality:

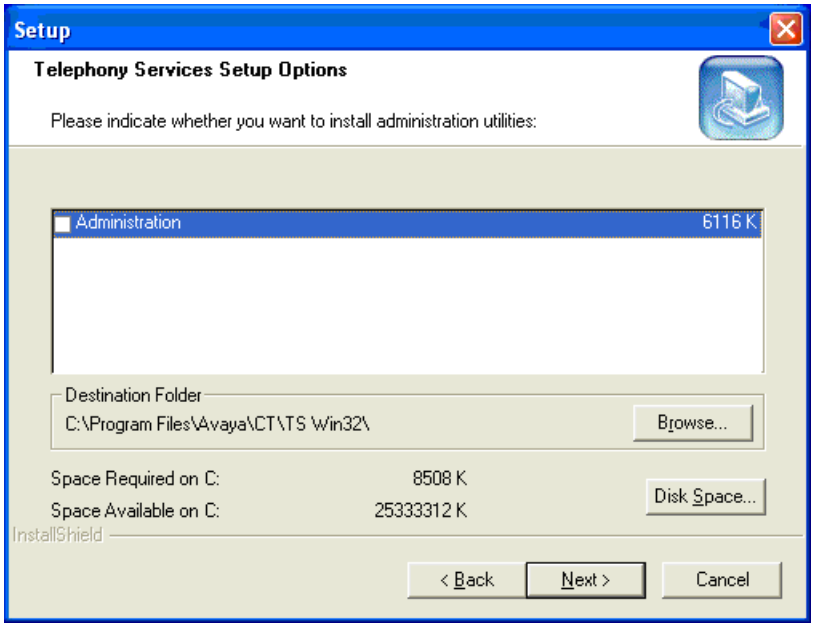
- When installing Microsoft SQL, make sure that you select the Mixed Authentication mode, as Quality for Communication Manager needs this option to function properly.
- When setting up the database, set up a maintenance plan at the same time, to back up the database as well as truncate the log. This ensures that the database gets backed up automatically and avoids having disk storage problems later. This is necessary as the transaction log continues to grow (cumulatively) over time.
- Run the SQL Server Client Network utility and disable the Named Pipes protocol. The server then uses the TCP/IP protocol as its standard network protocol. To disable the Named Pipes, access the SQL Server Client Network utility. Verify that Named Pipes is listed in Disabled protocols. If it is not, then select Named Pipes, and then select Disable to transfer Named Pipes to the Disabled protocols. Verify that the Enable shared memory protocol check box is cleared, otherwise system memory resources are limited. Select "**OK**" and restart the Server.

6.2. Avaya TSAPI Client Installation on Witness Quality Server

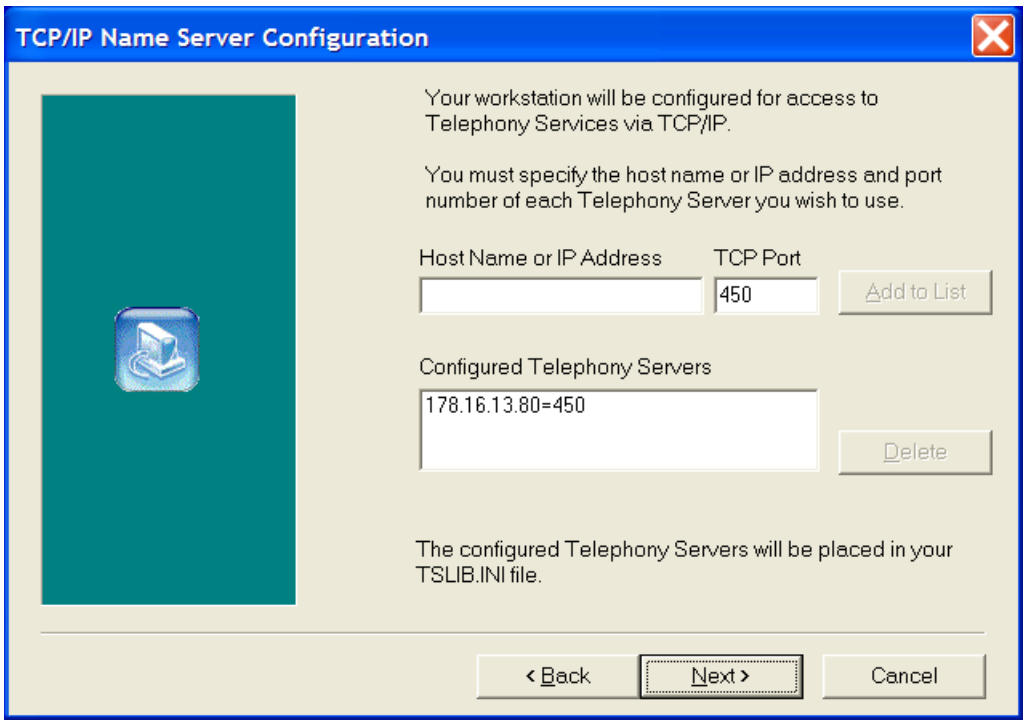
For the Quality for Communication Manager Server to connect to the Avaya Computer Telephony Server, the TSAPI Client 1.3 must be installed on the Witness Quality server prior to starting the server.

Step	Description
1.	Place the Quality for Communication Manager CD into the CD-ROM drive on the Witness Quality server. The Welcome page appears.
2.	On the **Quality for Communication Manager Welcome** window, scroll down to **Install Third Party Products**. Click **Install TSAPI Client 1.3 for connecting to Avaya CT Server**. The **Welcome to the Telephony Services Win32 Client Setup** program screen appears. Click "**Next**" to continue.

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Step	Description
3.	The **Telephony Services Setup Options** screen appears. It is unnecessary to select "**Administration**".  Click "**Next**" to continue.

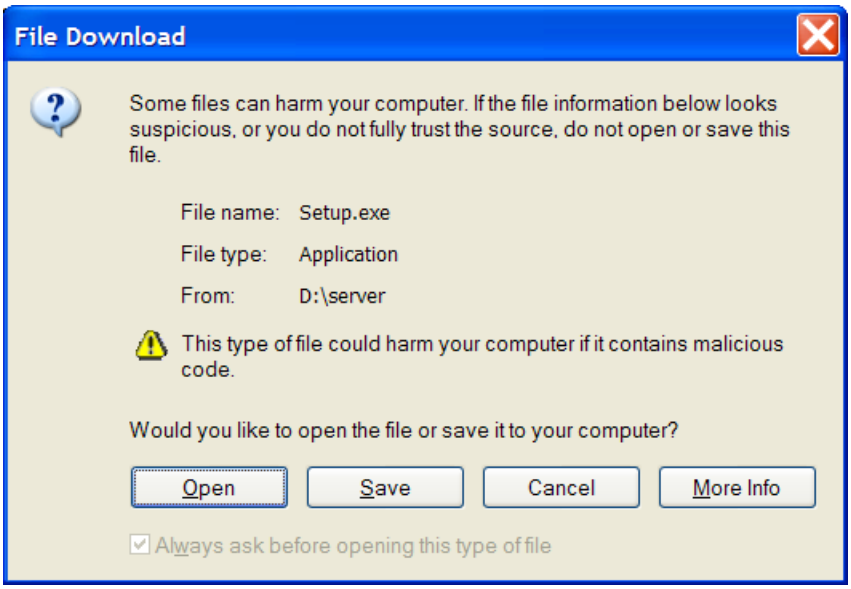
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Step	Description
4.	The **TCP/IP Name Server Configuration** screen appears. Enter the Avaya Computer Telephony Server **Host Name or IP Address**. Leave the **TCP port** number as the default (450). Click the "**Add to list**" button to add the information to the **Configured Telephony Servers** field.  Click "**Next**" to continue.
5.	The **Installation Complete** setup screen appears. Click "**Finish**" to complete the TSAPI client installation.

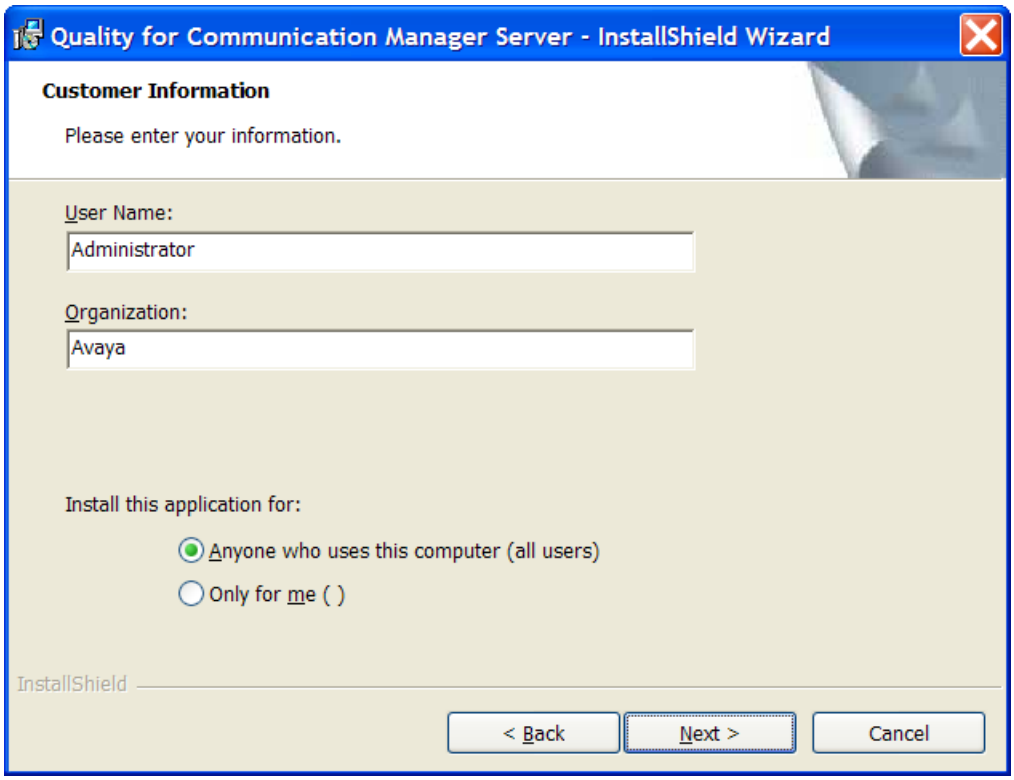
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6.3. Witness Quality Server Installation

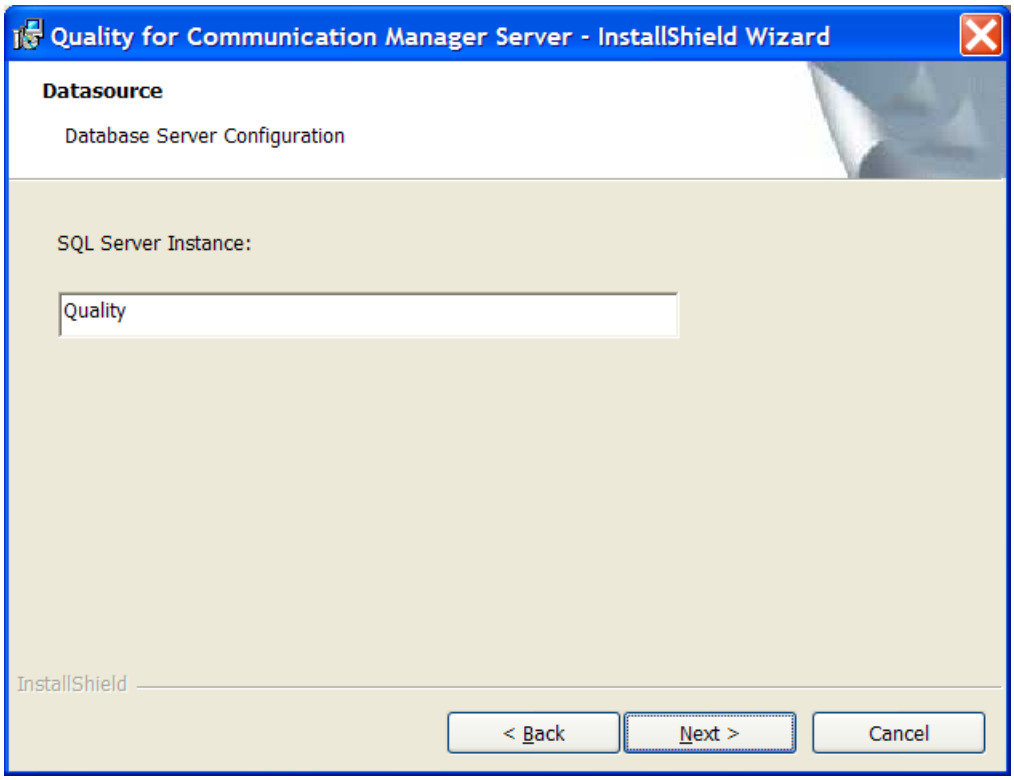
The following configuration describes the steps needed to install the Witness Quality Server software.

Step	Description
1.	Place the Quality for Communication Manager CD into the CD-ROM drive on the Witness Quality server. The Welcome page appears.
2.	Under **Install Quality for Communication Manager**, select **Quality for Communication Manager Server Component**. The following **File Download** dialog box appears.  Click "**Open**" to continue.
3.	The **Welcome to the InstallShield Wizard for Quality for Communication Manager Server** screen appears. Click "**Next**" to continue.
4.	The **License Agreement** appears. Read the entire license agreement and select "**I accept the terms in the license agreement**". Click "**Next**" to continue.

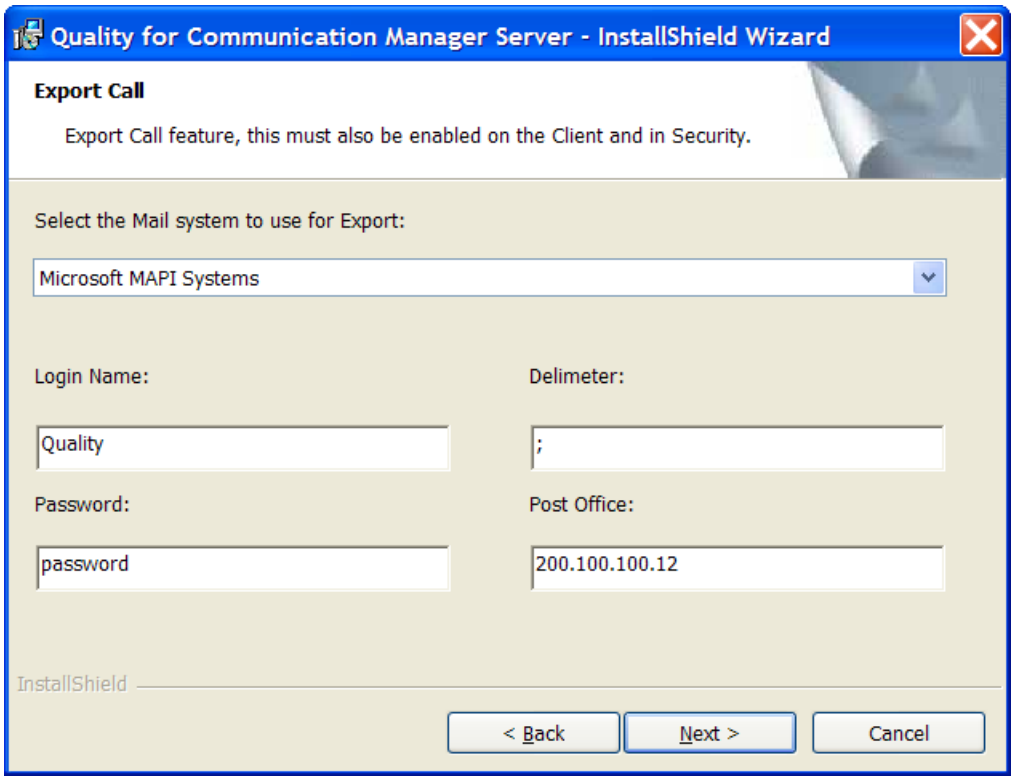
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Step	Description
5.	The **Customer Information** screen appears. Enter the **User Name** and **Organization**. Select whether to Install this application for **Anyone who uses this computer (all users)** or **Only for me (User Name)**.  Click "**Next**" to continue.
6.	The **Destination Folder** screen appears. Click "**Next**" to continue.
7.	The **Journal Storage** screen appears. Use the drop-down list to select the drive on which the recorded calls will be stored. Click "**Next**" to continue.

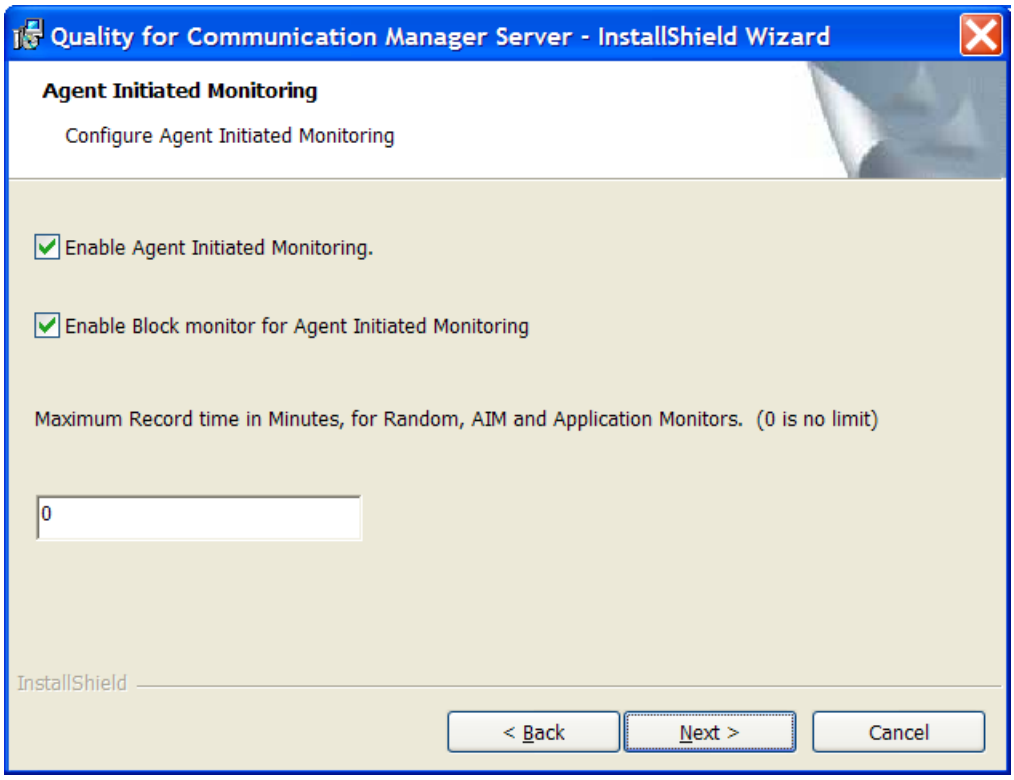
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Step	Description
8.	The **DataSource** screen appears. Enter the SQL Server Instance name where the Quality database resides. The Microsoft SQL 2000 server was installed on the same server as Witness Quality.  Click "**Next**" to continue.
9.	The **Playback and Record Settings** screen appears. Set the **Fast Forward** and **2X Forward** intervals, in seconds, to use when replaying calls with the Quality for Communication Manager Client software. Set the **Data Poll Rate** to capture data from the agent desktops. The default poll rate is 1000 milliseconds. Specify whether to save **Scheduled Recording** as one block or as discrete calls (requires CTI events). The default settings were used in these Application Notes. Click "**Next**" to continue.
10.	The **System Maintenance** screen appears. Use this screen to set the purge criteria for journal files and the removal of events from the server log files. The default settings were used. Click "**Next**" to continue.

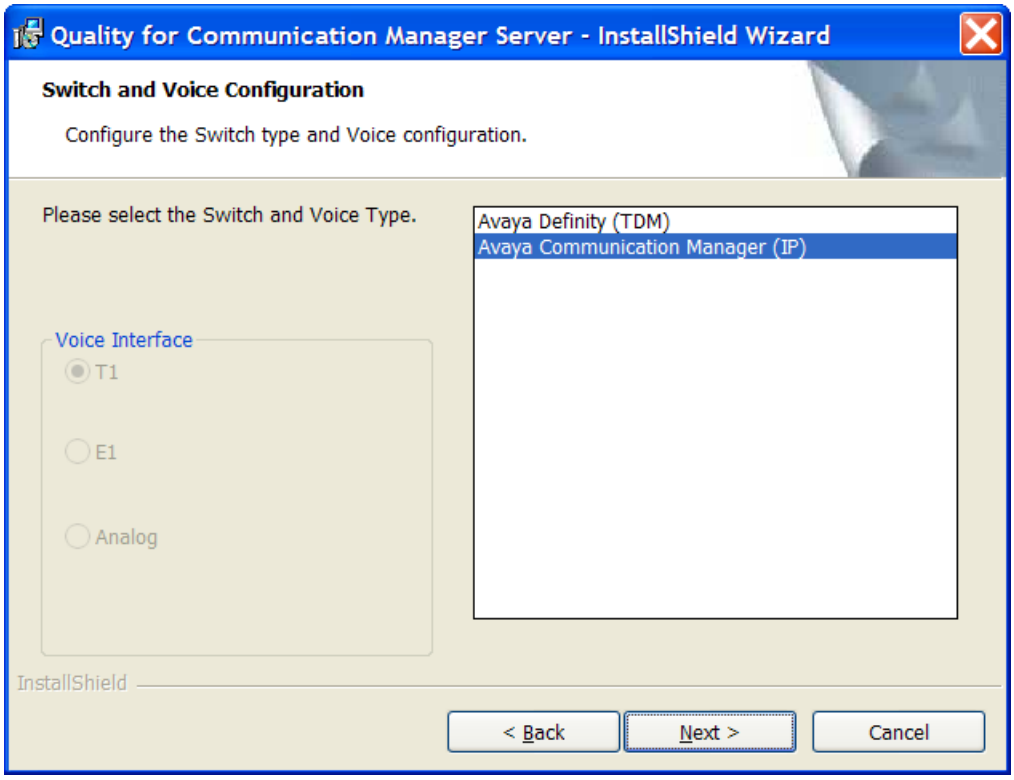
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Step	Description
11.	The **Export Call** screen appears. Witness Quality can be configured to send recorded voice calls to others. To use this feature, an account can be set up on the mail server for the Quality server to use. Contact the LAN administrator to complete the procedure. Use the drop-down list to specify the type of mail service the network uses. Microsoft MAPI (Microsoft Exchange mail systems) was used. For **Login Name**, enter the name on the account that is set up on the mail server for the Quality Server to use. Enter the password in the Password field and leave the ";" (semi-colon) to separate recipients. The **Post Office** refers to Microsoft Exchange server IP address or Fully Qualified Domain Name (FQDN).  Click "**Next**" to continue.

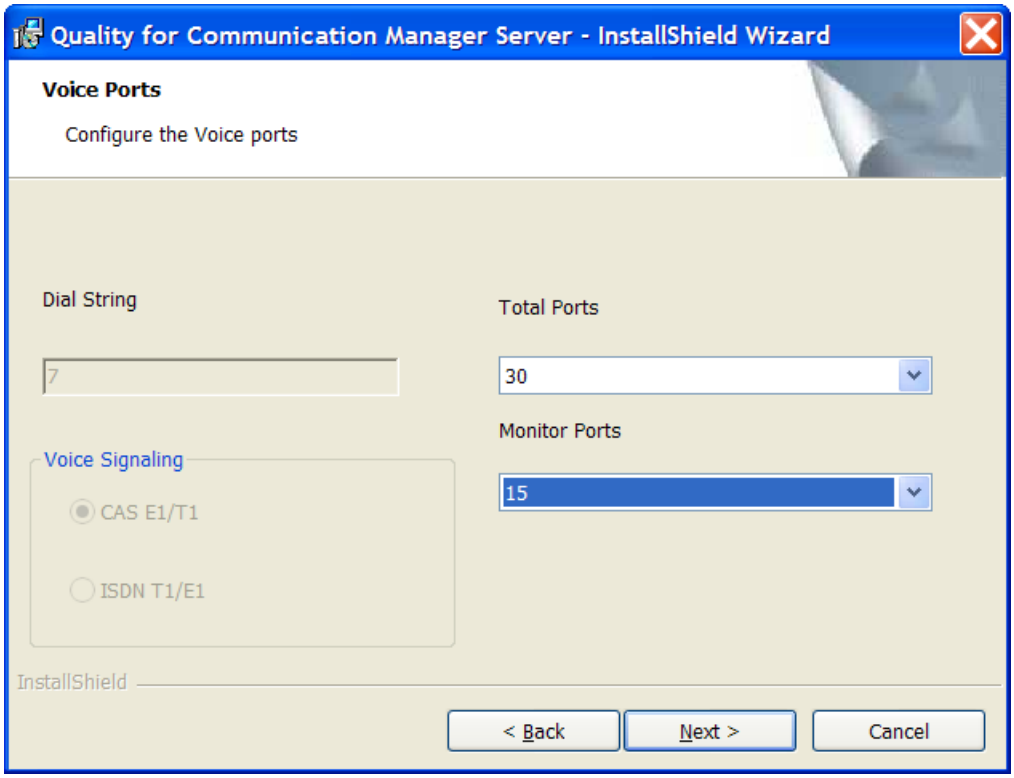
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Step	Description
12.	The **Agent Initiated Monitoring** screen appears. Use the parameters on this screen to allow customer service agents or third party applications to start and stop monitoring sessions or block calls from being monitored. The maximum record time can also be configured, with the exception of Live Monitor calls. The default setting for maximum record time is **0**, which allows unlimited recording time.  Click "**Next**" to continue.

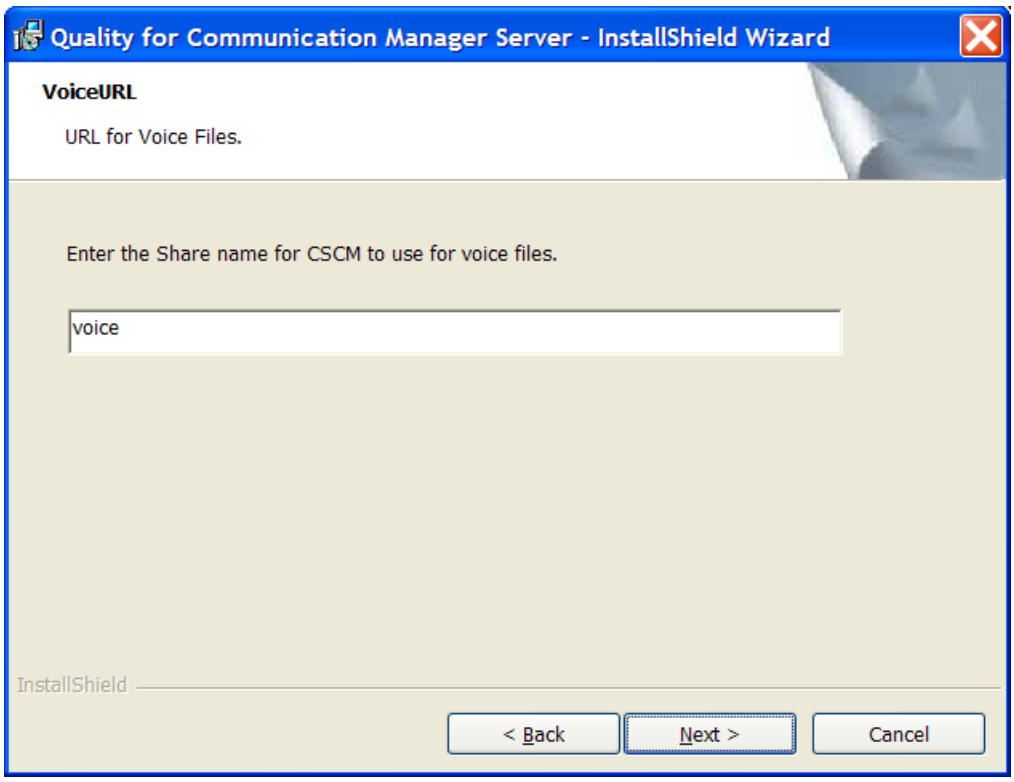
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Step	Description
13.	The **Switch and Voice Configuration** screen appears. Select **Avaya Communication Manager (IP)** as the switch and voice type.  Click "**Next**" to continue.

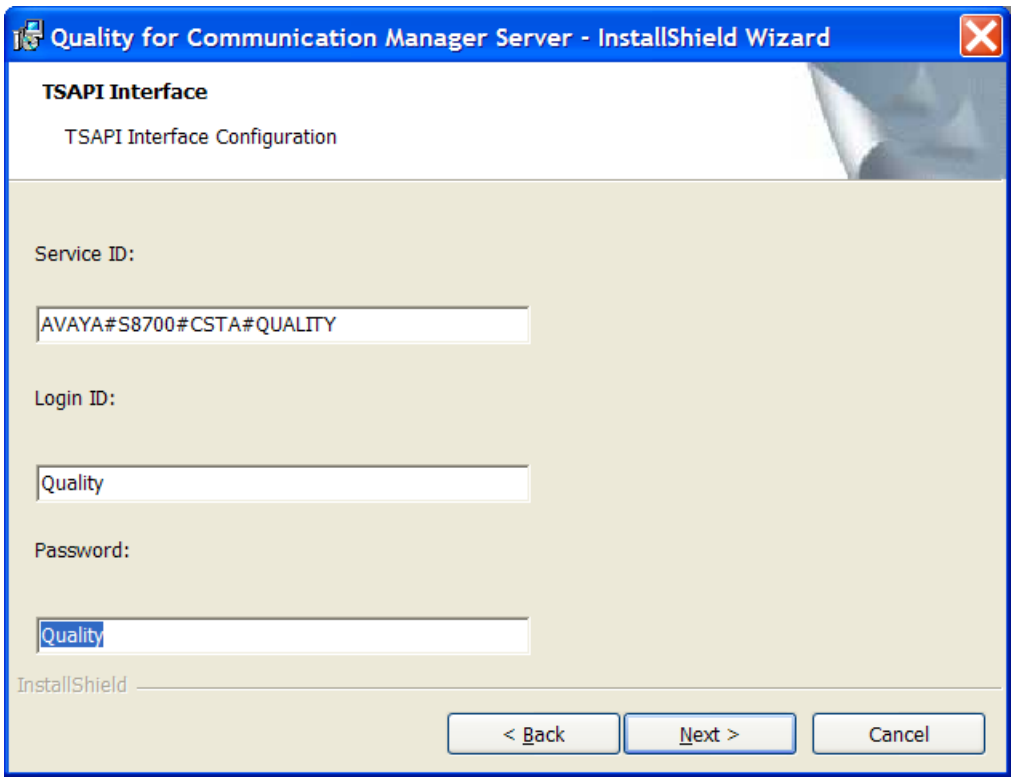
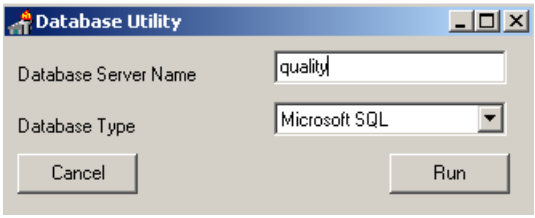
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Step	Description
14.	The **Voice Ports** screen appears. Use the drop-down list for **Total Ports** to specify the number of active ports on the system. This is typically the total number of Quality ports licensed on the Witness ContactStore Server. Use the drop-down list for **Monitor Ports** to specify the number of active ports to use for monitoring. The remainder of the active ports will be used for playback.  Click "**Next**" to continue.

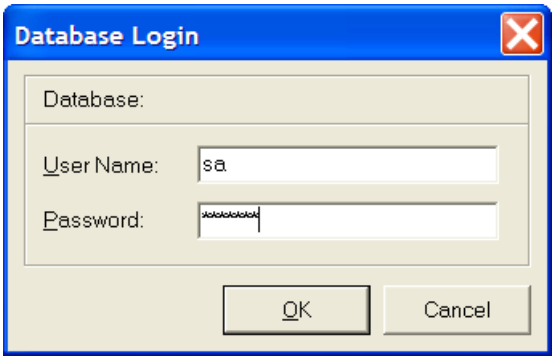
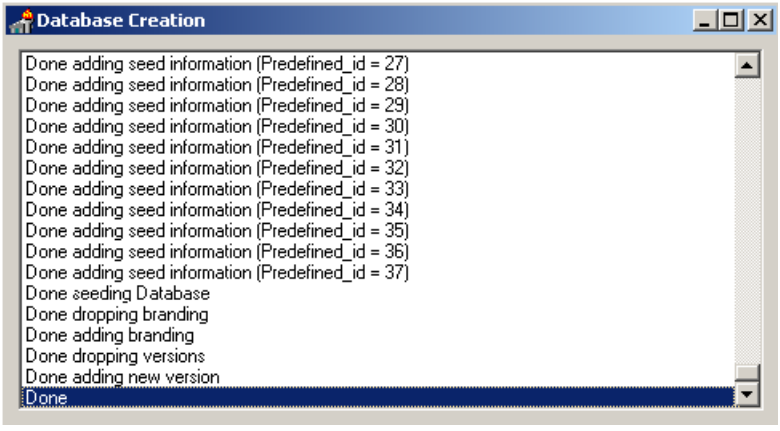
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Step	Description
15.	The **Voice URL** screen appears. Enter the name of the file share that Witness ContactStore will use to store the recorded files.  Click "**Next**" to continue.
16.	The **Custom Setup** screen appears. TSAPI is the default interface. Click "**Next**" to continue.

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Step	Description
17.	The **TSAPI Interface Configuration** screen appears. Use this screen to enter the Avaya Computer Telephony Server **Service ID**, **Logon ID**, and the **Password** configured in Section 4.  Click "**Next**" to continue.
18.	The **Ready to Install the Program** screen appears. Click "**Install**" to proceed with the installation.
19.	Once the **Quality for Communication Manager** is installed, the **InstallShield Wizard Completed** screen appears. Click "**Finish**" to exit the installation program.
20.	Open Windows Explorer and navigate to "**C:\Program Files\Witness Systems\Quality for Communication Manager Server**". Double-click on the "**dbutil32.exe**" file to start the **Database Utility** application. Enter the **Database Server Name** and click "**Run**". 

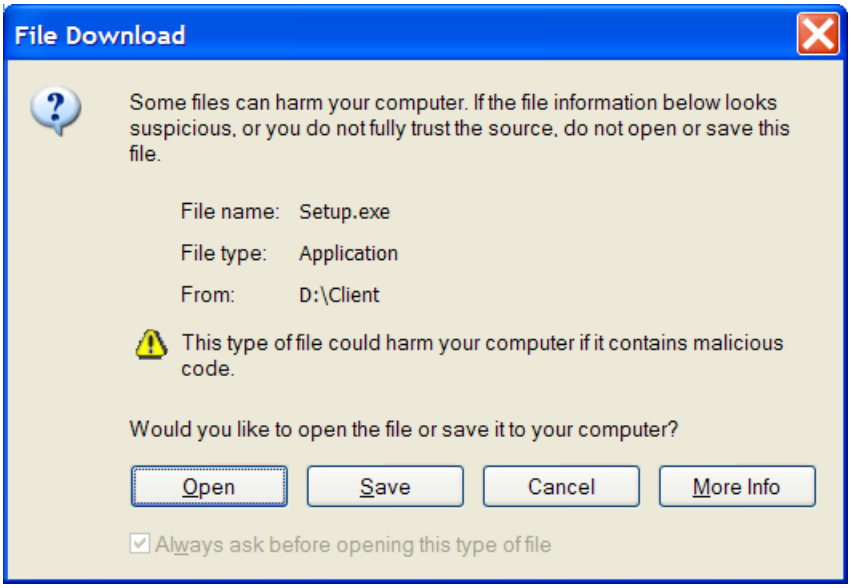
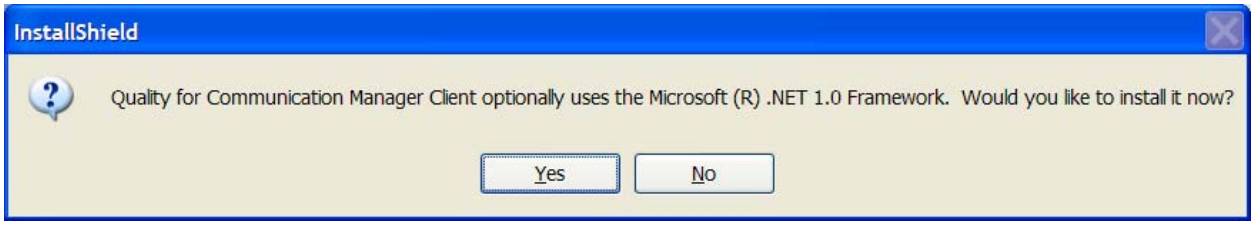
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Step	Description
21.	The **Database Login** pop up window appears. Enter the database administrator **User Name** and **Password**.  Click "**OK**" to continue.
22.	The **Database Parameters** pop up window appears. Enter the **Database Path**, select the **Language**, and check the **Avaya Database** checkbox.  Click "**Go**" to create the Witness Quality SQL database
23.	The following **Database Creation** status window appears. Click ☒ when the status window indicates the database creation is complete. 

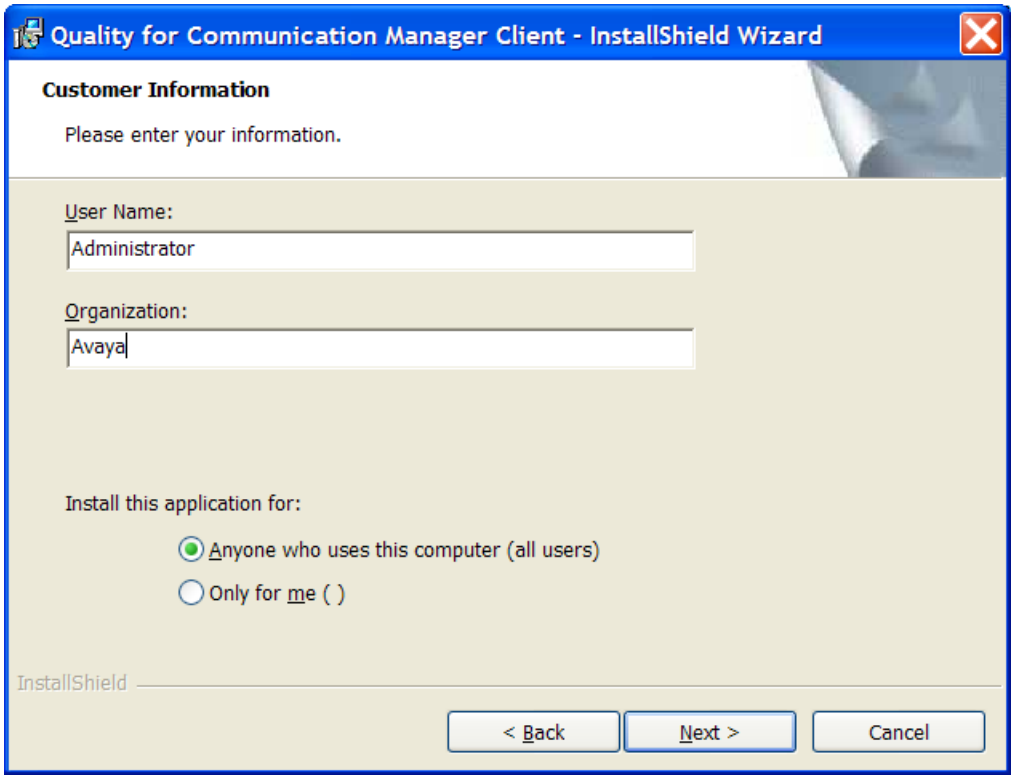
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6.4. Witness Quality Client Installation

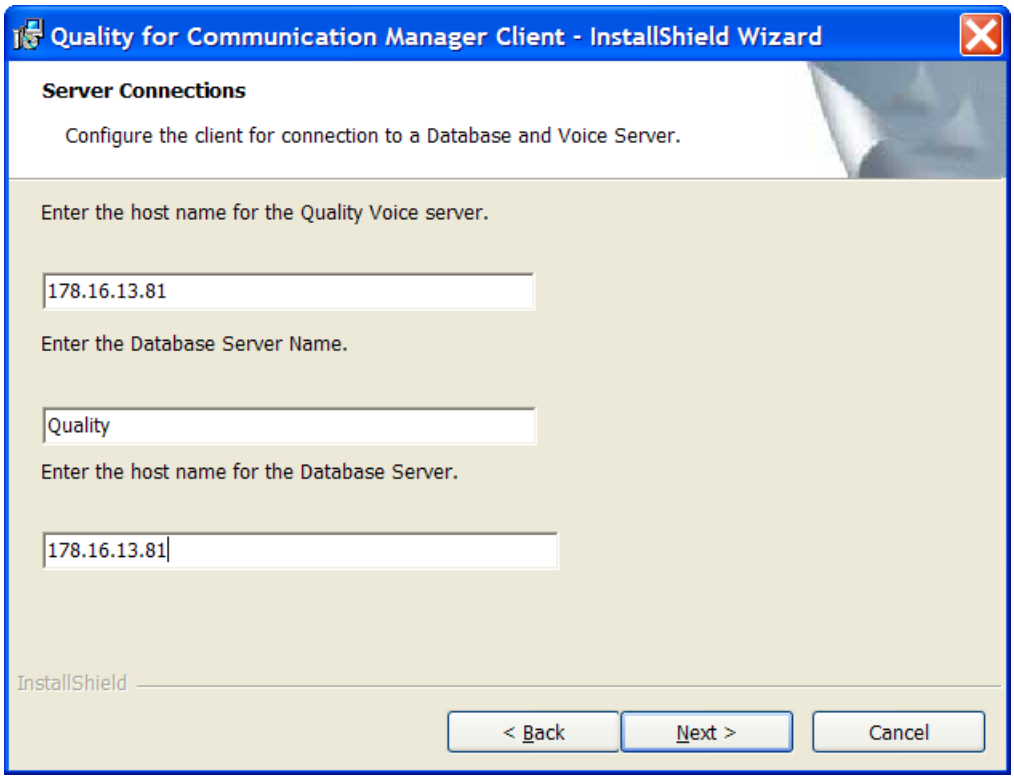
The following configuration describes the steps needed to install the client software component on the Witness Quality server.

Step	Description
1.	Place the Quality for Communication Manager CD into the CD-ROM drive on the Witness Quality server. The Welcome page appears.
2.	Under **Install Quality for Communication Manager**, select **Quality for Communication Manager Client Component**. The following **File Download** dialog box appears.  Click "**Open**" to continue.
3.	If the .NET framework is not installed on the client machine, then a dialog box prompting to install the Microsoft .NET 1.0 Framework appears. Click "**Yes**" and follow the instructions to install the .NET 1.0 Framework. 

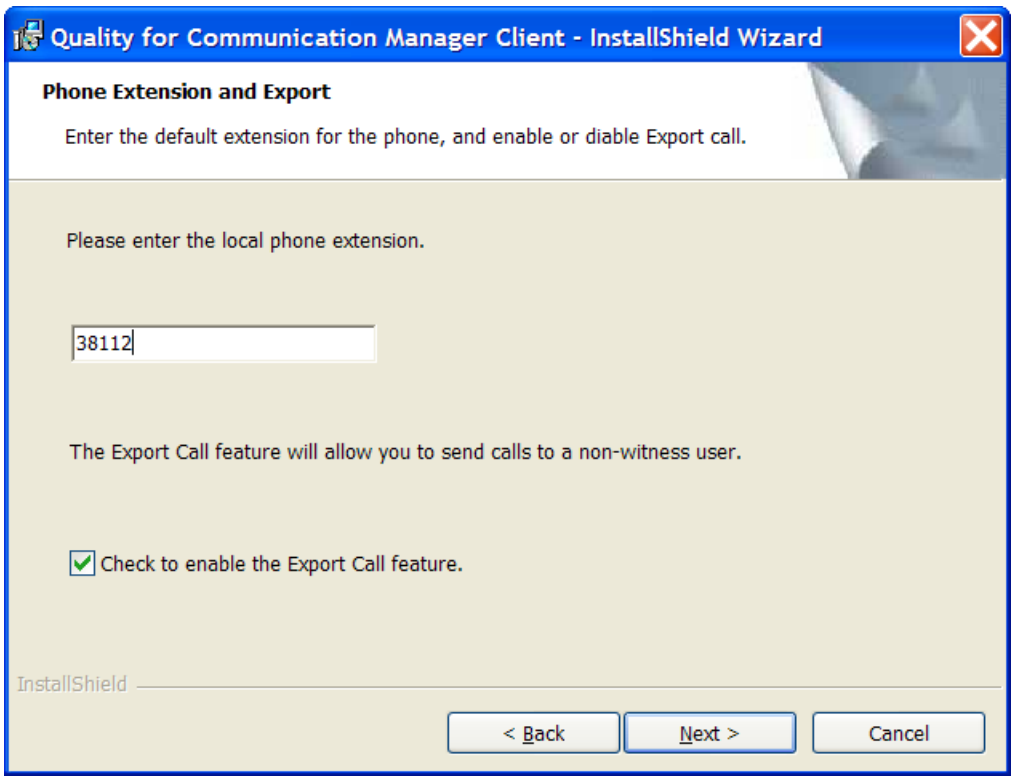
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Step	Description
4.	Next, the **Welcome to the InstallShield Wizard for Quality for Communication Manager Client** screen appears. Click "**Next**" to continue.
5.	The **Customer Information** screen appears. Enter the **User Name** and **Organization**. Select whether to Install this application for: **Anyone who uses this computer (all users)** or **Only for me (User Name)**.  Click "**Next**" to continue.

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Step	Description
6.	The **Server Connections** screen appears. Enter the host name or IP address of the Quality for Communication Manager Server in the **Enter the host name for the Quality Voice server** field. Enter the instance name of the SQL Server in the **Enter the Database Server Name** field. Enter the host name or IP address of the server hosting the SQL Server database in the **Enter the host name for the Database Server** field.  Click "**Next**" to continue.

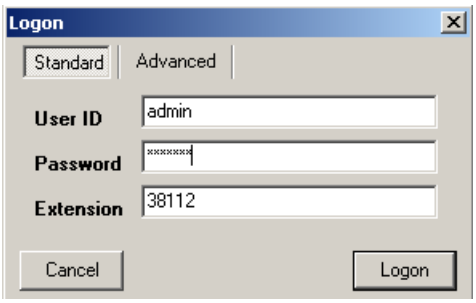
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Step	Description
7.	The **Phone Extension and Export** screen appears. Enter the phone extension of a phone used to replay calls or for live monitoring. Select the **Check to enable the Export Call Feature** check box to enable this feature. Selecting this check box allows administrators to configure the Client to be able to email voice calls to other people.  Click "**Next**" to continue.
8.	The **Setup Type** screen appears. Select **Custom** to select all the client features and click "**Next**" to continue.
9.	The **Custom Setup** screen appears. Click "**Next**" to continue.
10.	The **Ready to Install the Program** screen appears. Click "**Install**" to proceed with the installation.
11.	Once the **Quality for Communication Manager Client** is installed, the **InstallShield Wizard Complete** screen appears. Click "**Finish**" to exit the installation program.

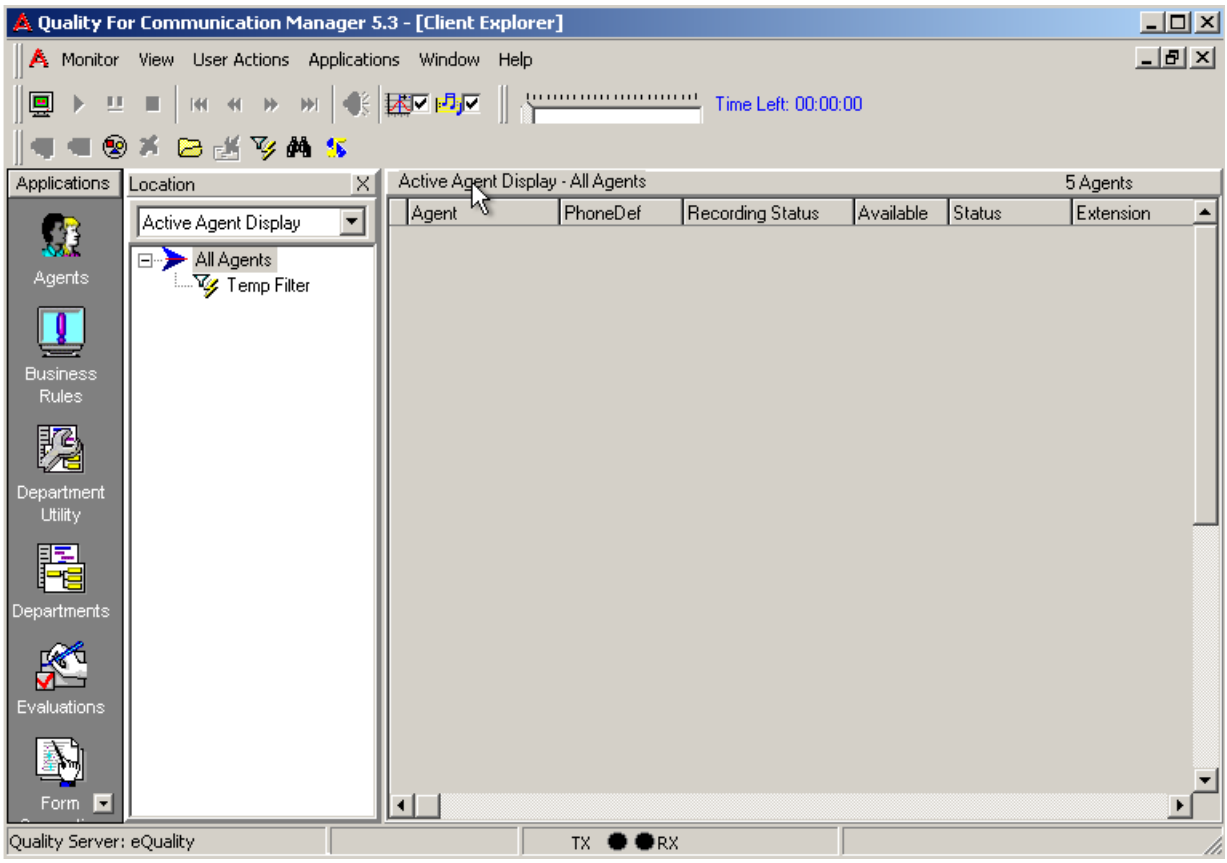
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6.5. Witness Quality Server Configuration

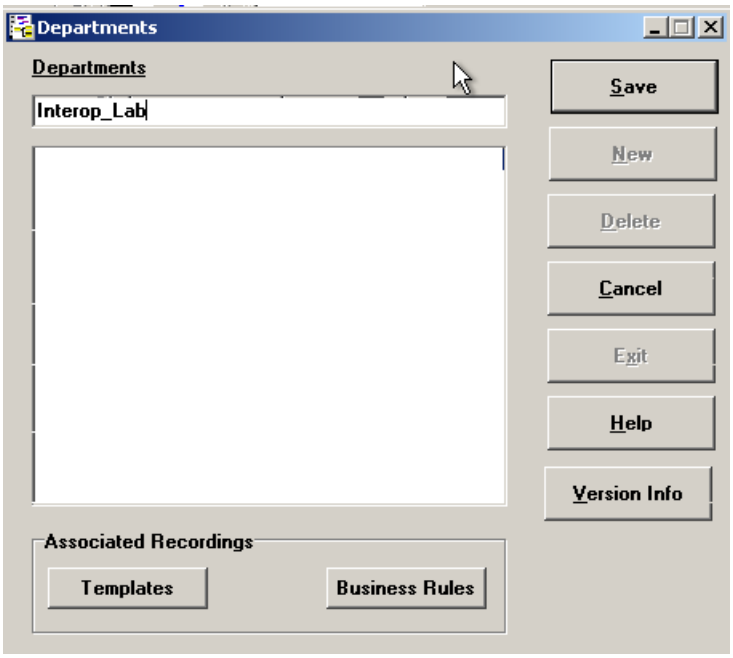
The following configuration describes the steps needed to configure the Witness Quality server using the Witness Quality client application. The configuration shown here addresses only some simple features used to verify call and desktop recording capabilities. Please consult the Witness Quality Administration Guide [3] for more information on more advanced Witness Quality server components and applications.

Step	Description
1.	On the Witness Quality server, select **Start→Programs→Quality for Communication Manager→Client**. The following **Logon** screen appears. Enter the admin password and click "Logon" to logon to the client application. The phone number displayed in the **Extension** field is that phone number provided during the agent installation in Section 6.4. This number is used to replay monitoring sessions. 

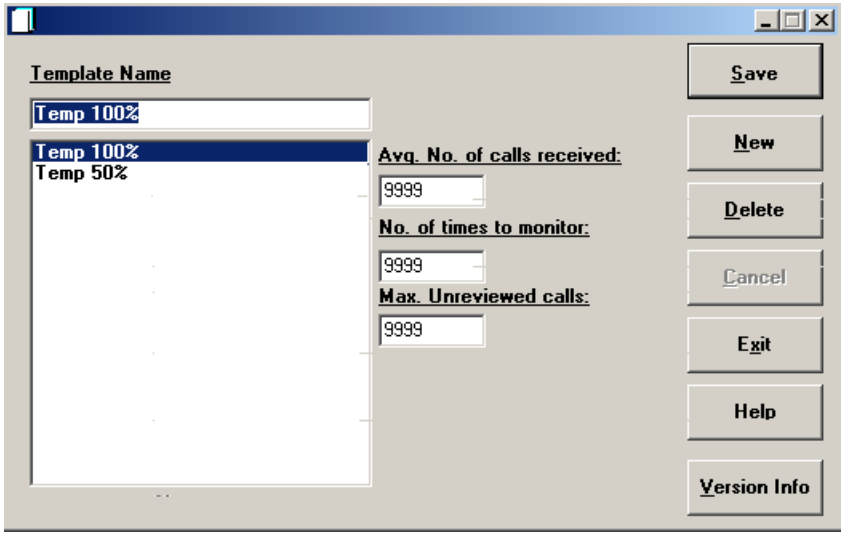
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Step	Description
2.	The **Quality for Communication Manager 5.3 – [Client Explorer]** window appears. 
3.	To be able to access all the Witness applications from the Client Explorer Toolbar, select **View → Applications Toolbar Properties** and check all the boxes for the applications.

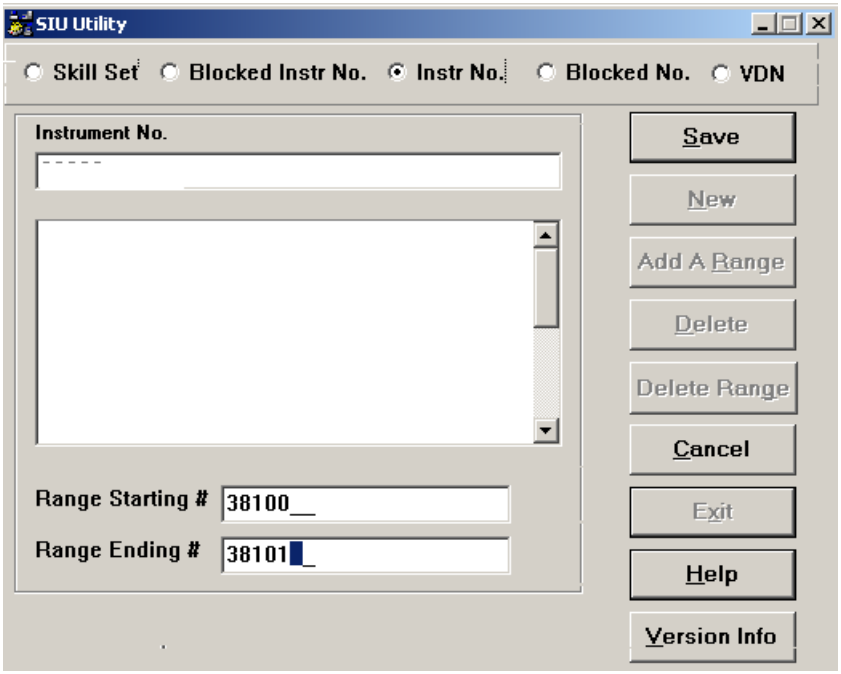
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Step	Description
4.	Create a **Departments** database. The **Departments** database contains all departments and call buckets. Select the **Departments** database icon on the Applications Toolbar. The **Departments** window appears. Click "**New**" and fill out the information as shown below. Click "**Save**".  Click "**Exit**" to return to the main client explorer window.

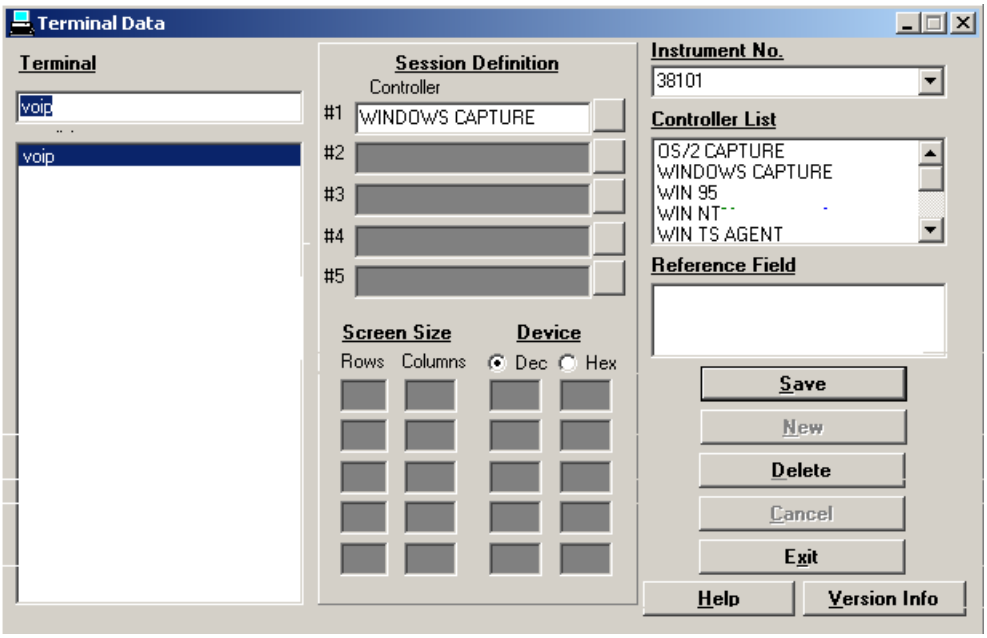
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Step	Description
5.	Create the **Template** database. This database applies only if Witness Quality supports random monitoring. To create a template, select the **Template** database icon on the Applications Toolbar. The **Template** window appears. Click "**New**" and fill out the information as shown below. Click "**Save**".  Click "**Exit**" to return to the main client explorer window.

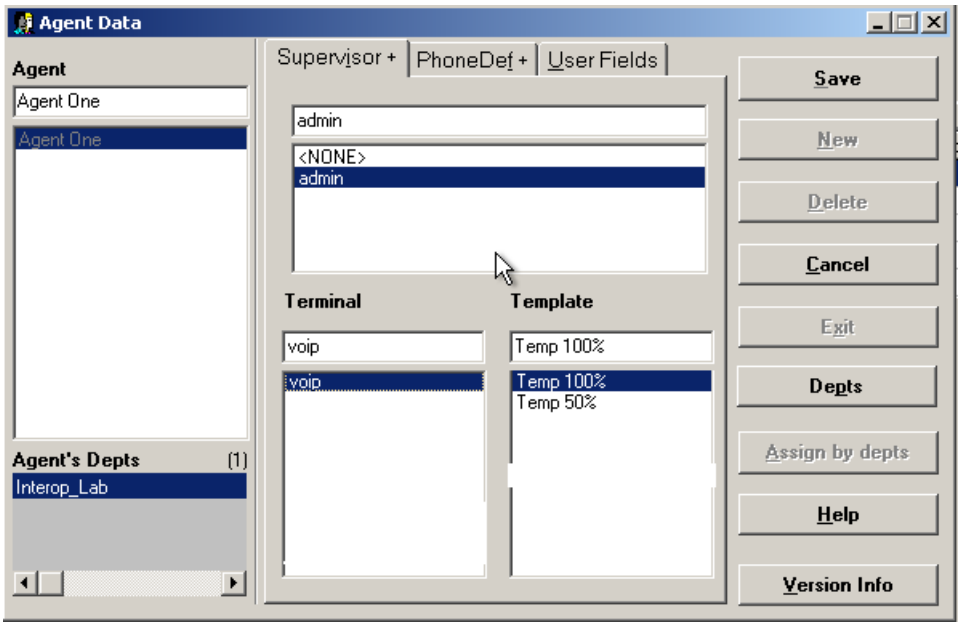
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Step	Description
6.	Create the **Switch Interface Unit (SIU)** database. This database provides Communication Manager with the ACD configuration information. To create an SIU, select the **SIU** utility icon on the Applications Toolbar. The **SIU Utility** window appears. Select "**Instr No.**" to configure the telephone extensions used by the agents. Click "**New**" and fill out the information as shown below. Extensions 38100 and 38101 were used. Click "**Save**" when done. Please consult the Witness Quality Administration Guide [3] for more information on how to configure other SIU objects.  Click "**Exit**" to return to the main client explorer window.

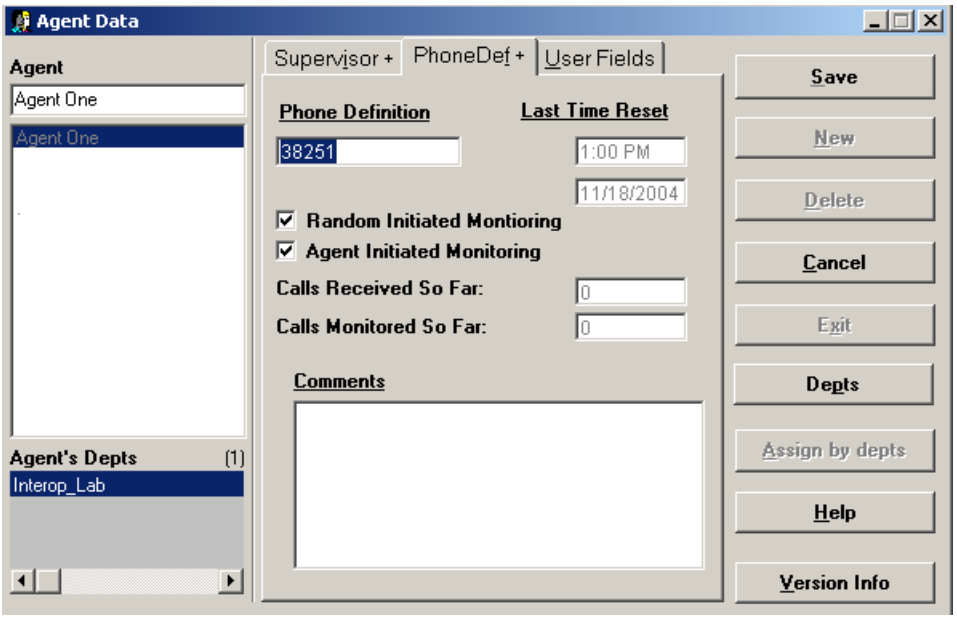
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Step	Description
7.	Configure the terminal data for the agent's PC. To monitor agent desktops, Witness Quality needs to have information about which terminal (PC) the agent is using. To configure an agent's Terminal Data, select the **Terminal** icon on the Applications Toolbar. The **Terminal Data** window appears. Click "**New**" and fill out the information as shown below. Make sure the name entered in the **Terminal** field can be resolved to an IP address by DNS or by the PCs hosts file. Repeat this step for additional agents and make sure to select the appropriate **Controller** and **Instrument No.** defined in Step 6. Click "**Save**" when done.  Click "**Exit**" to return to the main client explorer window.

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Step	Description
8.	Create the **Agents** database. The **Agents** database includes information about all the agents that can be monitored. To create an agent database, select the **Agents** database icon on the Applications Toolbar. The **Agent Data** window appears. Click "**New**" and fill out the information on the **Supervisor +** tab as shown below. 

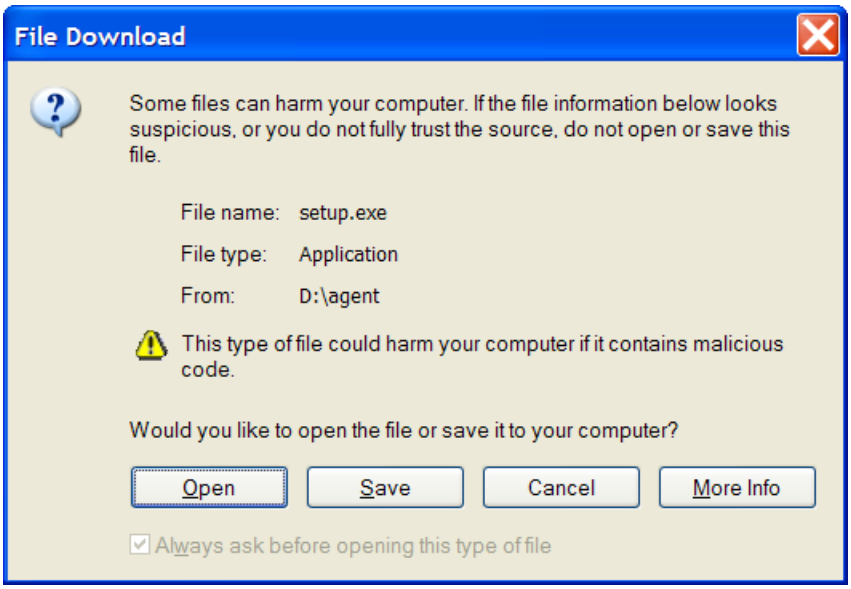
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Step	Description
9.	Select the **PhoneDef +** tab on the **Agent Data** window, enter the agent ID in the **Phone Definition** field and fill out the rest of the information as shown below. The Communication Manager Agent ID configuration is not shown in these Application Notes. Please consult the Avaya Communication Manager ACD documentation [4] for more information on how to configure Agent IDs. Click "**Save**" when done.  Click "**Exit**" to return to the main client explorer window.
10.	Repeat Steps 8-9 to add additional agents.

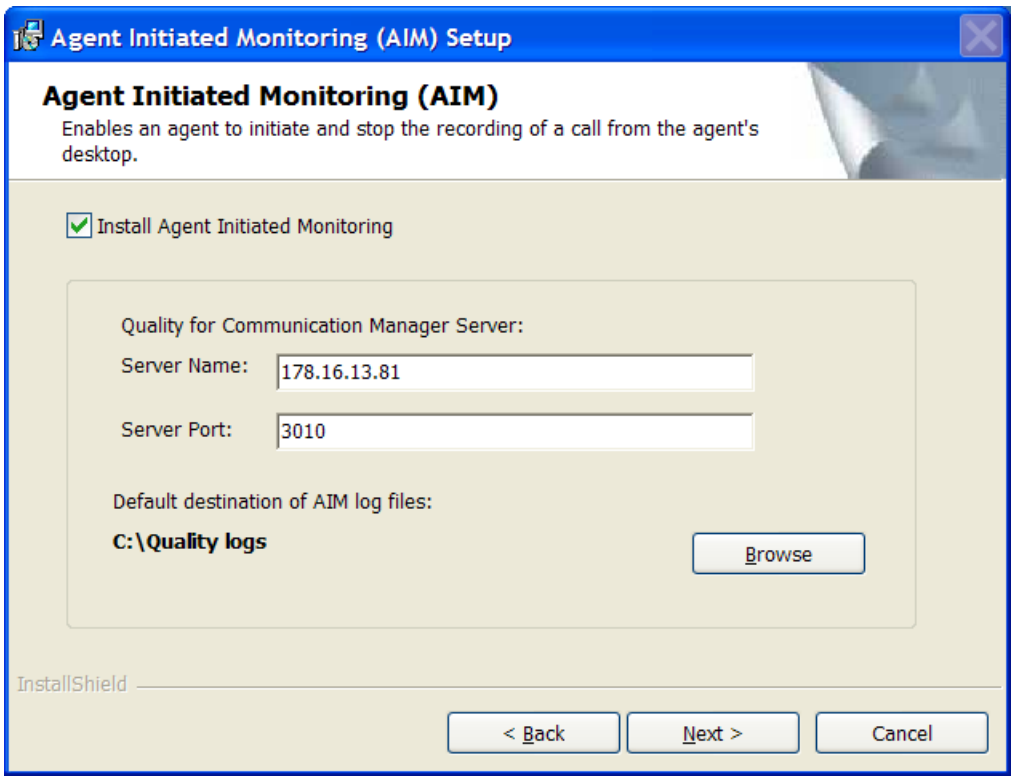
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6.6. Witness Quality Agent Installation

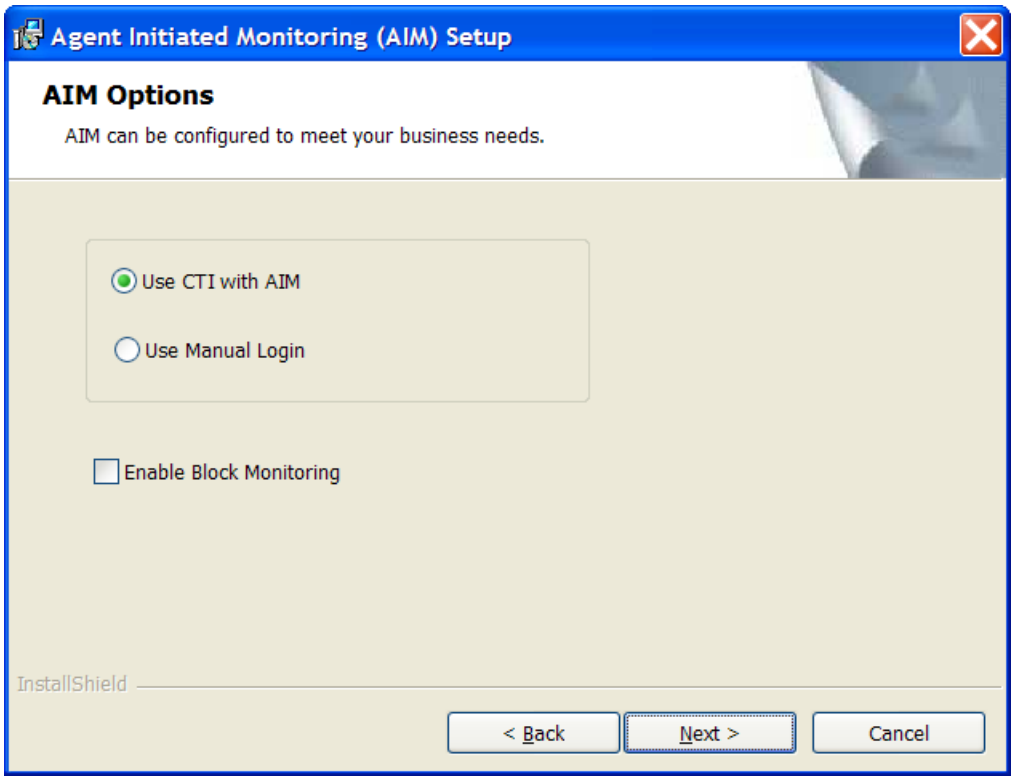
The following configuration describes the steps needed to install the agent software component on the agent desktop PCs.

Step	Description
1.	Place the Quality for Communication Manager CD into the CD-ROM drive on the Witness Quality server. The Welcome page appears.
2.	Under **Install Quality for Communication Manager**, select **Quality for Communication Manager Agent Component**. The following **File Download** dialog box appears.  Click "**Open**" to continue.
3.	The **Welcome to the InstallShield Wizard for Quality for Communication Manager Agent** screen appears. Click "**Next**" to continue.
4.	The **Destination Folder** screen appears. Click "**Next**" to continue.

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Step	Description
5.	The **Agent Initiated Monitoring (AIM)** screen appears. Select **Install Agent Initiated Monitoring** to allow an agent to record a call. Enter the Witness Quality server name or IP Address in the **Server Name** field. The **Server Port** and **Default destination of AIM log files** fields are automatically populated.  Click "**Next**" to continue.

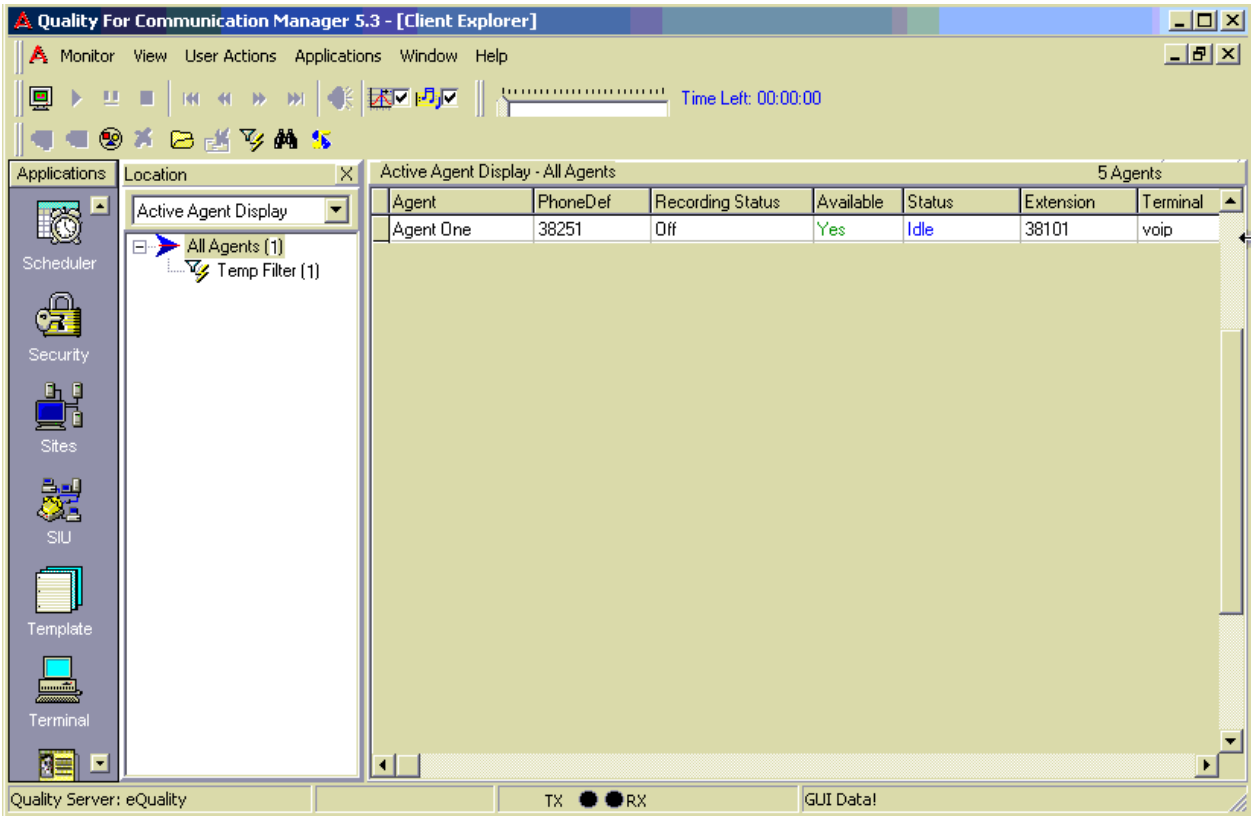
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Step	Description
6.	The **AIM Options** screen appears. Leave the default setting (Use CTI with AIM).  Click "**Next**" to continue.
7.	The **AIM Annotation Setup** screen appears. Use this screen to select enable annotation for agent initiated monitors. If enabled, the annotation fields must be configured. This feature was disabled in these Application Notes. Click "**Next**" to continue.
8.	The **Ready to Install the Program** screen appears. Click "**Install**" to proceed with the installation.
9.	Once the **Quality for Communication Manager Agent** is installed, the **InstallShield Wizard Complete** screen appears. Click "**Finish**" to exit the installation program.

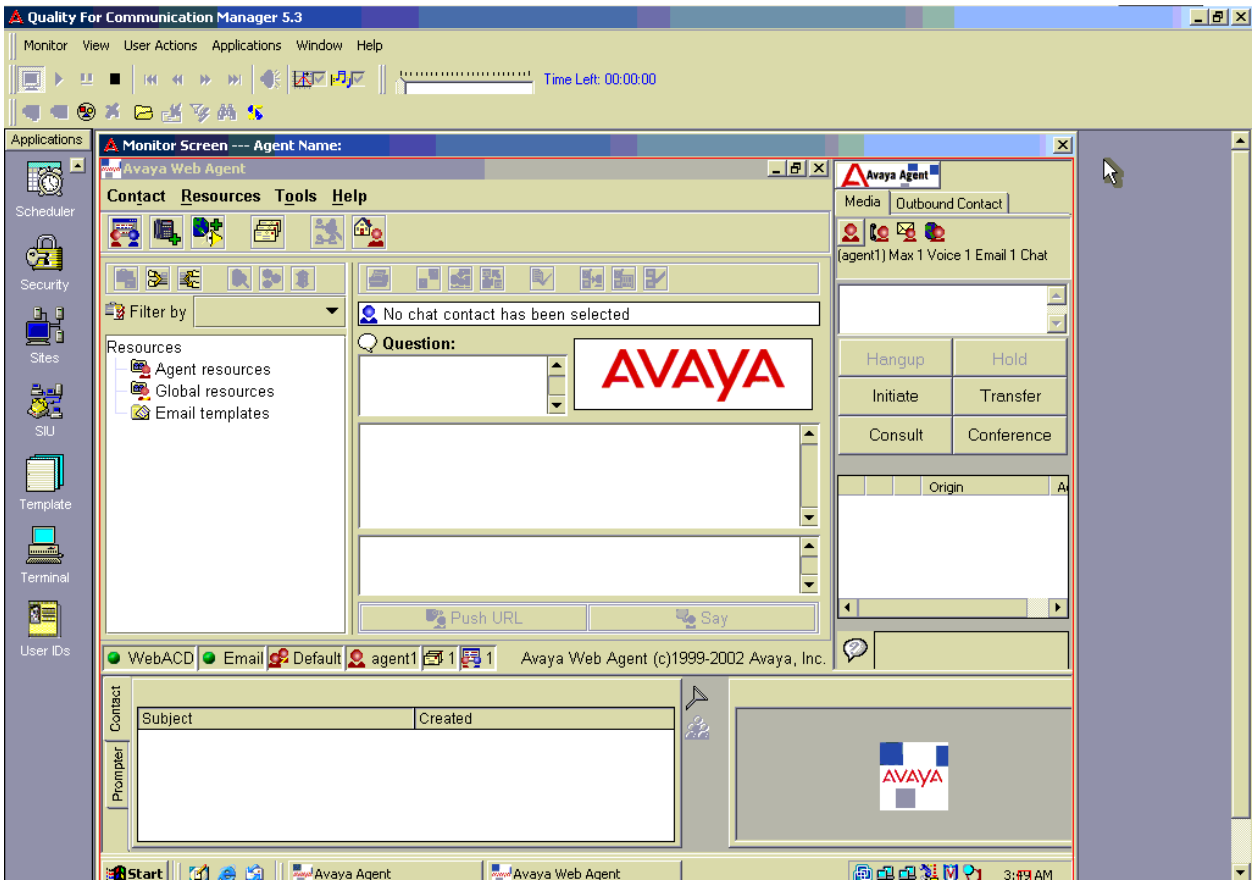
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7. Verification Steps

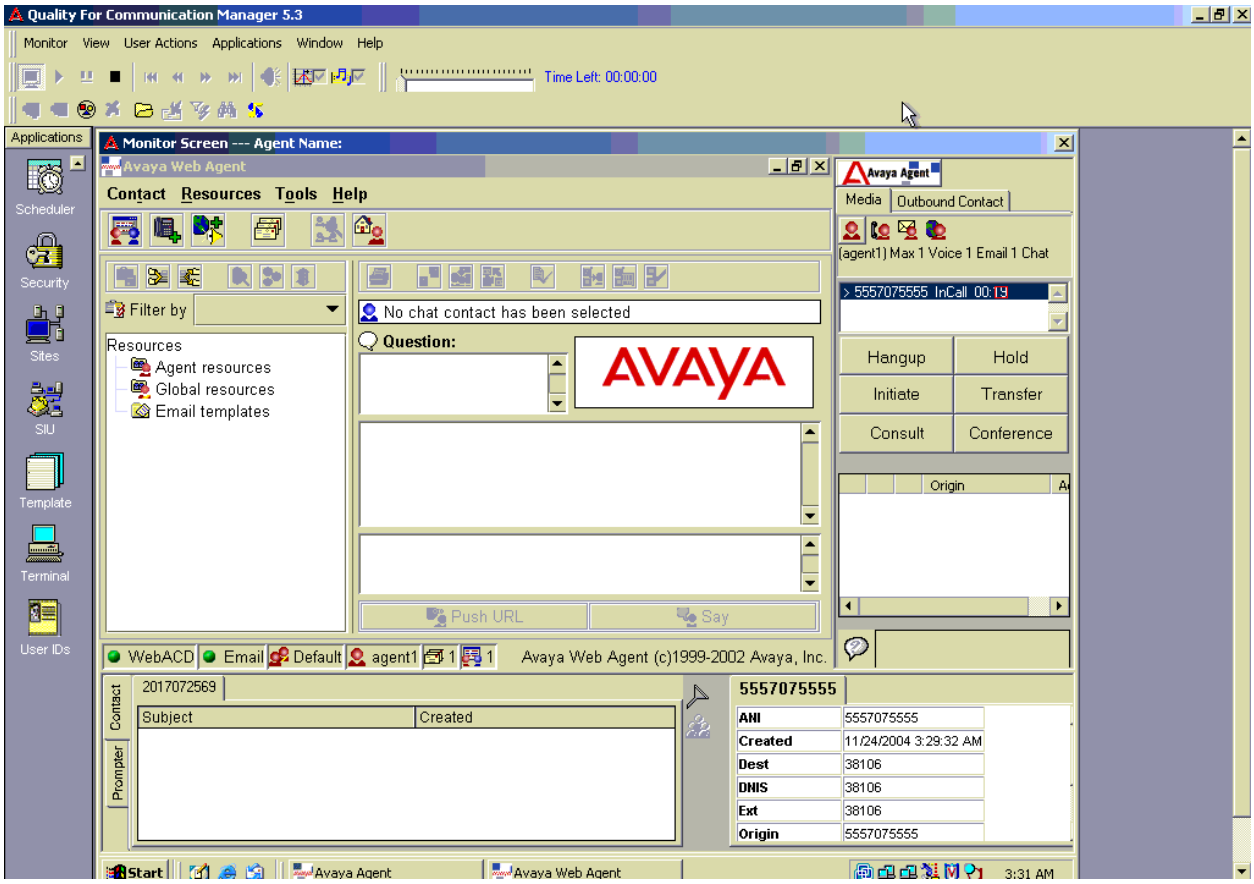
The following tests can be performed in the field to verify that the Witness Quality call and desktop recording configuration is working correctly.

Step	Description
1.	On the Witness Quality server, select **Start→Programs→Quality for Communication Manager→Client** to open the Client Explorer application. The following **Quality for Communication Manager 5.3 – [Client Explorer]** window appears. 

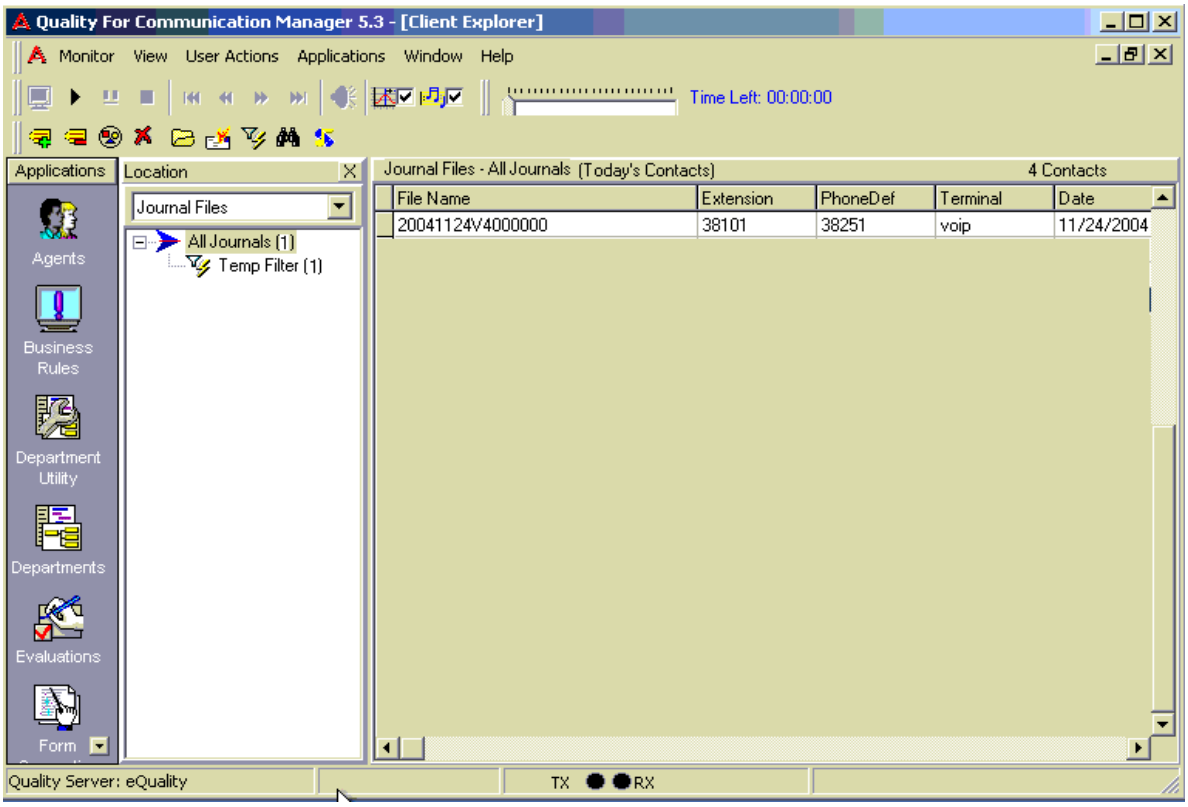
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Step	Description
2.	Highlight the configured agent and select **Monitor → Live Monitor** to start the desktop and call recording and live monitoring. Verify the Client Explorer window displays the selected Avaya Interaction Center agents desktop in real-time. 

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Step	Description
3.	Place a call from a customer phone directly to one of the Interaction Center agents' extensions being recorded by the Witness Quality server. Answer the customer's call and verify the client explorer screen is updated in real-time and reflects the incoming customer call. 

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Step	Description
4.	Stop the Recording and Live Monitor session by clicking on **Monitor → Stop**. Select **Journal Files** from the client explorer **Location** toolbar and verify there is an entry for the previously recorded session. 
5.	Select **Monitor → Play** from the Client Explorer window and verify the recorded session can be played successfully.

8. Conclusion

These Application Notes provide administrators with the basic steps necessary to configure a sample Witness Quality call and desktop recording configuration. The steps provided should be helpful for implementing most deployments, but they do not address all possible configuration scenarios.

9. Additional References

[1] "*Avaya Interaction Center Release 6.1 Installation and Configuration*", Document ID: 585-248-102
[2] "*Administration for Network Connectivity for Avaya Communication Manager*", Document ID: 555-233-504
[3] "*Avaya Quality for Communication Manager Administration Guide - Version 5.3*", Issue 2
[4] "*Automatic Call Distribution Guide*", Document ID: 07-300185

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