



Avaya Solution & Interoperability Test Lab

Application Notes for Viable Resources Customer Experience Reporting with Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Customer Experience Reporting to interoperate with Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services. Customer Experience Reporting is a web-based contact center management solution. Customer Experience Reporting uses real-time data from Communication Manager to monitor and produce reports on phone activity for agents and ACD/skill groups.

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

1. Introduction

Viable Resources' Customer Experience Reporting is a web-based contact center management solution. Customer Experience Reporting uses real-time data from Avaya AuraTM Communication Manager to monitor and produce reports on phone activity for agents and ACD/skill groups. It enables supervisors to monitor activities as they happen in a contact center and provide historical, statistical, and graphic reports on specific activities over time.

The interoperability of Customer Experience Reporting Version 1.1 with Avaya AuraTM Communication Manager is accomplished through Avaya AuraTM Application Enablement Services. These Application Notes describe the compliance test configuration used to test Customer Experience Reporting Version 1.1, with Communication Manager running on an Avaya S8300 Server and an Avaya G350 Media Gateway.

1.1. Interoperability Compliance Testing

The Compliance testing focused on the following areas:

- **Installation & Configuration**
- **Customer Experience Reporting/Avaya Feature Functionality Verification**
- **Failover and Serviceability Tests**

The installation and configuration testing focused on the setup of all components and the ability to interoperate. It also covered the ability to remove the application from the Customer Experience Reporting server.

The functionality testing focused on verifying Customer Experience Reporting ability to receive and parse real-time data from Communication Manager, and the use of the data in various reports as well as the production of historical reports.

The serviceability testing focused on verifying the ability of Customer Experience Reporting to recover from and report on adverse conditions.

1.2. Support

Technical support on Customer Experience Reporting can be obtained through the following:

- **Phone:** (513) 518-2775
- **Email:** inquiries@ccscallcenters.com

2. Reference Configuration

The interoperability of Customer Experience Reporting Version 1.1 with Communication Manager is accomplished through Application Enablement Services. The compliance test configuration used to test Customer Experience Reporting Version 1.1 includes the Avaya S8300 Server, the Avaya G350 Media Gateway, Application Enablement Services, Windows 2003 Server for Customer Experience Reporting, PCs for the clients, and telephones. **Figure 1** provides a high level topology.

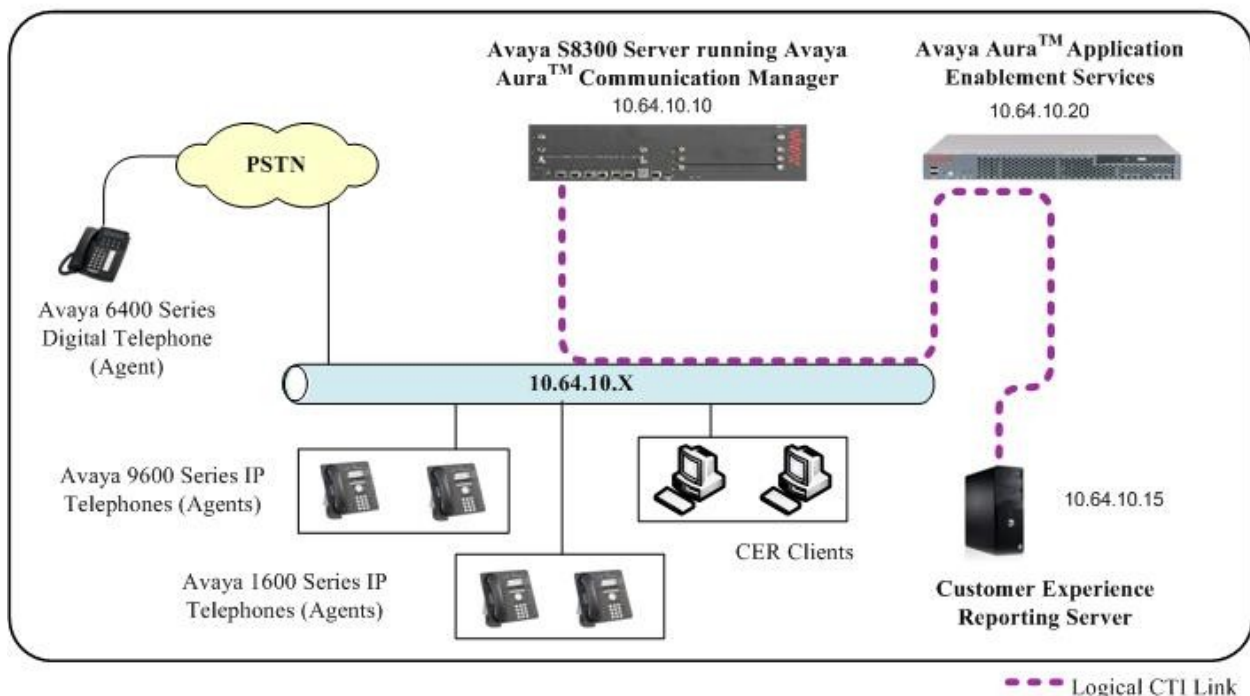


Figure 1: Customer Experience Reporting Compliance Test Sample Configuration

3. Equipment and Software Validated

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

Hardware/Software Component	Version/Description
Avaya S8300 Server and G350 Media Gateway	Avaya Aura™ Communication Manager 5.2 (R015x.02.0.947.3) with Service Pack 17534
Avaya Aura™ Application Enablement Services	Release 4.2.3
Avaya 9600 Series IP Telephones	9620, 9630, 9640 H.323 Avaya One-X Terminals R2.0
Avaya IP Agent, Avaya One-X Agent	R6, R1
Viable Solutions' Customer Experience Reporting running on Windows 2003 (32-bit) Server	Version 1.1 with Windows IIS Services 5.1, .NET Framework 3.5, and Internet Explorer 6.0

4. Configure Avaya Aura™ Communication Manager

All the configuration changes in this section for Communication Manager are performed through the System Access Terminal (SAT) interface. For more information on configuring Communication Manager, refer to the Avaya product documentation, Reference [1].

This section provides the procedures for configuring Communication Manager. The procedures fall into the following areas:

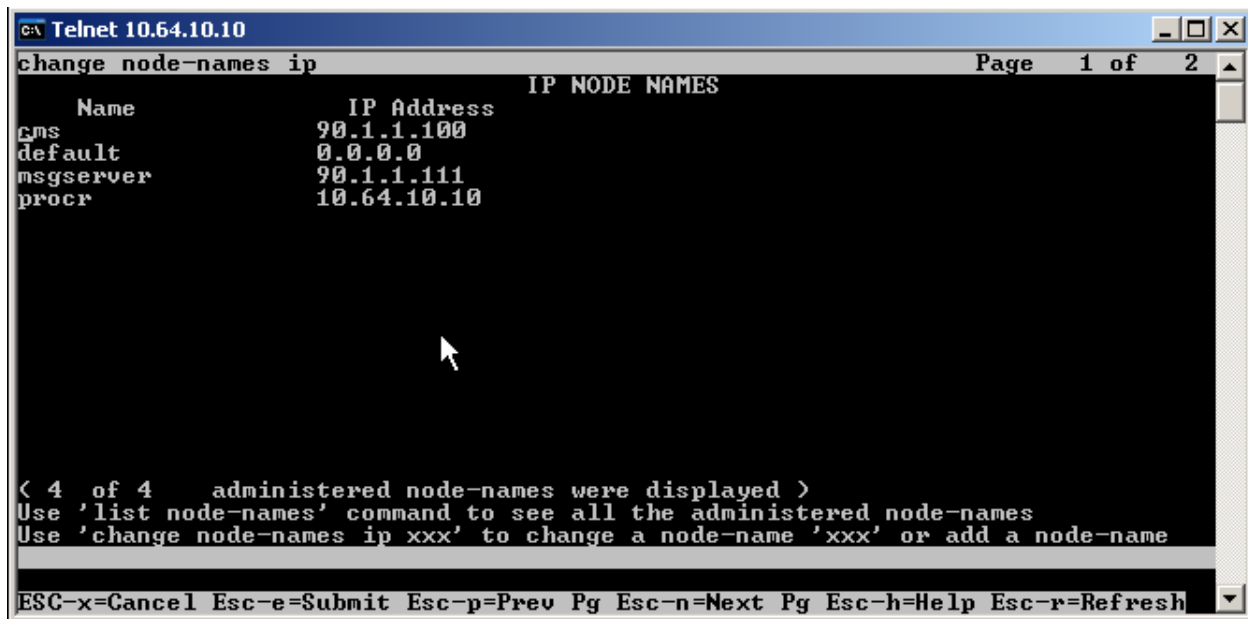
- Administer Processor Ethernet Interface for Application Enablement Services connectivity
- Administer CTI link with TSAPI service

The detailed administration of contact center entities, such as VDN, Vector, Skill, Logical Agents and Station Extensions are assumed to be in place and are not covered in these Application Notes.

4.1. Administer Processor Ethernet Interface for Application Enablement Services Connectivity

Verify the entry for the Processor Ethernet Interface in the node-names form.

- Enter the **change node-names ip** command. In this case, **procr** and **10.64.10.10** are already populated as **Name** and **IP Address** for the Processor Ethernet Interface that will be used for connectivity to the Application Enablement Services server. The actual IP address may vary. Submit these changes.



The screenshot shows a Telnet window titled 'Telnet 10.64.10.10'. The command 'change node-names ip' has been entered, and the output is displayed in a table format. The table has two columns: 'Name' and 'IP Address'. The rows are: 'cns' with IP '90.1.1.100', 'default' with IP '0.0.0.0', 'msgserver' with IP '90.1.1.111', and 'procr' with IP '10.64.10.10'. Below the table, a message states '< 4 of 4 administered node-names were displayed >'. It also provides instructions: 'Use 'list node-names' command to see all the administered node-names' and 'Use 'change node-names ip xxx' to change a node-name 'xxx' or add a node-name'. At the bottom, a status bar shows keyboard shortcuts: 'ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh'.

Name	IP Address
cns	90.1.1.100
default	0.0.0.0
msgserver	90.1.1.111
procr	10.64.10.10

< 4 of 4 administered node-names were displayed >
Use 'list node-names' command to see all the administered node-names
Use 'change node-names ip xxx' to change a node-name 'xxx' or add a node-name

ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh

On an S8300 server, the Processor Ethernet Interface should already be in the ip-interface list.

- Either the **display ip-interface procr** command or the **list ip-interface all** command will display the parameters of the Processor Ethernet Interface on the S8300.

```
Telnet 10.64.10.10
display ip-interface procr

IP INTERFACES

Type: PROCR                                Target socket load: 1700
Enable Interface? y                        Allow H.323 Endpoints? y
Network Region: 1                          Allow H.248 Gateways? y
                                           Gatekeeper Priority: 5

IPV4 PARAMETERS
Node Name: procr
Subnet Mask: /24

Command:
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

```
Telnet 10.64.10.10
list ip-interface all

IP INTERFACES

ON Type   Slot  Code/Sfx  Node Name/  Mask  Gateway Node  Net  ULAN
          -----  IP-Address  -----  -----  -----
y PROCR   -----  10.64.10.10 /24    10.64.10.1    1    -----

Command successfully completed
Command:
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

Add an entry for IP Services with the following values for fields on Page 1, as displayed below:

- Enter the **change ip-services** command.
- In the **Service Type** field, type AESVCS.
- In the **Enabled** field, type y.
- In the **Local Node** field, type the Node name **procr** for the Processor Ethernet Interface.
- In the **Local Port** field, retain the default of 8765.

Service Type	Enabled	Local Node	IP SERVICES Local Port	Remote Node	Remote Port
AESVCS	y	procr	8765		

Go to Page 3 of the IP Services form, and enter the following values:

- In the **AE Services Server** field, type the name obtained from the Application Enablement Services server, in this case **AES**.
- In the **Password** field, type the same password to be administered on the Application Enablement Services server, in this case **aes1password**.
- In the **Enabled** field, type **y**.

Server ID	AE Services Server	Password	Enabled	Status
1:	AES	aes1password	y	in use
2:				
3:				
4:				
5:				
6:				
7:				
8:				
9:				
10:				
11:				
12:				
13:				
14:				
15:				
16:				

Note that the name and password entered for the **AE Services Server** and **Password** fields must match the name and password on the Application Enablement Services server. The administered name for the Application Enablement Services server is created as part of the Application Enablement Services installation, and can be obtained from the Application Enablement Services server by typing **uname -n** at the Linux command prompt. The same password entered above will need to be set on the Application Enablement Services server using **Administration > Switch Connections > Edit Connection > Set Password**.

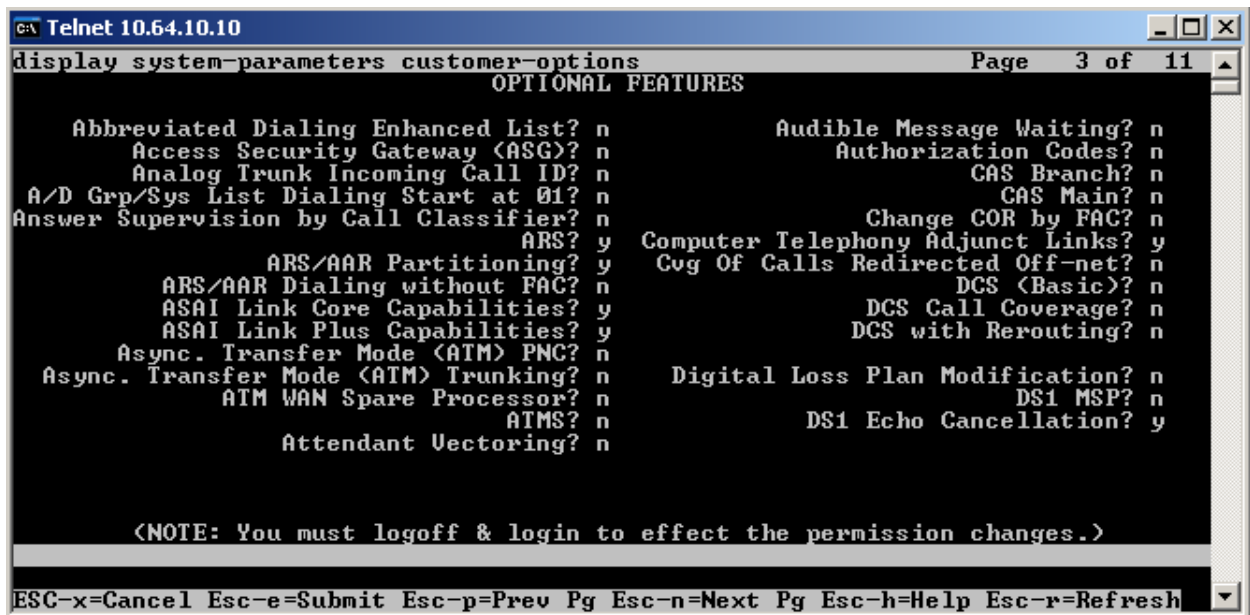
4.2. Administer Computer Telephony Integration (CTI) Link

It is assumed that Communication Manager is enabled with feature licenses for Vectoring, ASAI Link Core Capabilities, and Computer Telephony Adjunct Links.

This section provides the steps required for configuring a CTI Link.

Enter the **display system-parameters customer-options** command.

- On Page 3, verify that the **Computer Telephony Adjunct Links** field is set to **y** for yes. If not, contact an authorized Avaya account representative to obtain the license.



```
C:\> Telnet 10.64.10.10
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           CAS Branch? n
A/D Grp/Sys List Dialing Start at 01? n    CAS Main? n
Answer Supervision by Call Classifier? n    Change COR by FAC? n
ARS? y      Computer Telephony Adjunct Links? y
ARS/AAR Partitioning? y      Cvg Of Calls Redirected Off-net? n
ARS/AAR Dialing without FAC? n      DCS (Basic)? n
ASAI Link Core Capabilities? y      DCS Call Coverage? n
ASAI Link Plus Capabilities? y      DCS with Rerouting? n
Async. Transfer Mode (ATM) PNC? n      Digital Loss Plan Modification? n
ATM WAN Spare Processor? n           DS1 MSP? n
ATMS? n      DS1 Echo Cancellation? y
Attendant Vectoring? n

<NOTE: You must logoff & login to effect the permission changes.>

ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

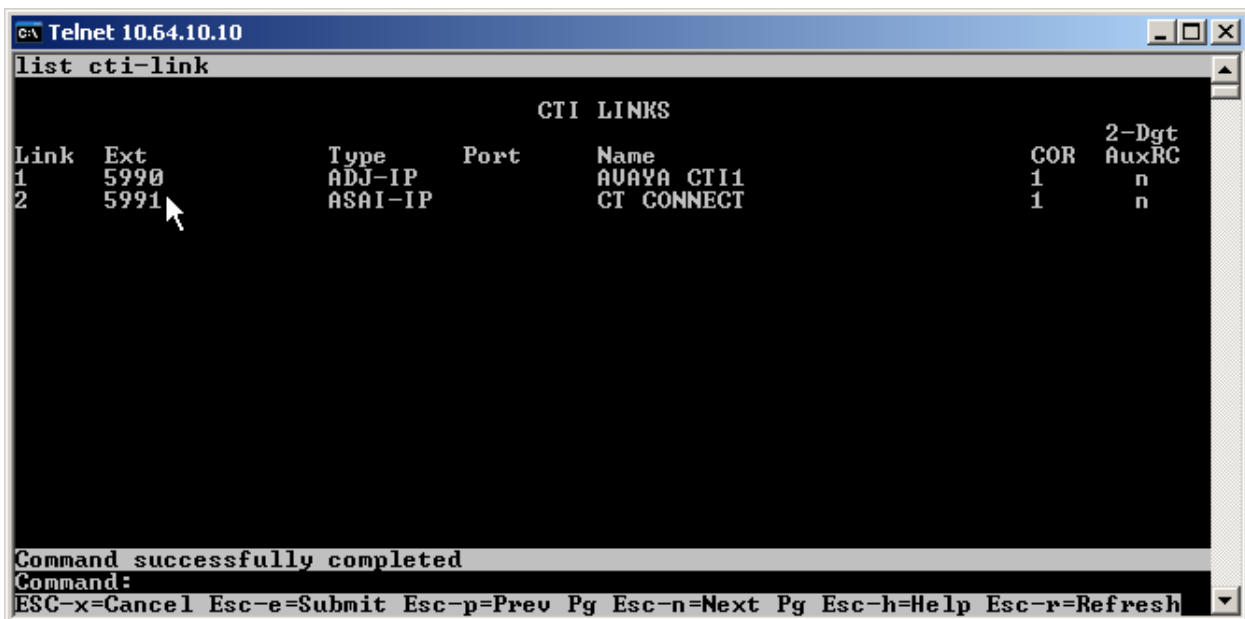
Enter the **add cti-link <link number>** command, where **<link number>** is an available CTI link number.

- In the **Extension** field, type **<station extension>**, where **<station extension>** is a valid station extension.
- In the **Type** field, type **ADJ-IP**.
- In the **Name** field, type a descriptive name.



```
c:\ Telnet 10.64.10.10
add cti-link 1
CTI LINK
CTI Link: 1
Extension: 5990
Type: ADJ-IP
Name: AVAYA CTI1
COR: 1
Page 1 of 3
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

Enter the **list cti-link** command to verify that the CTI Link is correctly configured. All configured links will show in this screen. In the snapshot below, Link 1 is the link of interest added above.



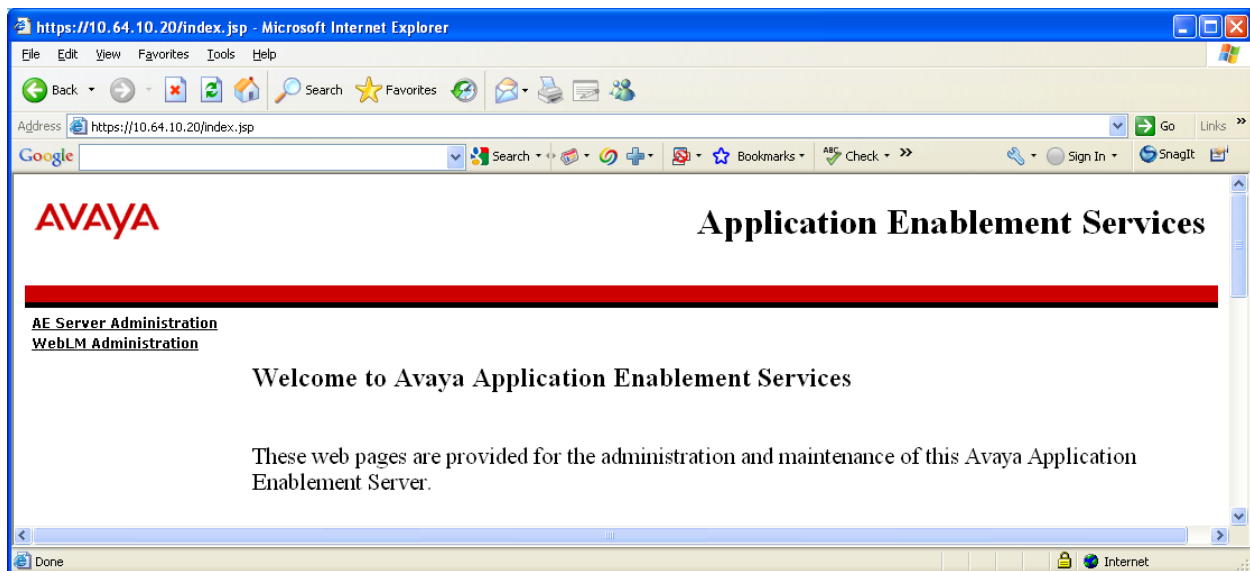
```
c:\ Telnet 10.64.10.10
list cti-link
CTI LINKS
Link  Ext      Type      Port      Name      COR      2-Dgt
1      5990      ADJ-IP      Port      AVAYA CTI1  1        n
2      5991      ASAI-IP      Port      CT CONNECT  1        n
Command successfully completed
Command:
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

5. Configure Avaya Aura™ Application Enablement Services

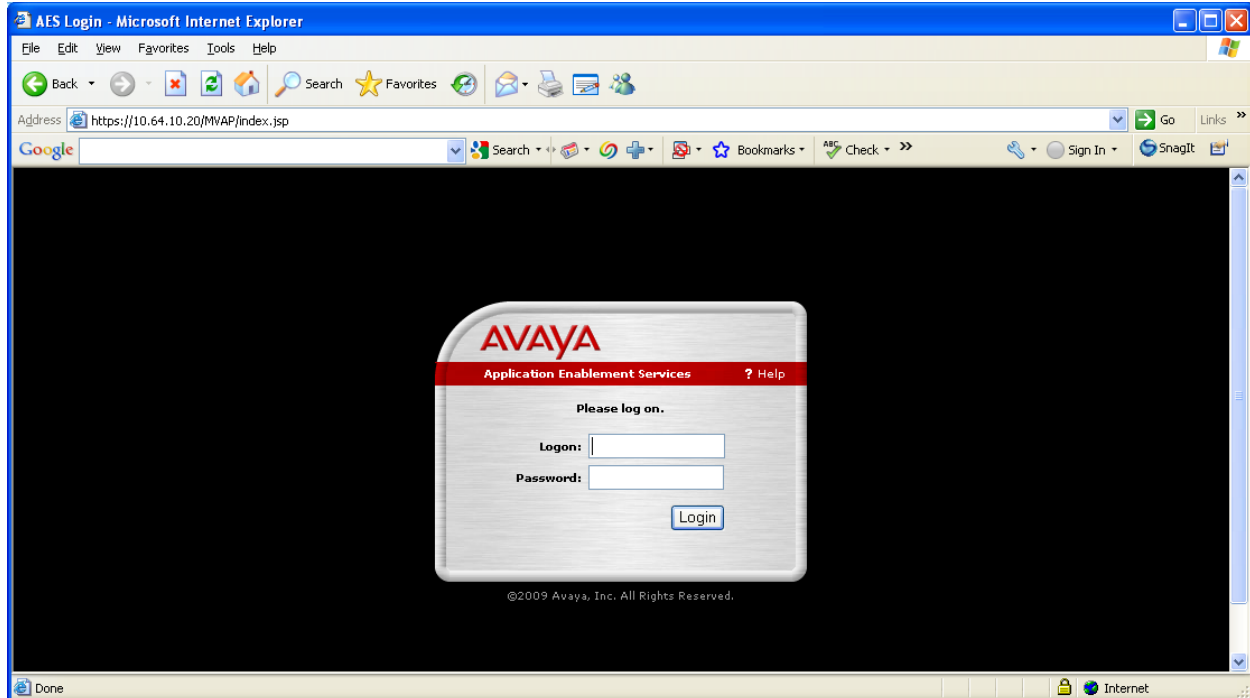
Application Enablement Services enables Computer Telephony Interface (CTI) applications to monitor and control telephony resources on Communication Manager. The Application Enablement Services server receives requests from CTI applications and forwards them to Communication Manager. Conversely, the Application Enablement Services server receives responses and events from Communication Manager and forwards them to the appropriate CTI applications.

This section assumes that the installation and basic administration of the Application Enablement Services server has already been performed. For more information on administering Application Enablement Services, refer to the Avaya product documentation, Reference [2].

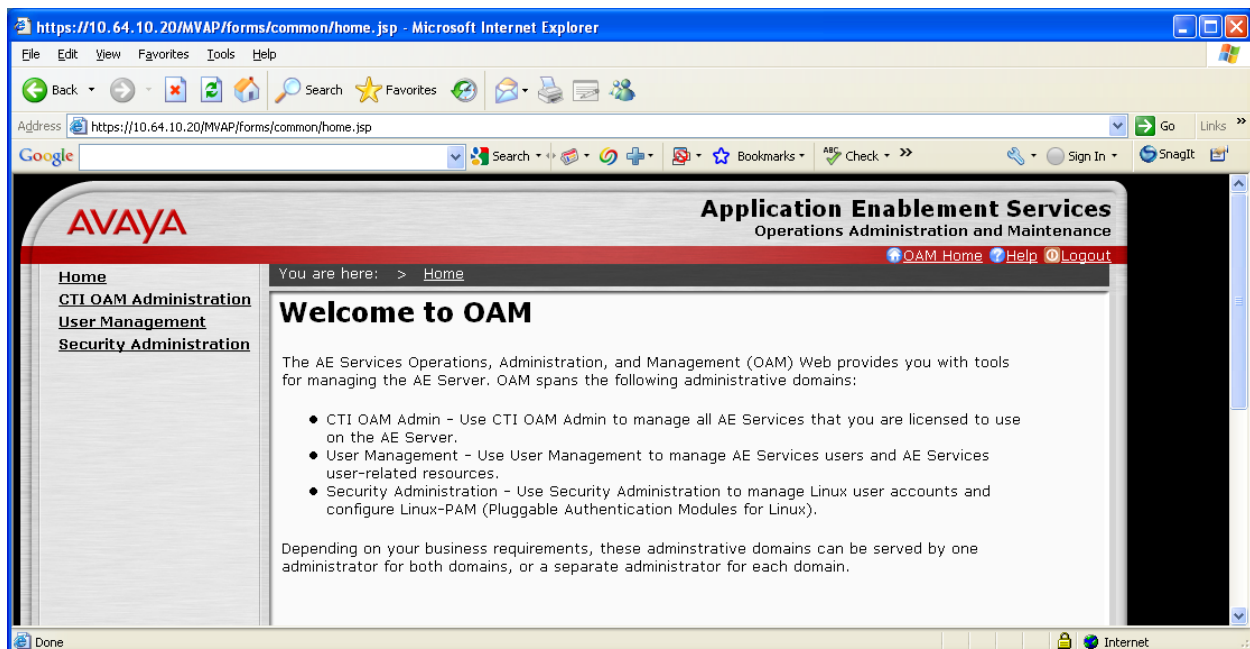
Access the Application Enablement Services OAM web-based interface by using the URL **https://ip-address** in an Internet browser window, where **ip-address** is the IP address of the Application Enablement Services server.



The **Login** screen is displayed as shown below. Log in with the appropriate credentials.



The **Welcome to OAM** screen is displayed next. Select **CTI OAM Administration** from the left pane.



The **Welcome to CTI OAM Screens** screen is displayed. Verify that Application Enablement Services is licensed for the TSAPI service, as shown in the bottom of the screen below. If the TSAPI service is not licensed, contact the Avaya sales team or business partner for a proper license file.

AVAYA Application Enablement Services
Operations Administration and Maintenance

You are here: > CTI OAM Home

Welcome to CTI OAM Screens

[craft] Last login: Mon Nov 2 20:01:05 2009 from 10.64.10.15

IMPORTANT: AE Services must be restarted for administrative changes to fully take effect. Changes to the Security Database do not require a restart.

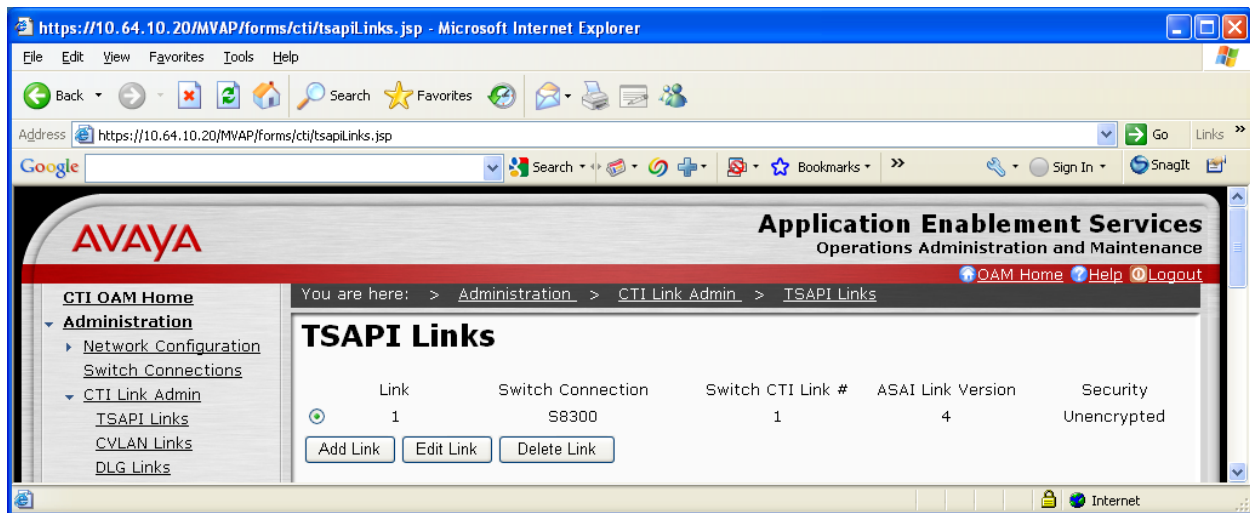
Service	Status	State	Licenses Purchased
ASAI Link Manager	Running	N/A	N/A
DMCC Service	Running	ONLINE	Yes
CVLAN Service	Running	ONLINE	Yes
DLG Service	Running	ONLINE	Yes
Transport Layer Service	Running	N/A	N/A
TSAPI Service	Running	ONLINE	Yes
SMS	N/A	N/A	Yes

For status on actual services, please use [Status and Control](#).

License Information

You are licensed to run Application Enablement (CTI) version 4.2.

To administer a TSAPI link, select **Administration > CTI Link Admin > TSAPI Links** from the left pane. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.



The **Add / Edit TSAPI Links** screen is displayed next. The **Link** field is only local to the Application Enablement Services server, and may be set to any available number. For **Switch Connection**, select the relevant switch connection from the drop-down list. In this case, the existing switch connection **S8300** is selected. For **Switch CTI Link Number**, select the CTI link number previously administered. Click **Apply Changes**.

The screenshot displays the Avaya Application Enablement Services (AES) web interface. The top header features the Avaya logo and the text 'Application Enablement Services Operations Administration and Maintenance'. Navigation links for 'OAM Home', 'Help', and 'Logout' are present. A breadcrumb trail indicates the current location: 'You are here: > Administration > CTI Link Admin > TSAPI Links'.

The left-hand navigation menu is expanded to show the 'Administration' section, with 'TSAPI Links' selected. Other visible menu items include 'Network Configuration', 'Switch Connections', 'CTI Link Admin', 'CVLAN Links', 'DLG Links', 'DMCC Configuration', 'TSAPI Configuration', 'Security Database', 'Certificate Management', 'Dial Plan', 'Enterprise Directory', 'Host AA', 'SMS Configuration', 'WebLM Configuration', 'Bridged Alert Config', 'Status and Control', 'Maintenance', 'Alarms', 'Logs', 'Utilities', and 'Help'.

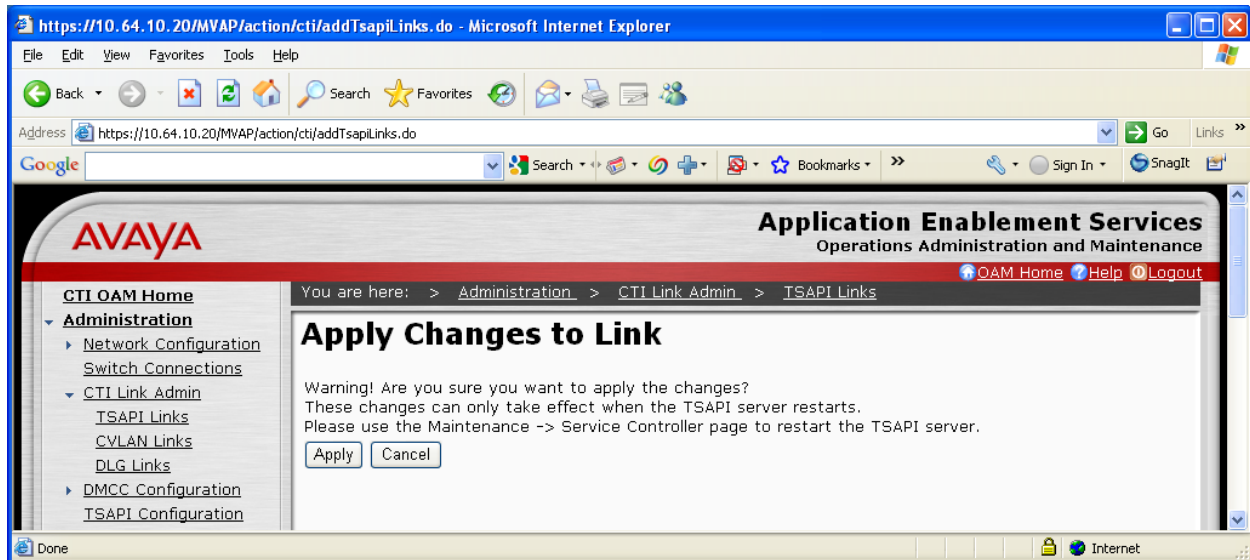
The main content area is titled 'Add / Edit TSAPI Links'. It contains the following configuration fields:

- Link:** A dropdown menu with the value '1' selected.
- Switch Connection:** A dropdown menu with the value 'S8300' selected.
- Switch CTI Link Number:** A dropdown menu with the value '1' selected.
- ASAI Link Version:** A dropdown menu with the value '4' selected.
- Security:** A dropdown menu with the value 'Unencrypted' selected.

At the bottom of the configuration area are two buttons: 'Apply Changes' and 'Cancel Changes'. A mouse cursor is positioned over the 'Cancel Changes' button.

The footer of the interface displays the copyright notice: '© 2009 Avaya Inc. All Rights Reserved.'.

The **Apply Changes to Link** screen is displayed. Click **Apply**.



Next, add a CTI User, as Customer Experience Reporting requires a CTI user to access Application Enablement Services. Select **OAM Home** > **User Management** > **Add User** from the left pane.

In the **Add User** screen, enter the following values:

- In the **User Id** field, type a meaningful user id.
- In the **Common Name** field, type a descriptive name.
- In the **Surname** field, type a descriptive surname.
- In the **User Password** field, type a password for the user.
- In the **Confirm Password** field, re-enter the same password for the user.
- In the **Avaya Role** field, retain the default of **None**.
- In the **CT User** field, select **Yes** from the dropdown menu.
- Click **Apply** at the bottom of the screen (not shown here).

AVAYA Application Enablement Services - Operations Administration and Maintenance

You are here: > [User Management](#) > [Add User](#)

Add User

Fields marked with * can not be empty.

* User Id

* Common Name

* Surname

* User Password

* Confirm Password

Admin Note

Avaya Role

Business Category

Car License

CM Home

Ciss Home

CT User

Department Number

Display Name

Employee Number

Employee Type

Enterprise Handle

Given Name

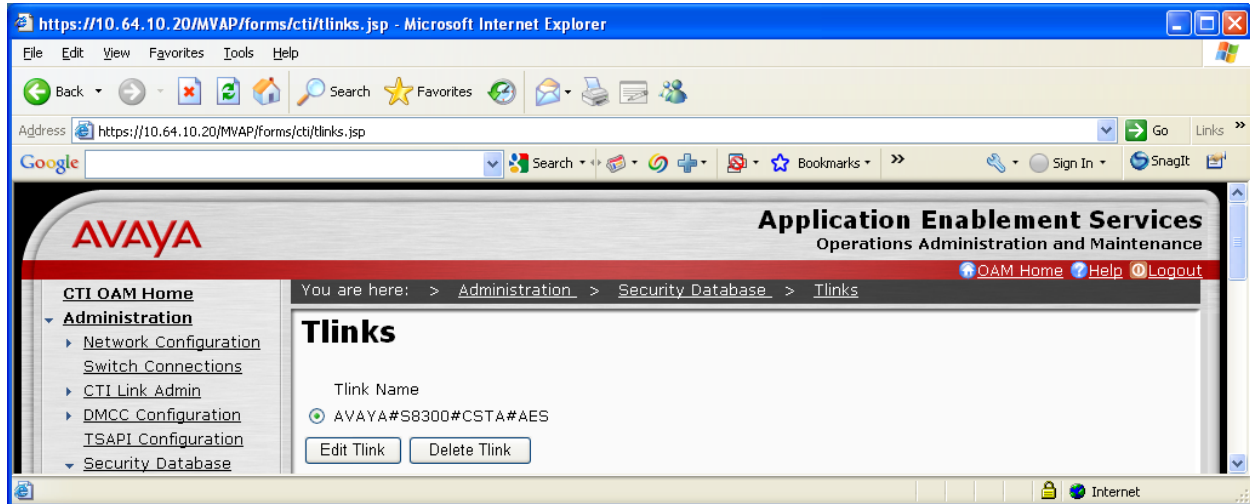
Home Phone

Home Postal Address

Initials

Select **Administration > Security Database > Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. A new Tlink name is automatically generated by the Application Enablement Services server, upon creation of a new switch connection. Locate the Tlink name associated with the relevant switch connection, which would use the name of the switch connection as part of the Tlink name. Make a note of the associated Tlink name, to be used later for configuring the Customer Experience Reporting server.

In this case, the associated Tlink name is “AVAYA#S8300#CSTA#AES”. Note the use of the switch connection “S8300” as part of the Tlink name.



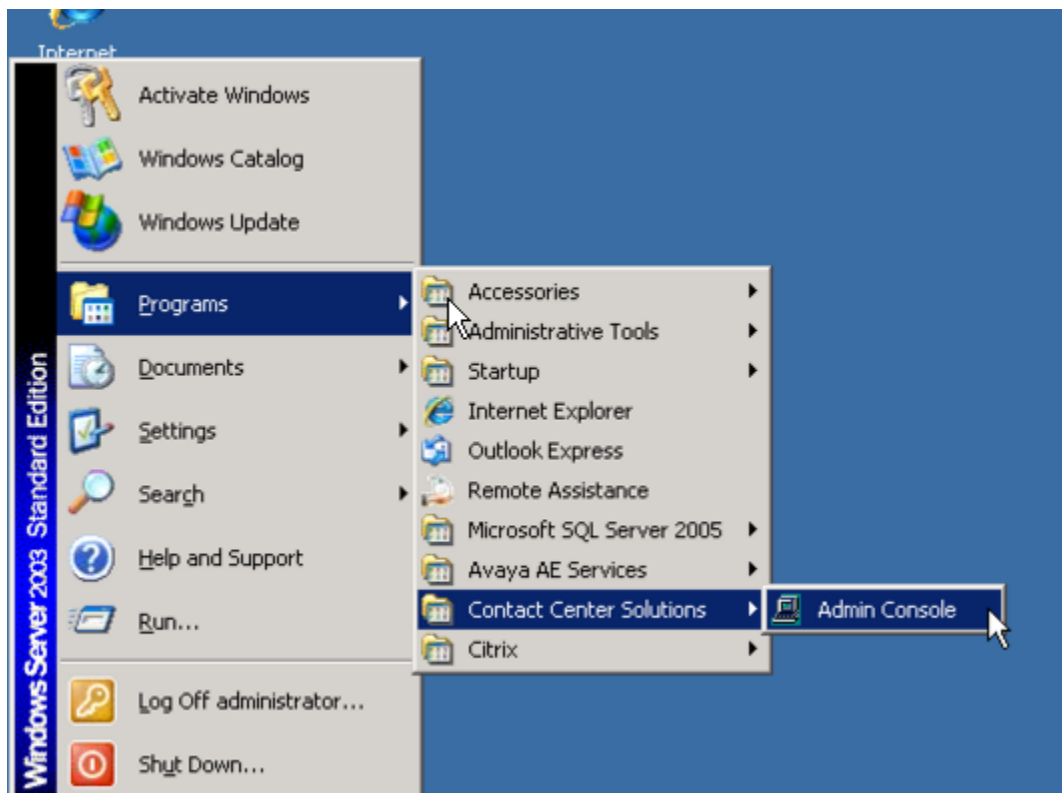
6. Configure Customer Experience Reporting

This section provides the procedures for configuring Customer Experience Reporting. The procedures include the following areas:

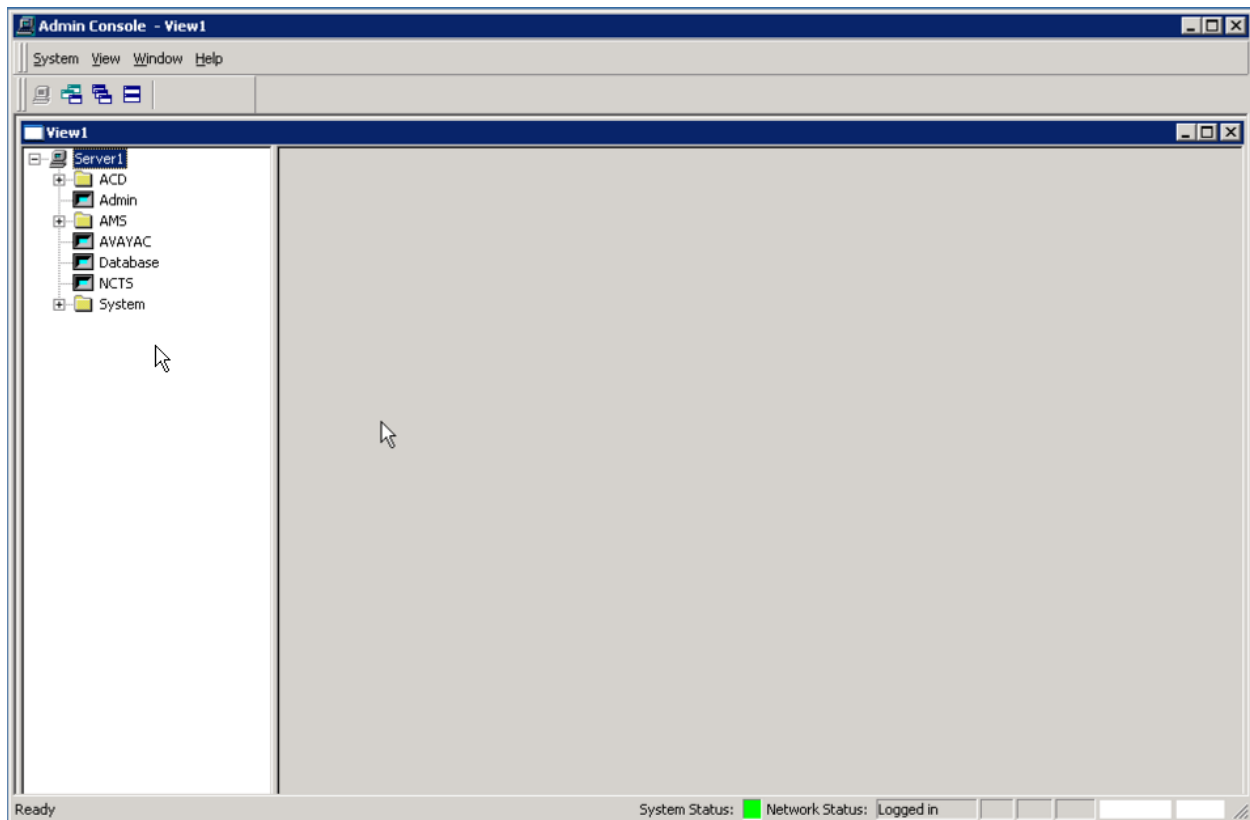
- Launch and Configure Administrator Console
- Launch Customer Experience Reporting Web Interface
- Administer Skills
- Administer Vectors
- Administer VDNs
- Administer Agents
- Administer Supervisor(s)
- Web Client Installation
- Accessing Instant Messaging

The configuration of Customer Experience Reporting is typically performed by Viable Resources support technicians. The procedural steps are presented in these Application Notes for informational purposes.

6.1. Launch and Configure Administrator Console



The first screen that appears is not a login screen. The console does not require a login, but it does require some configuration.



Configure the Site Info Tab under the Admin Tab.

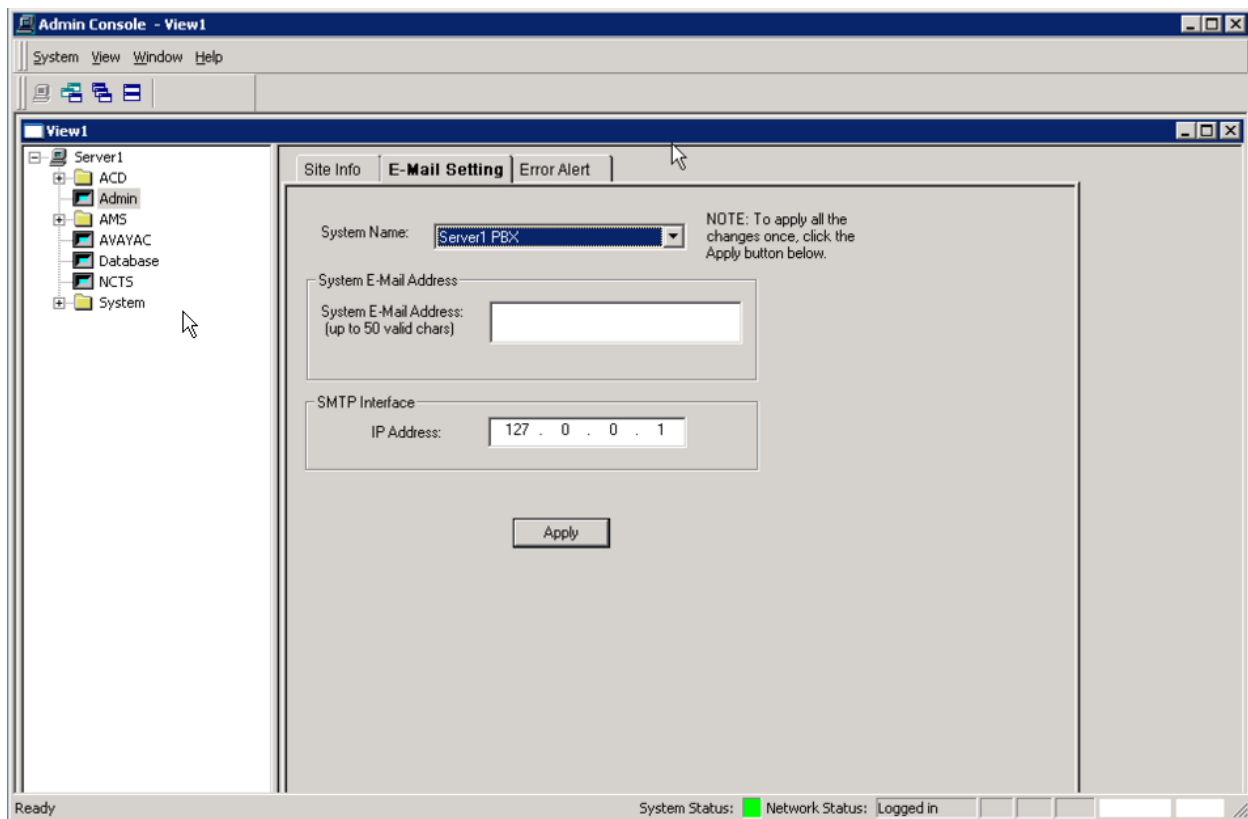
- Fill in boxes for **Name**, **Address**, **City**, **State**, **Zip Code**, **First Name**, **Last Name**, **Phone Number**, and **E-Mail Address**.

The screenshot shows the 'Admin Console - View1' window. On the left is a tree view with 'Server1' expanded, showing sub-items: 'ACD', 'Admin', 'AMS', 'AVAYAC', 'Database', 'NCTS', and 'System'. The main area has three tabs: 'Site Info' (selected), 'E-Mail Setting', and 'Error Alert'. Below the tabs, there are input fields for 'Registration Number' (DEVCONNET) and 'Site ID' (00000). A note states: 'NOTE: To apply all the changes once, click the Apply button below.' The 'Site Information' section contains fields for 'Name' (Avaya DevConnect), 'Address' (1300 West 120th Ave, D4-D40), 'City' (Westminster), 'State' (CO), and 'ZIP Code' (80234). The 'Contact Person' section contains fields for 'First Name' (Bella), 'Last Name' (Hartz), 'Phone Number' (303.555.1212), and 'E-Mail Address' (someuser@avaya.com). An 'Apply' button is located at the bottom center of the form area. The status bar at the bottom shows 'Ready', 'System Status' with a green indicator, 'Network Status' with a red indicator, and 'Logged in'.

Registration Number: DEVCONNET		Site ID: 00000		NOTE: To apply all the changes once, click the Apply button below.	
Site Information					
Name:	Avaya DevConnect				
Address:	1300 West 120th Ave, D4-D40				
City:	Westminster	State:	CO	ZIP Code:	80234
Contact Person					
First Name:	Bella	Last Name:	Hartz		
Phone Number:	303.555.1212	E-Mail Address:	someuser@avaya.com		
<input type="button" value="Apply"/>					

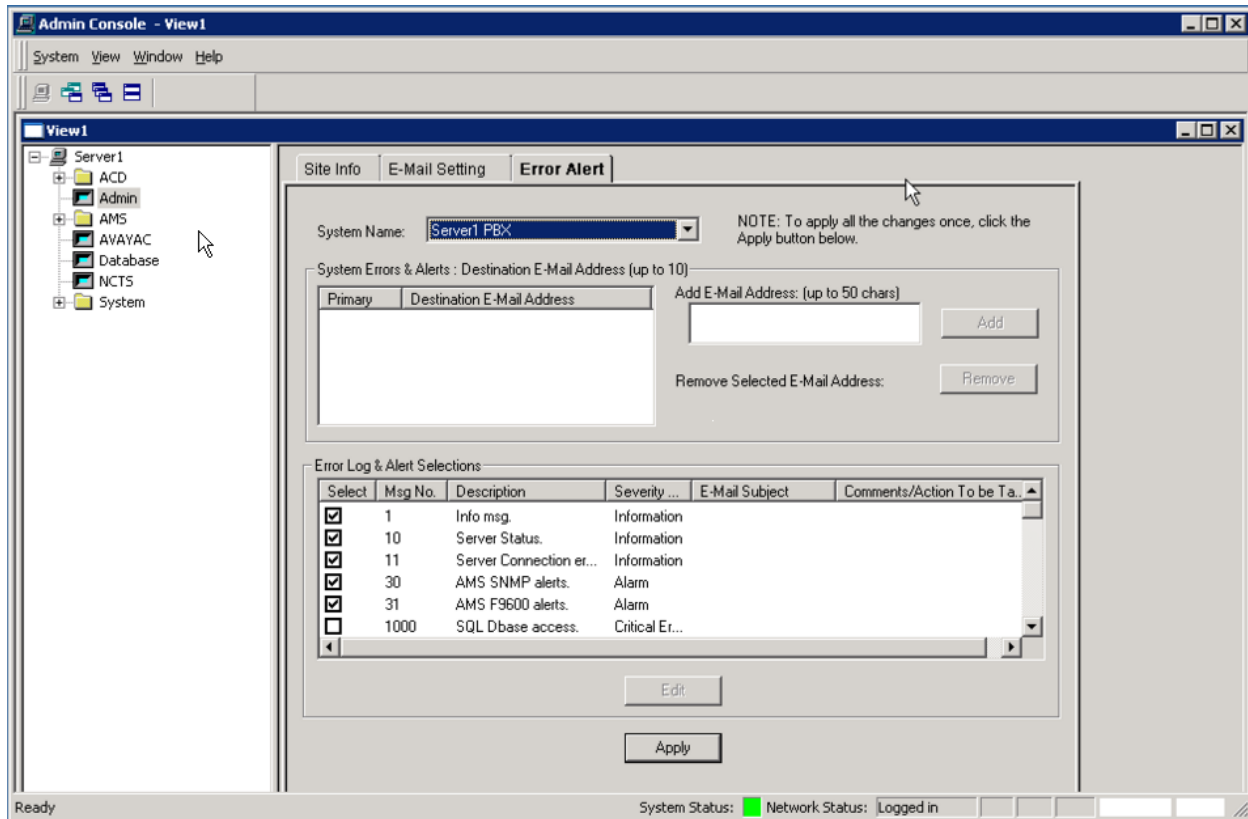
Configure the E-Mail Setting Tab under the Admin Tab.

- Choose the **System Name** from the pull-down menu. Populate the **System E-Mail Address** box and the **SMTP Interface IP Address** for the network management elements, if required for alerting. Hit **Apply**.
- E-mail was not populated in the screen shot below as it was not needed for the interoperability testing.



Configure the Error Alert Tab under the Admin Tab.

- Choose the **System Name** from the pull-down menu. Populate the **Add E-Mail Address** box and choose which error logs and alerts the customer requires, if needed. Hit **Apply**.
- E-mail was not populated in the screen shot below as it was not needed for the interoperability testing.

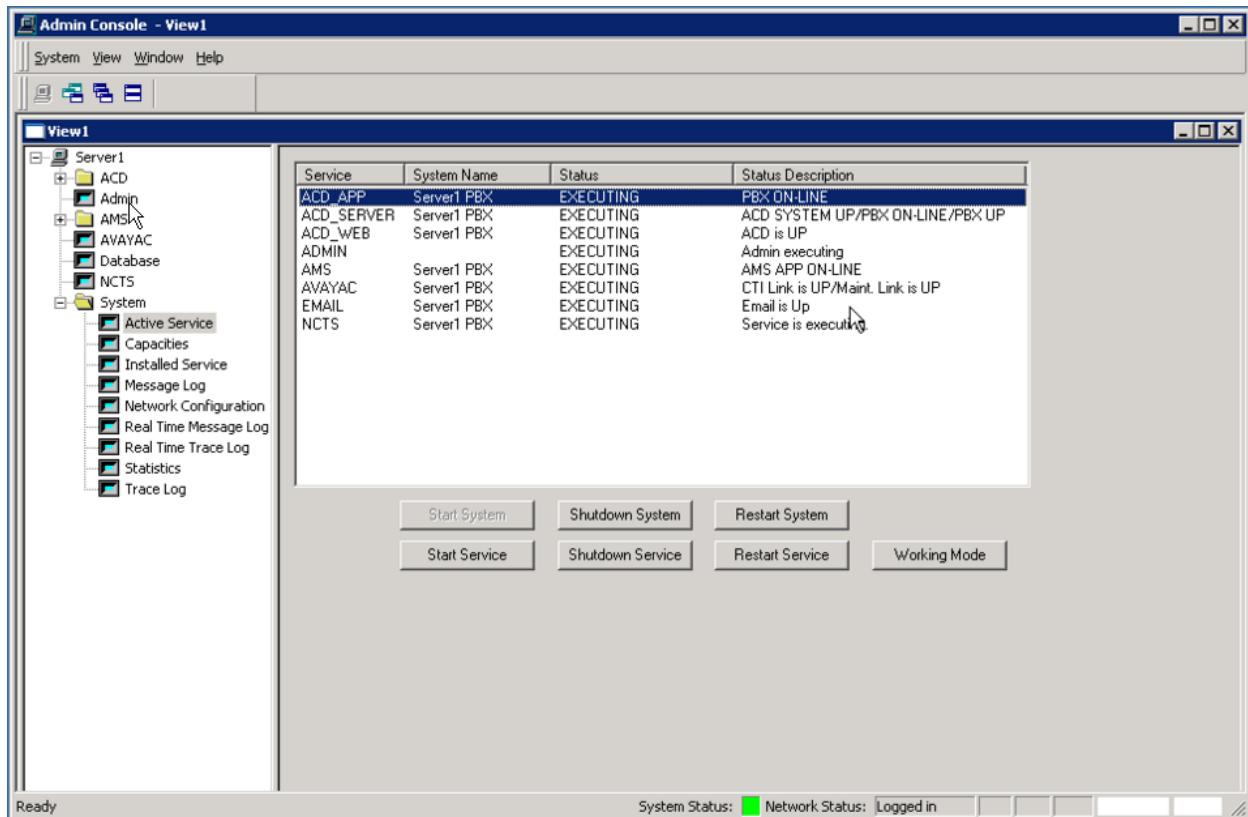


Configure the Avaya portion under the AVAYAC tab.

- Choose the **System Name** from the pull-down menu. Populate the **Maintenance Interface** information with the **IP Address**, **Login Name**, and **Password** from the Communication Manager.
NOTE: A standard login is recommended with privileges similar to the dadmin login created below, but Viable does not recommend using dadmin in a production environment.
- Populate the **CTI Interface** information with the **IP Address/Port**, **Avaya CTI Link ID**, the TLINK name for the **AES Connection ID**, the **Login Name**, and **Password** from the Application Enablement Server. Hit **Apply**.

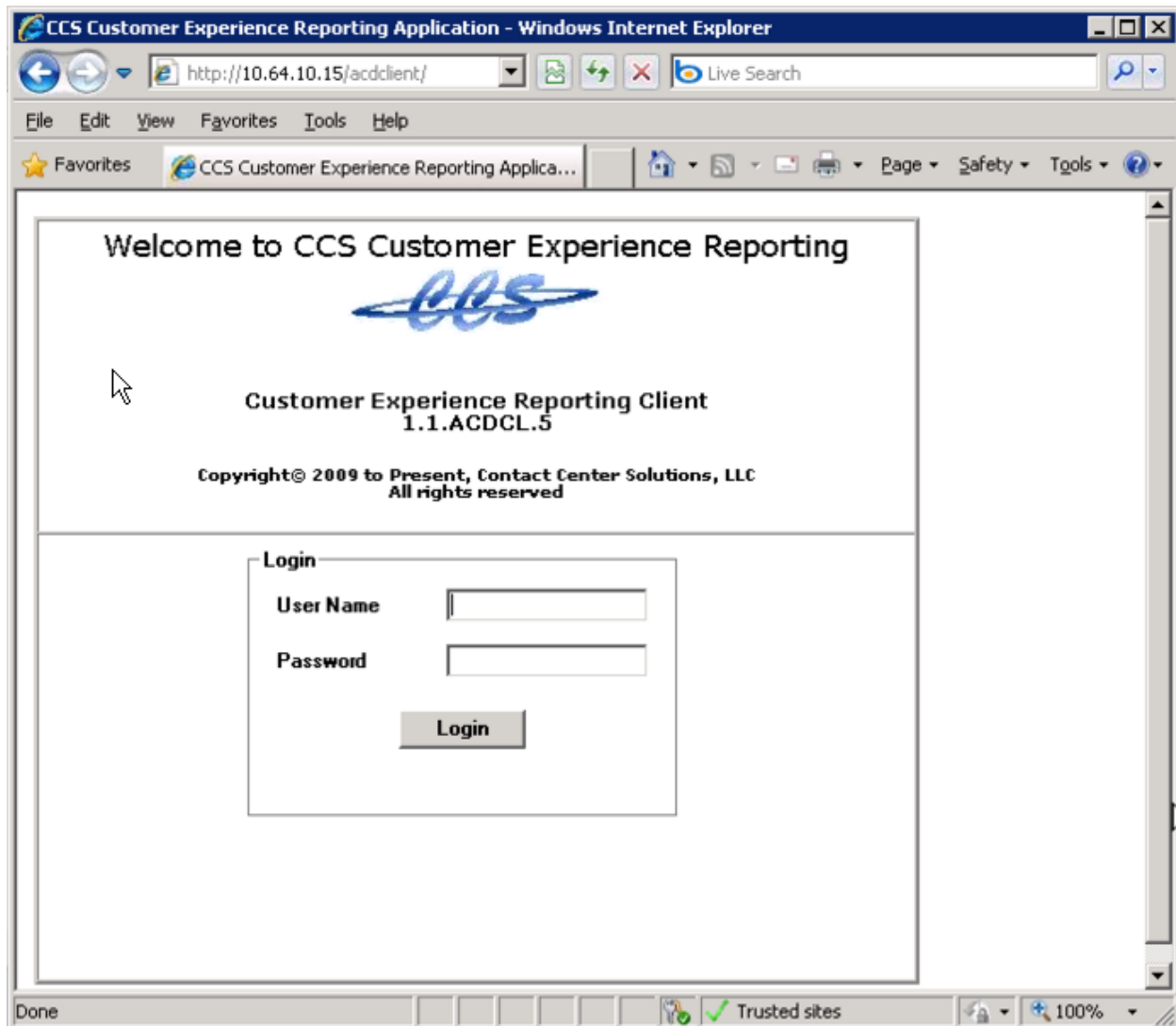
The screenshot shows the 'Admin Console - View1' window. On the left is a tree view with 'Server1' expanded, showing sub-items: ACD, Admin, AMS, AVAYAC (selected), Database, NCTS, and System. The main area contains configuration fields for the AVAYAC tab. The 'System Name' is set to 'Server1 PBX'. Below it, the 'Maintenance Interface' section includes fields for 'IP Address' (10.64.10.10), 'Login Name' (dadmin), 'Password' (masked), and 'PIN' (masked). To the right of these fields are 'Reset' and 'Apply' buttons. The 'CTI Interface' section includes fields for 'IP Address / Port' (10.64.10.20 / 450), 'Avaya CTI Link ID' (01), 'AES Connection ID' (AVAYA#S8300#CSTA#AES), 'Login Name' (avaya), and 'Password' (masked). At the bottom, the status bar shows 'Ready', 'System Status' (green), 'Network Status' (green), and 'Logged in'.

To view system status in the Admin Console, click on **System -> Active Service**. This page gives the full system status including Network Status, PBX status, and CTI Link Status.



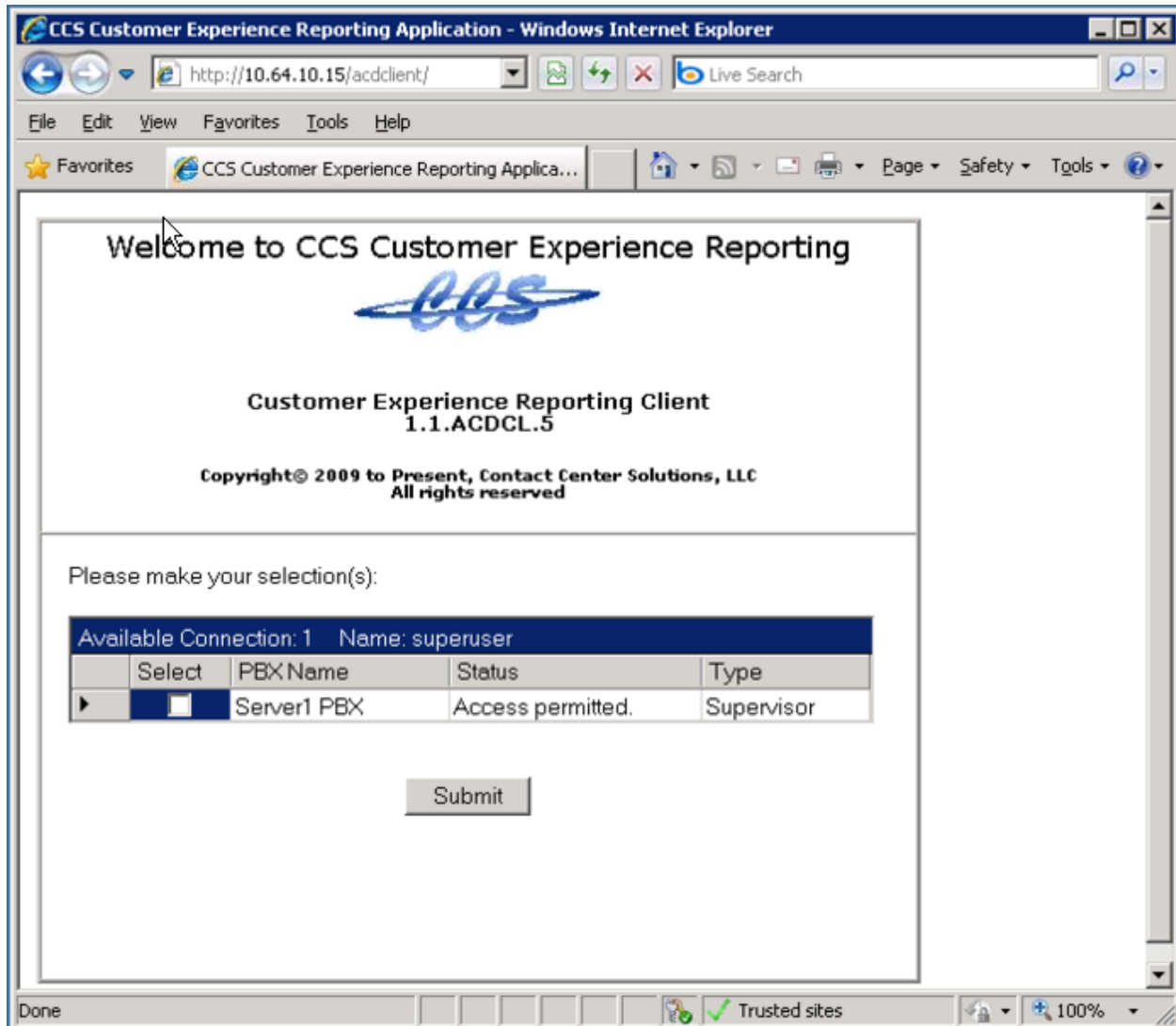
6.2. Launch Customer Experience Reporting

Access the Customer Experience Reporting web-based interface using the URL **http://ip-address/acdclient** in an Internet browser window, where **ip-address** is the IP address of the Customer Experience Reporting server. The **Log In** screen is displayed as shown below. Log in using the appropriate credentials.



After entering a valid login and password, the user is prompted to choose a server. In this configuration, there is only one choice.

- Check the box labeled **Select**, and hit **Submit**.




CCS Customer Experience Reporting Application - Windows Internet Explorer

http://10.64.10.15/acdclient/

File Edit View Favorites Tools Help

★ Favorites CCS Customer Experience Reporting Applica...

Welcome to CCS Customer Experience Reporting



Customer Experience Reporting Client
1.1.ACDCL.5

Copyright© 2009 to Present, Contact Center Solutions, LLC
All rights reserved

Please make your selection(s):

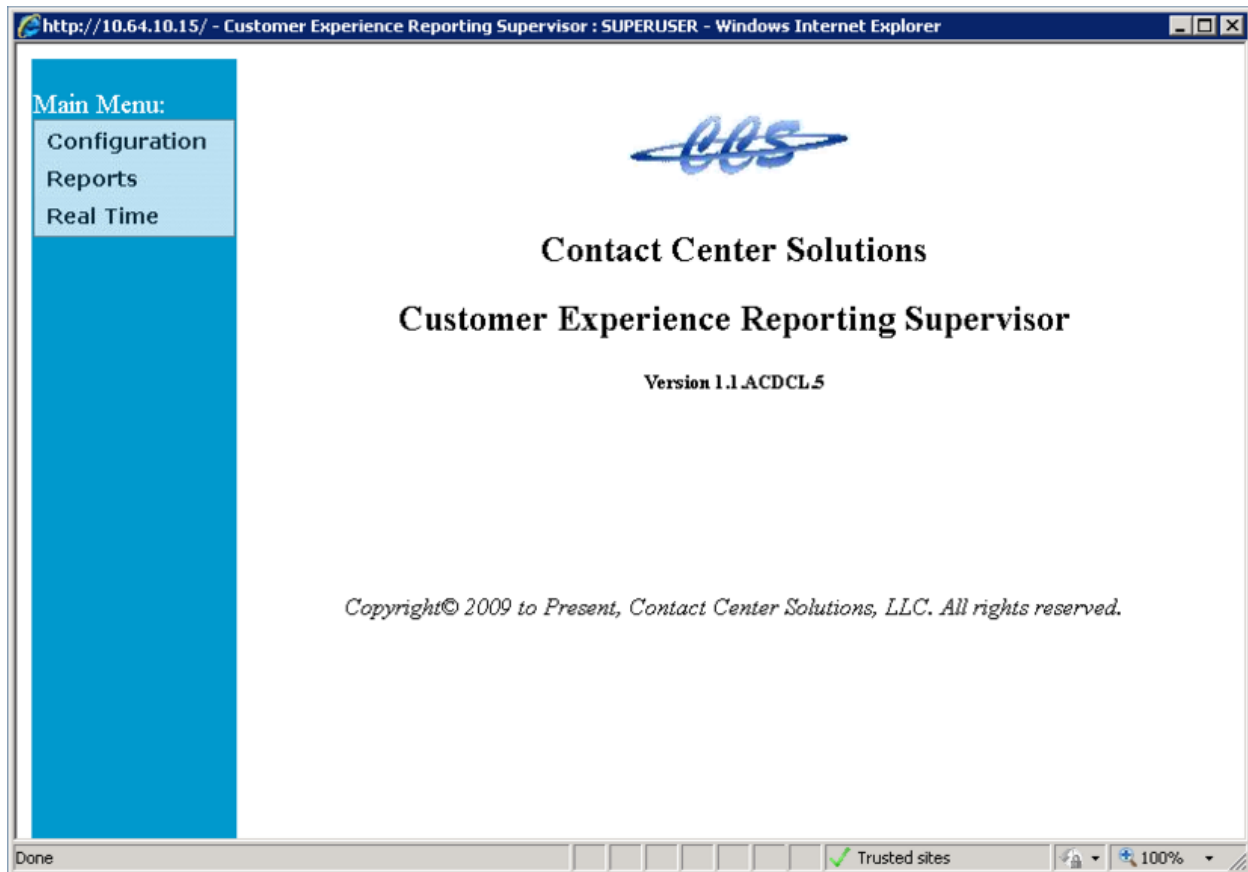
Available Connection: 1 Name: superuser

Select	PBX Name	Status	Type
<input type="checkbox"/>	Server1 PBX	Access permitted.	Supervisor

Submit

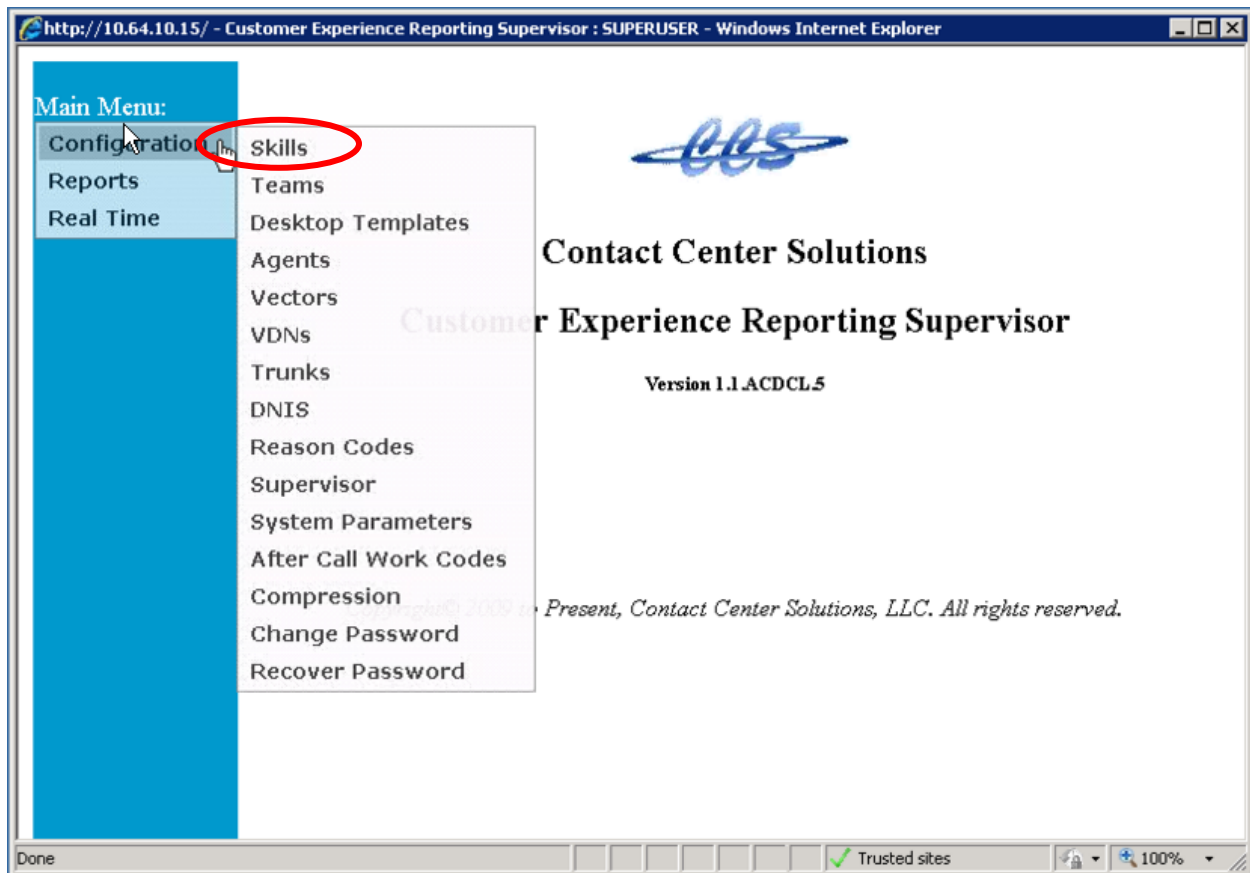
Done Trusted sites 100%

The next screen is the Main Menu. From here, the Supervisor can do the Configuration for the system.



6.3. Administer Skills

From the Main Menu, select **Configuration** -> **Skills** from the left pane.



Populate the **Skill Configuration** fields based on the information from the Communication Manager S8300 Server.

- Choose the **ACD System** from the pull-down menu. Populate the fields for **Skill Number**, **Skill Name**, **Extension**, and **COR**. Set other parameters as needed. Hit **Submit**.
- For test purposes, the fields **ACD System**, **Skill No.**, **Skill Name**, **Extension**, and **COR** were populated. Total Calls Waiting thresholds were set to **TH1 = 5**, **TH2 = 10**, and **TH3 = 15**. This was essential for testing the real-time reports. The rest of the fields were left at the default values.

Skill Configuration

ACD System: Server1 PBX

Skill Information

Skill No.: 10
Skill Name: TESTHUNT
Extension: 5510 COR: 1

Calculation Intervals

ASA, SVL: 10 Minutes
% Abandoned Calls(AB): 10 Minutes

Call Waiting

	TH1	TH2	TH3	Bell
Total Calls Waiting	5	10	15	N
Call Waiting Time	60	120		N
Longest Call Waiting	60	120		N
Average Speed Of Answer(ASA)	30			N
Service Level (SVL)	20			
% Grade of Service (GOS)	80			N
% Abandoned (AB)	5			N
% Waiting Calls	5	10		N
% AVAIL Agents	20	50		N

Miscellaneous

Redirect On No:
Ans Time (Rings):
Max Calls Queued: 20
Redirect to VDN:
After Call Work (ACW) Time:

Shift Schedules(00:00-23:59)

	Start	End
First Shift	00:00	23:59
Second Shift	00:00	00:00
Third Shift	00:00	00:00
Fourth Shift	00:00	00:00

Time in State (mm:ss)

	TH1	TH2
AVAIL	02:00	05:00
ACW	02:00	05:00
ACD IN	02:00	05:00
EXT OUT	02:00	05:00
INTERNAL	02:00	05:00
AUX	02:00	05:00
EXT IN	02:00	05:00
HOLD	02:00	05:00
RING	02:00	05:00
UNAVAIL	02:00	05:00
DIAL	00:00	00:00

Submit Cancel [Insert Mode](#)

As you populate multiple skills, these can be accessed using the pull-down menu. The skill can be modified using either the **Skill No.** or **Skill Name**.

http://10.64.10.15/ - Skill Configuration - Windows Internet Explorer

Skill Configuration

ACD System
Server1 PBX

Skill Information

Skill No. 10 Skill Name TESTHUNT

Extension 5510 COR 1

Calculation Intervals

ASA, SVL 10 Minutes

% Abandoned Calls(AB) 10 Minutes

Call Waiting

	TH1	TH2	TH3	Bell
Total Calls Waiting	5	10	15	N
Call Waiting Time	60	120		N
Longest Call Waiting	60	120		N
Average Speed Of Answer(ASA)	30			N
Service Level (SVL)	20			
% Grade of Service (GOS)	80			N
% Abandoned (AB)	5			N
% Waiting Calls	5	10		N
% AVAIL Agents	20	50		N

Last Modified : 12/21/2009 4:17:26 PM

Shift Schedules(00:00-23:59)

	Start	End
First Shift	00:00	23:59
Second Shift	00:00	00:00
Third Shift	00:00	00:00
Fourth Shift	00:00	00:00

Time in State (mm:ss)

	TH1	TH2
AVAIL	02:00	05:00
ACW	02:00	05:00
ACD IN	02:00	05:00
EXT OUT	02:00	05:00
INTERNAL	02:00	05:00
AUX	02:00	05:00
EXT IN	02:00	05:00
HOLD	02:00	05:00
RING	02:00	05:00
UNAVAIL	02:00	05:00
DIAL	00:00	00:00

Miscellaneous

Redirect On No Ans Time (Rings):

Max Calls Queued: 20

Redirect to VDN:

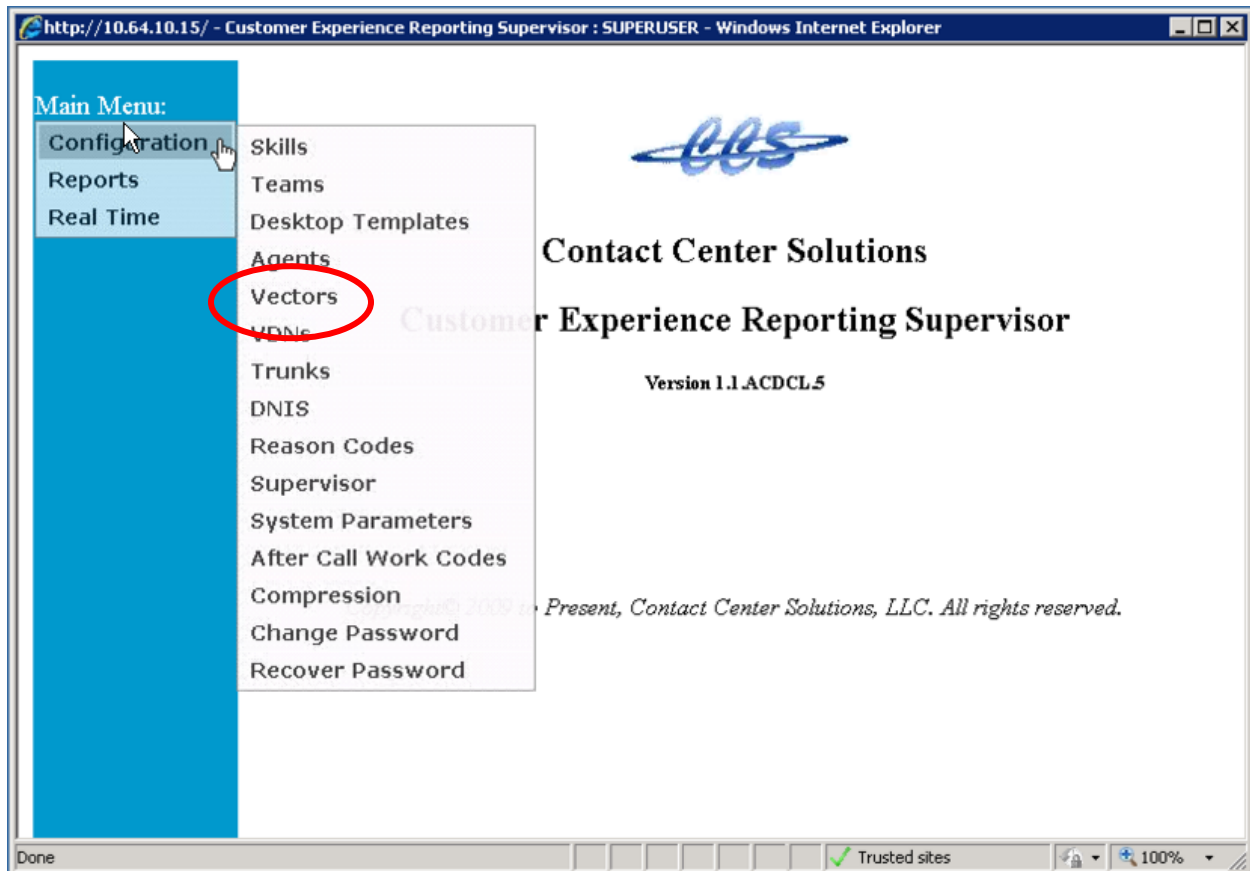
After Call Work (ACW) Time:

Submit
Insert
Delete
< Previous
Next >

Done Trusted sites 100%

6.4. Administer Vectors

From the Main Menu, select **Configuration** -> **Vectors** from the left pane.



Populate the Vector Configuration Fields based on the information from the Communication Manager S8300 Server.

- Choose the **ACD System** from the pull-down menu. Populate the fields for **Vector Number**, **Vector Name**, and Vector Steps. Hit **Submit**.

http://10.64.10.15/ - Vector Configuration - Windows Internet Explorer

Vector Configuration

ACD System

Vector Information

Vector No Insert Mode

Vector Name

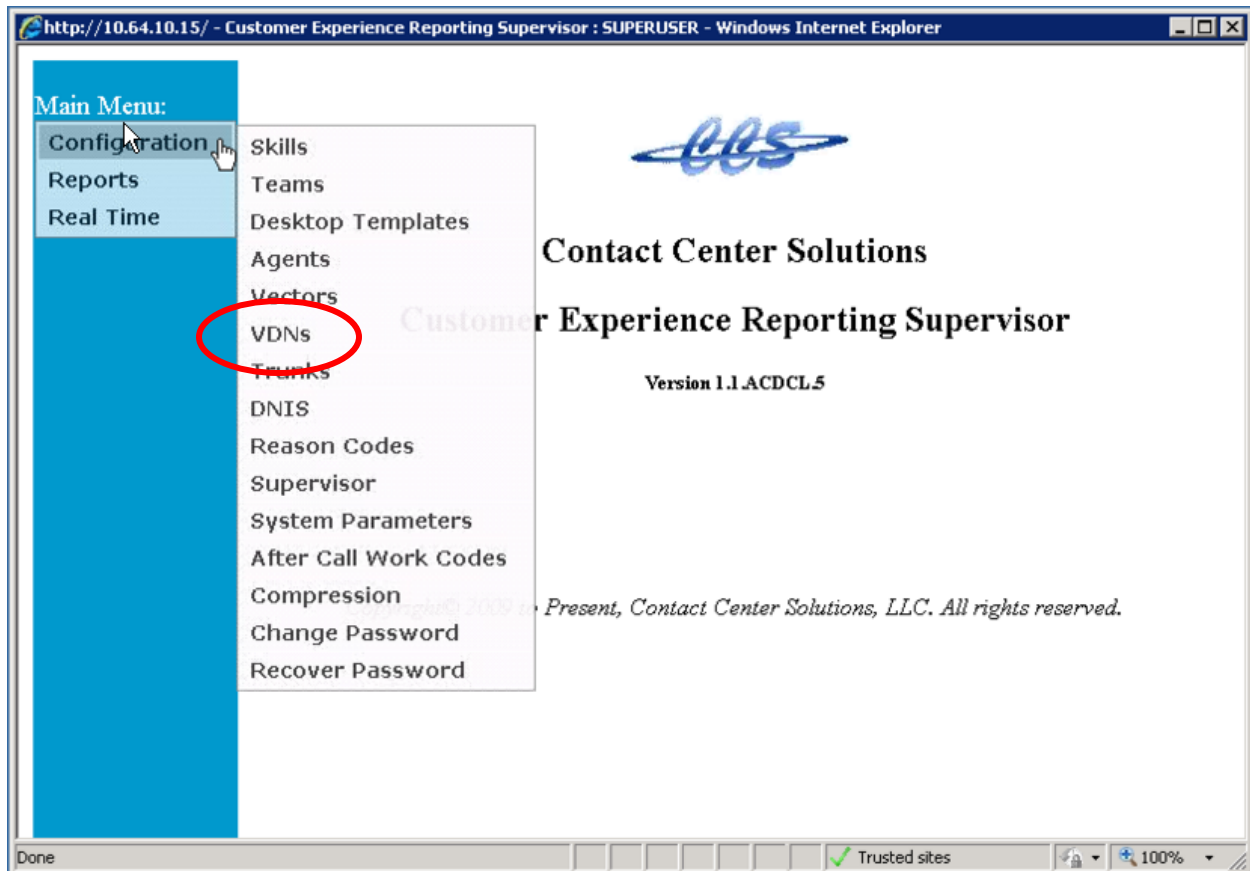
	No	Command	
Select	1	wait-time	0 secs hearing silence
Select	2	route-to	number 5510 with cov n if unconditionally
Select	3	stop	
Select	4		
Select	5		
Select	6		
Select	7		
Select	8		
Select	9		
Select	10		
Select	11		
Select	12		
Select	13		
Select	14		
Select	15		
Select	16		

1

Done Trusted sites 100%

6.5. Administer VDNs

From the Main Menu, select **Configuration** -> **VDNs** from the left pane.



Populate the VDN Configuration Fields based on the information from the Communication Manager S8300 Server.

- Choose the **ACD System** from the pull-down menu. Populate the fields for **VDN Number**, **VDN Name**, **Vector No**, and any other thresholds that need to be set. Hit **Submit**.
- For test purposes, the fields **ACD System**, **VDN No.**, **VDN Name**, **Vector No.**, and **COR** were populated. The rest of the fields were left at the default values.

VDN Configuration

ACD System: Server1 PBX Sort VDN by: Number VDN List: All

VDN Information

VDN Number: 5610 TestVDN Vector No: 1

VDN Name: TestVDN Automatic Scheduling ☐ Record is InActive

Allow Override: N

Call Threshold	Collection Interval	TH1	TH2	Bell	COR
Total Number of Call Waiting(NCW)		0	0	N	1
Call Waiting Threshold(CWT)		0	0	N	1st Skill
Number of Calls Rerouted(CRR)	10 Minutes	0	0	N	
Number of Calls Abandoned(ABN)	10 Minutes	0	0	N	
Number of Calls Handled(NCH)	10 Minutes	0	0	N	2nd Skill
Number of Calls Offered(NCO)	10 Minutes	0	0	N	
Average Speed of Answer(ASA)	10 Minutes	0		N	
Percent Abandon(%ABN)	10 Minutes	0		N	3rd Skill
Average Delay to Abandon(ADA)	10 Minutes	0		N	
Acceptable Grade of Service %(GOS)	10 Minutes	0		N	
Call Answer Threshold for GOS		0			

Last Modified: 12/21/2009 4:36:14 PM

Request Processed

Submit Insert Delete < Previous Next >

Repeat population of the fields for each VDN that is added. Once added, they can be viewed in the pull-down window list.

http://10.64.10.15/ - VDN Configuration - Windows Internet Explorer

VDN Configuration

[Vector >](#)

ACD System Sort VDN by VDN List

VDN Information

VDN Number Vector No

VDN Name Automatic Scheduling ☐ Record is InActive

Allow Override

Call Threshold

	Collection Interval	TH1	TH2	Bell	COR
Total Number of Call Waiting(NCW)		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	<input type="text" value="1"/>
Call Waiting Threshold(CWT)		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	1st Skill
Number of Calls Rerouted(CRR)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	<input type="text"/>
Number of Calls Abandoned(ABN)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	<input type="text"/>
Number of Calls Handled(NCH)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	2nd Skill
Number of Calls Offered(NCO)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="N"/>	<input type="text"/>
Average Speed of Answer(ASA)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>		<input type="text" value="N"/>	<input type="text"/>
Percent Abandon(%ABN)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>		<input type="text" value="N"/>	3rd Skill
Average Delay to Abandon(ADA)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>		<input type="text" value="N"/>	<input type="text"/>
Acceptable Grade of Service %(GOS)	<input type="text" value="10 Minutes"/>	<input type="text" value="0"/>		<input type="text" value="N"/>	<input type="text"/>
Call Answer Threshold for GOS		<input type="text" value="0"/>			

Last Modified

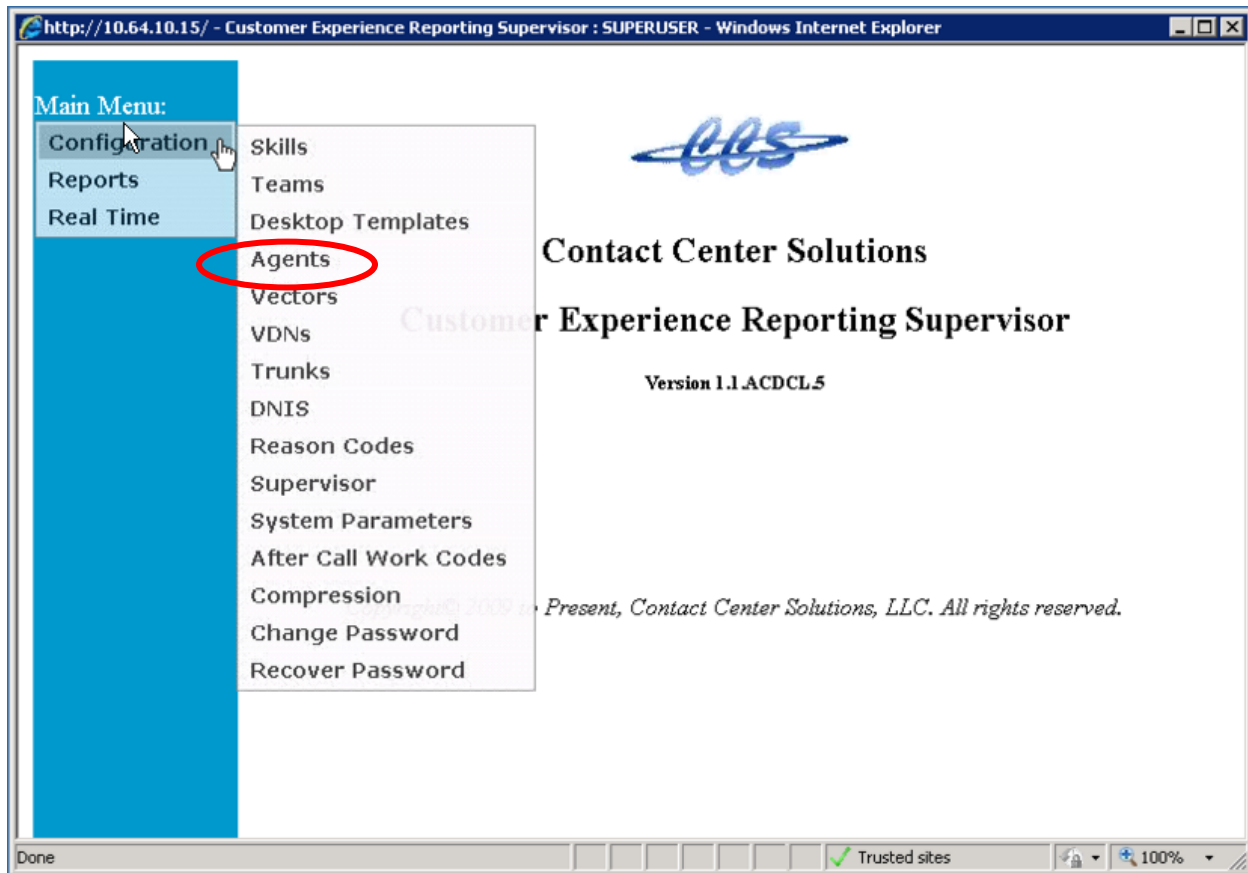
[Request Processed](#)

Trusted sites 100%

6.6. Administer Agents

From the Main Menu, select **Configuration** -> **Agents** from the left pane.

Select the **Agents** tab, and click **Add new record** to add a new agent.



Populate the **Agent Configuration** fields based on the information from the Communication Manager S8300 Server.

- Choose the **ACD System** from the pull-down menu. Populate the fields for **Agent Information**, including **Agent ID** and **Agent Name**. Set other parameters as needed. Hit **Submit**.

http://10.64.10.15/ - Agent Configuration - Windows Internet Explorer

Agent Configuration

ACD System Server1 PBX

Agent Information

Agent ID 5310

Agent Name AGENT 1

Automatic Login ☐ **Automatic AVAIL** ☐

Desktop Template

Telephone

COR 1 **Auto Answer** none

Agent Ext. No. 5200

Miscellaneous

Team 0

After Call Work (ACW) none Indefinite

After ACD call, phone will remain in ACW mode Indefinitely.

Forced ACW Code ☐

Skill Selection

Level	Skill No.	Skill Name	Priority
1	10	TESTHUNT	1
2			
3			
4			
5			
6			
7			
8			
9			
10			
1 2			

Submit
Cancel
[Insert Mode](#)

Trusted sites 100%

Repeat this section to add the remaining agents. Agents that were previously added can be modified using the pull-down menu under **Agent ID** or **Agent Name**.

http://10.64.10.15/ - Agent Configuration - Windows Internet Explorer

Agent Configuration

ACD System Server1 PBX Sort Agent by ID Agent List All

Agent Information

Agent ID 5319 Agent Name Agent 10

Agent Name 5310
5311
5312
5313
5314
5315
5316
5317
5318
5319

Automatic Login ☐ Automatic AVAIL ☐

Desktop Template

Telephone

COR 1 Auto Answer none

Agent Ext. No. 5209

Miscellaneous

Team 0

After Call Work (ACW) Time PBX Controlled

Check "ACW Time" for skills (0 means immediate to Avail).

Forced ACW Code ☐

Last Modified 12/21/2009 4:31:42 PM

[Request Processed](#)

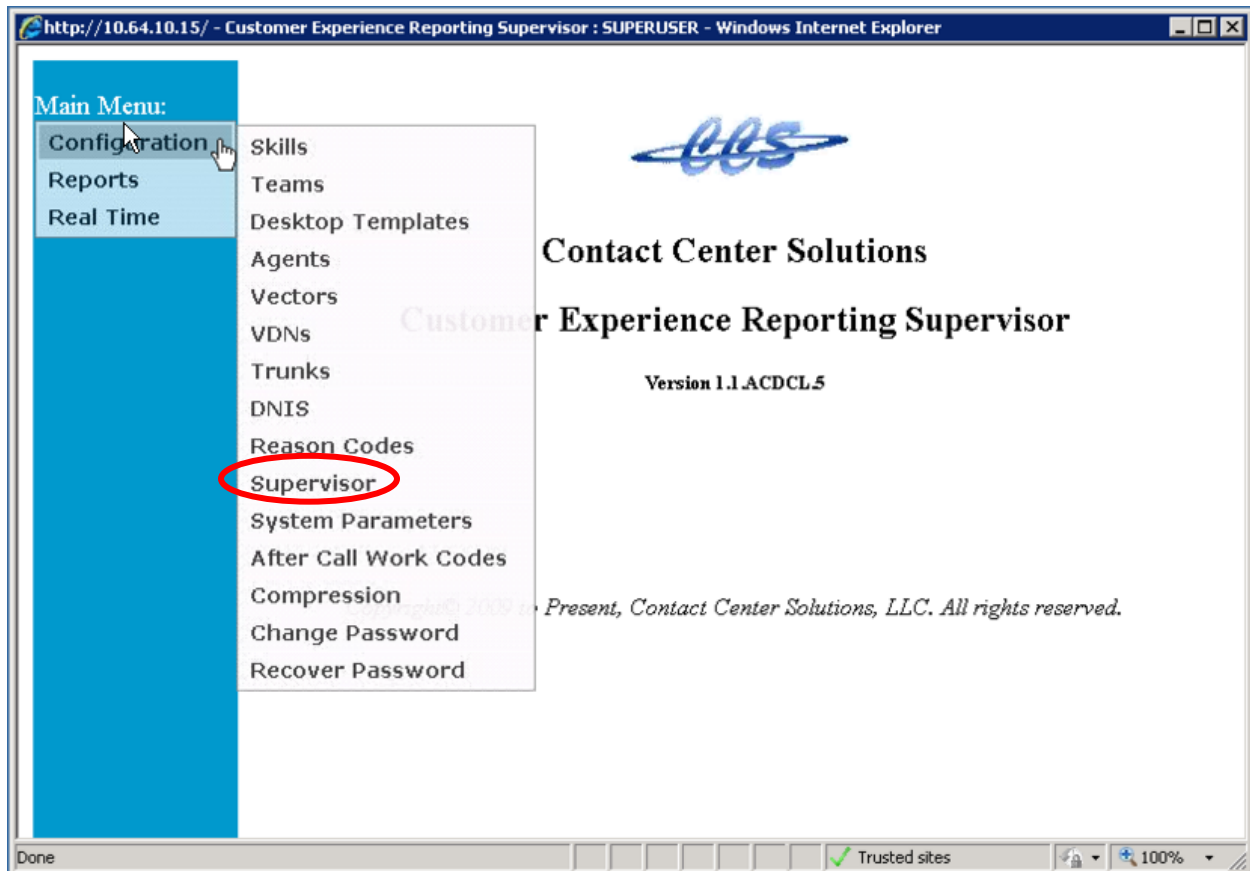
Submit Insert Delete < Previous Next >

Level	Skill No.	Skill Name	Priority
1	12	TESTHUNT2	1
2			
3			
4			
5			
6			
7			
8			
9			
10			
12			

Trusted sites 100%

6.7. Administer Supervisor(s)

From the Main Menu, select **Configuration** -> **Supervisor** from the left pane.



Populate the **Supervisor Configuration** fields based on the information from the Communication Manager S8300 Server.

- Choose the **ACD System** from the pull-down menu. Populate the fields for **Supervisor Information**, including **Supervisor Login Name** and **Supervisor Login ID**. Set other parameters as needed, including **ACD Skills**, **ACD Teams**, and **ACD VDNs** that the Supervisor will monitor. Hit **Submit**.

The screenshot shows a web browser window titled "http://10.64.10.15/ - Supervisor Configuration - Windows Internet Explorer". The page content is titled "Supervisor Configuration".

ACD System: A pull-down menu showing "Server1 PBX".

Sort Supervisor by: A pull-down menu.

Supervisor Information:

- Supervisor Login Name**: Text input field containing "Skill1 Super".
- Supervisor Login ID**: Text input field containing "skill1".
- Login Limit**: Text input field containing "1".

Features: A button labeled "Features...".

Telephone:

- Ext. No.**: Text input field.

Viewable Supervisor Entities:

ACD Skills	ACD Teams	ACD VDNs
<div>Insert Delete</div> <div>10 : TESTHUNT</div>	<div>Insert Delete</div> <div></div>	<div>Insert Delete</div> <div>5610 : TestVDN</div>

At the bottom of the form are buttons for **Submit**, **Cancel**, and a link labeled **Insert Mode** in red text.

The browser status bar at the bottom shows "Done", "Trusted sites", and a zoom level of "100%".

Populate the **Supervisor Feature Configuration** fields based on the information from the Communication Manager S8300 Server.

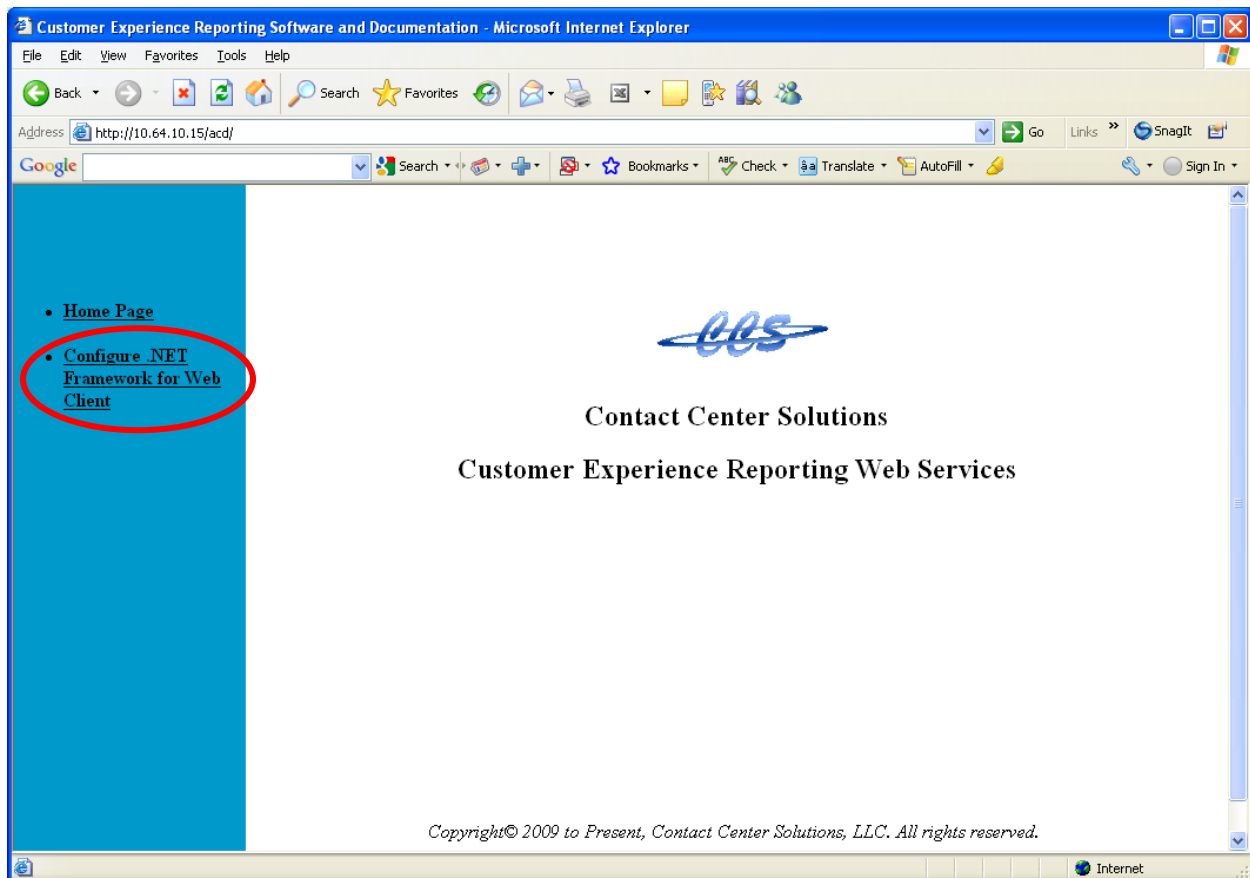
- Check the fields shown in the following screen shot for **Skill Displays**, **VDN Displays**, **Reports**, **Utility**, and **Vector**. Set the **Configuration and Administration Privileges** and shown in the screen below. This sets administrative privileges or restrictions of the Supervisor in CER. Hit **Apply**.

Feature Names	Feature Names	Feature Names	Privilege
Skill Displays	Reports	Configuration and Administration	
<input checked="" type="checkbox"/> Skill Agent Status	<input checked="" type="checkbox"/> On Demand Reports	Skills	Full
Agent State Notify	<input checked="" type="checkbox"/> Scheduled Reports	Teams	None
<input type="checkbox"/> External Outgoing Call	<input checked="" type="checkbox"/> Scheduled Reports All	Agent Desktop Templates	None
<input type="checkbox"/> External Incoming Call	<input checked="" type="checkbox"/> Call Track Reports	Agents	View
<input type="checkbox"/> Internal Call	<input checked="" type="checkbox"/> Configuration Reports	Announcements	None
<input type="checkbox"/> ACD IN	<input checked="" type="checkbox"/> Global Report View	Vectors	View
<input type="checkbox"/> RONA	Utility	Vector Scheduling	None
<input type="checkbox"/> ACW	<input type="checkbox"/> Recover Password	VDNs	None
<input type="checkbox"/> AUX	<input type="checkbox"/> Change Password	Trunk Groups	None
<input checked="" type="checkbox"/> Team Agent Status	<input checked="" type="checkbox"/> Agent Control	Trunks	None
<input checked="" type="checkbox"/> Skill Status	<input type="checkbox"/> Database Compression	DNIS	None
<input checked="" type="checkbox"/> Skill Status Graphs	Vector	Reason Codes	Modify
VDN Displays	<input checked="" type="checkbox"/> Activate	Supervisor	None
<input checked="" type="checkbox"/> VDN Call	<input checked="" type="checkbox"/> Override	Supervisor Features	None
<input checked="" type="checkbox"/> VDN Call Graphs	<input checked="" type="checkbox"/> Emergency Override	System Parameters	None
<input checked="" type="checkbox"/> Call Info		ACW Codes	View

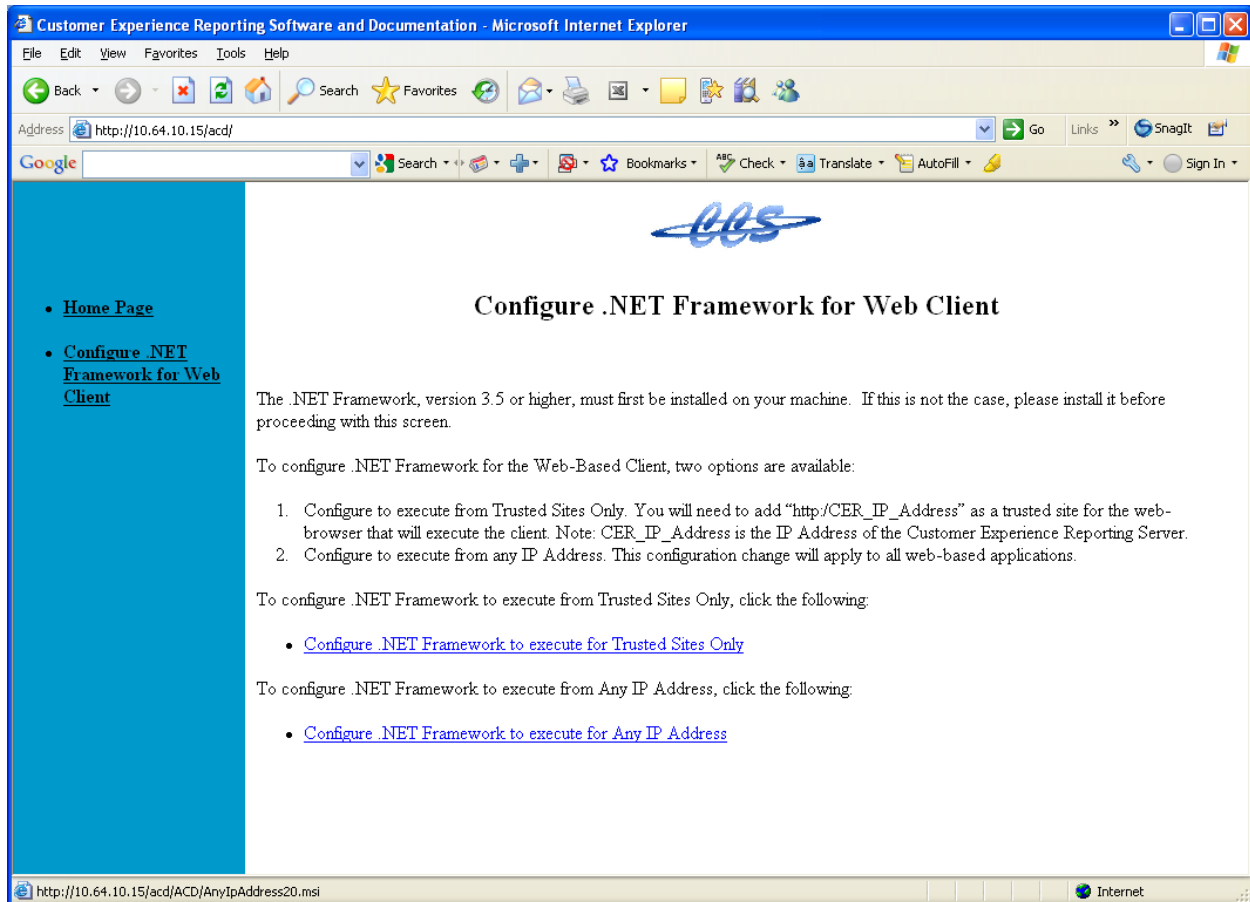
Apply Close

6.8. Web Client Installation

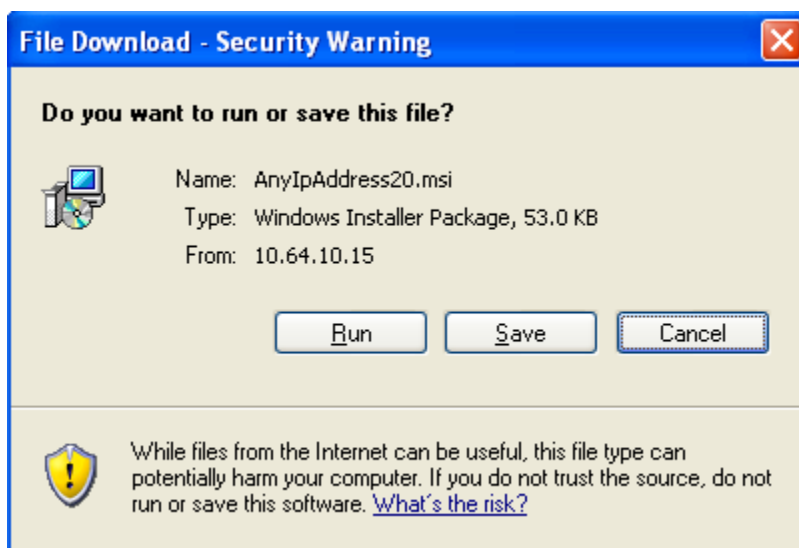
Bring up a browser and type in <ip-address/acd>. The screen that appears allows the end user to download the client. Click on **Configure .NET Framework for Web Client**.



At the Configure screen, choose one of the two links to set up the client. In this case, the second link, **Configure .NET Framework to execute for Any IP Address** was used.




Choose either **Run** or **Save** to download the client.



Once the client is downloaded, type into the browser **http://ip-address/acdclient**, where **ip-address** is the IP address of the Customer Experience Reporting server. This brings up a login page. Log in with the appropriate credentials. Both Agents and Supervisors will log in using this method.

The screenshot shows a Windows Internet Explorer browser window titled "CCS Customer Experience Reporting Application - Windows Internet Explorer". The address bar displays "http://10.64.10.15/acdclient/". The page content includes a welcome message, the CCS logo, the application name "Customer Experience Reporting Client 1.1.ACDCL.6", copyright information "Copyright© 2009 to Present, Contact Center Solutions, LLC All rights reserved", and a login form with fields for "User Name" and "Password", and a "Login" button.

Welcome to CCS Customer Experience Reporting



Customer Experience Reporting Client
1.1.ACDCL.6

Copyright© 2009 to Present, Contact Center Solutions, LLC
All rights reserved

Login

User Name


Password

6.9. Accessing Instant Messaging

Log into the Web Client. Once logged in, select a server to log into. Hit **Submit**.

The screenshot shows a web browser window titled "CCS Customer Experience Reporting Application - Windows Internet Explorer". The address bar shows "http://10.64.10.15/acdclient/". The page content includes a welcome message, the CCS logo, and client version information. Below this, a table lists available connections for selection. The "Server1 PBX" connection is selected, and a "Submit" button is visible at the bottom of the selection area.


Welcome to CCS Customer Experience Reporting



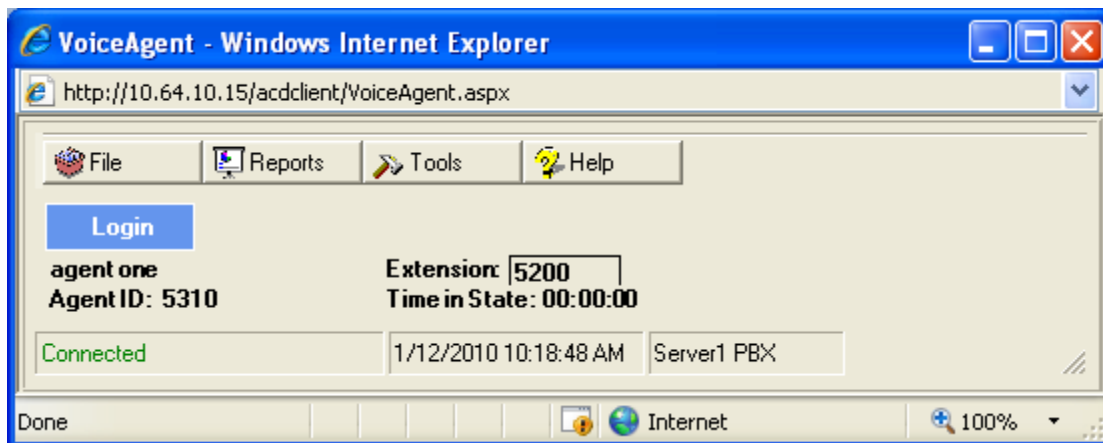
Customer Experience Reporting Client
1.1.ACDCL.6

Copyright© 2009 to Present, Contact Center Solutions, LLC
All rights reserved

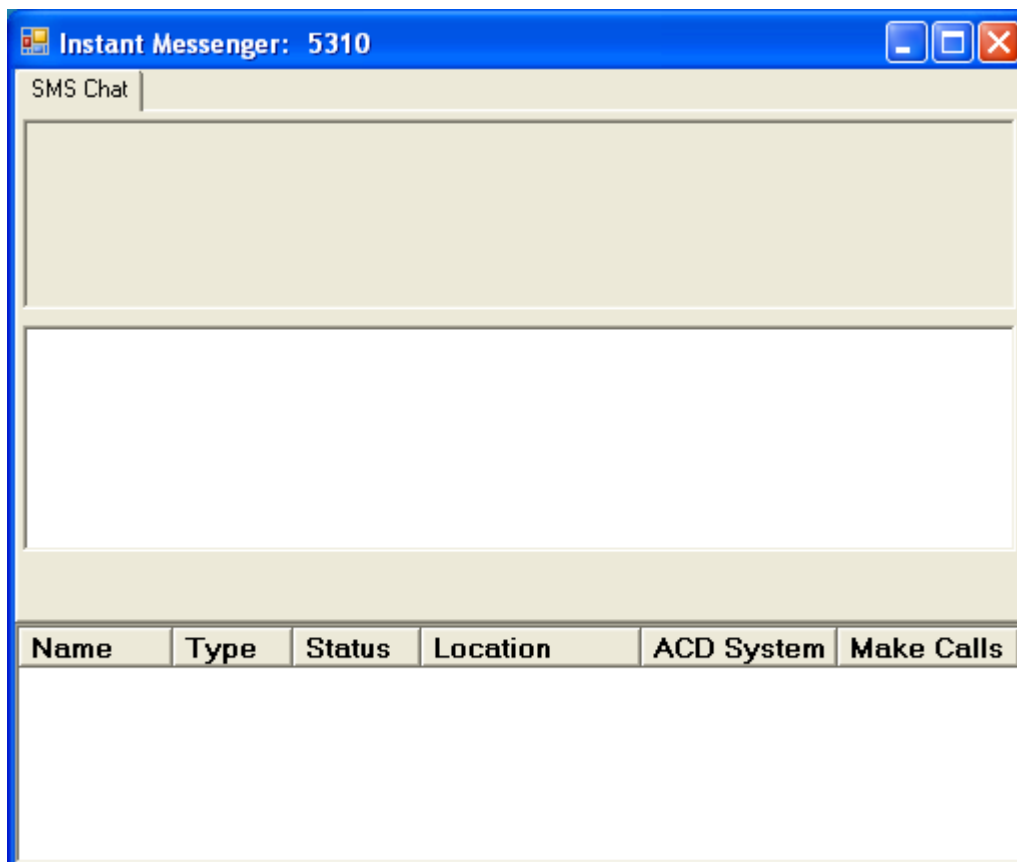
Please make your selection(s):

Available Connection: 1 Name: superuser				
	Select	PBX Name	Status	Type
	<input checked="" type="checkbox"/>	Server1 PBX	Access permitted.	Supervisor

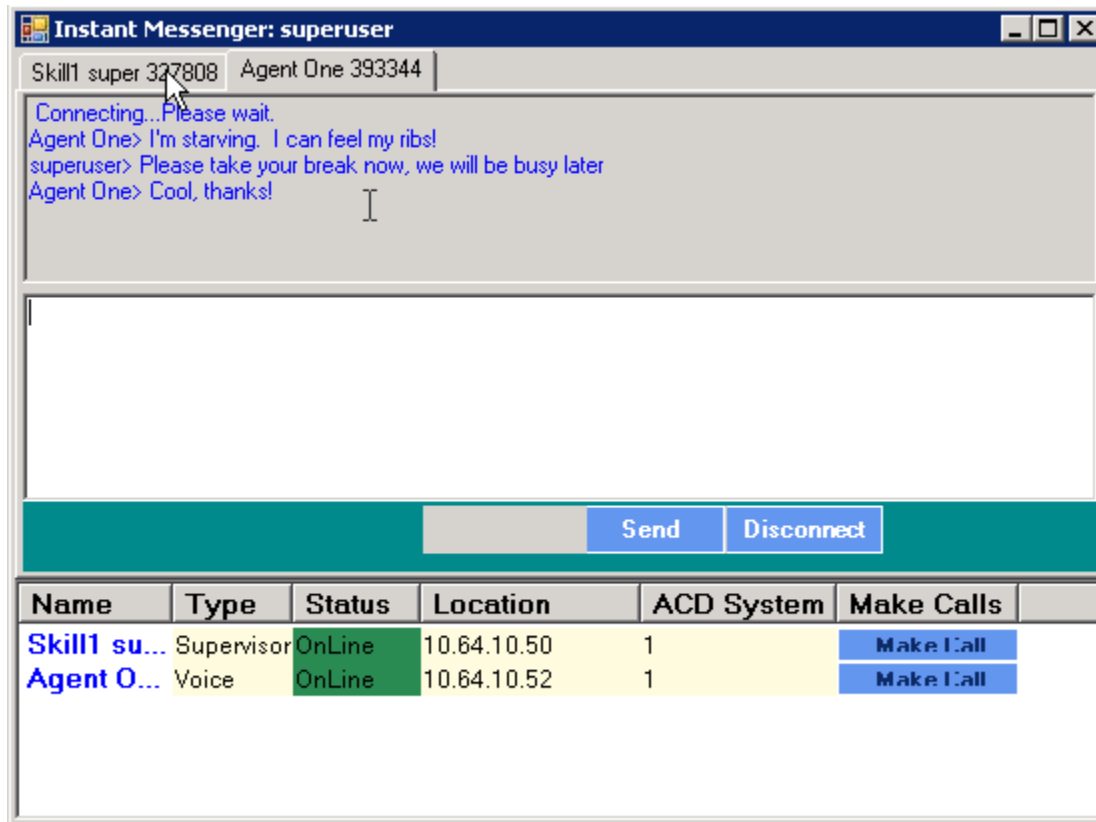
Once access is granted, the end user will see the screen below. The Agent can hit the Login button to log in. In order to initiate a Messenger session, choose **Tools -> Messenger**.



This brings up an Instant Messenger Window.



When additional Agents and Supervisors are online, that information is shown at the bottom of the screen with **Name** listed in blue. A chat session is initiated using the **Make Call** button. Chat can be seen in the top window in blue. More than one chat session can take place and can be seen with the multiple tabs, as seen in the screen below.



7. General Test Approach and Test Results

All feature functionality test cases were performed manually to verify proper operation. The following scenarios were tested using the test configuration diagram shown in **Figure 1**.

The installation test cases were covered with the setup of Communication Manager, Application Enablement Services, and Customer Experience Reporting. The clean removal of the application was also covered in this section.

The functionality test cases were performed manually. Various calls were placed including incoming PSTN calls to the hunt groups, and incoming and outgoing personal calls from the agents.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet cable to an IP telephone, the Customer Experience Reporting server, and Communication Manager, and also by busying out the CTI port connection to Application Enablement Services from Communication Manager.

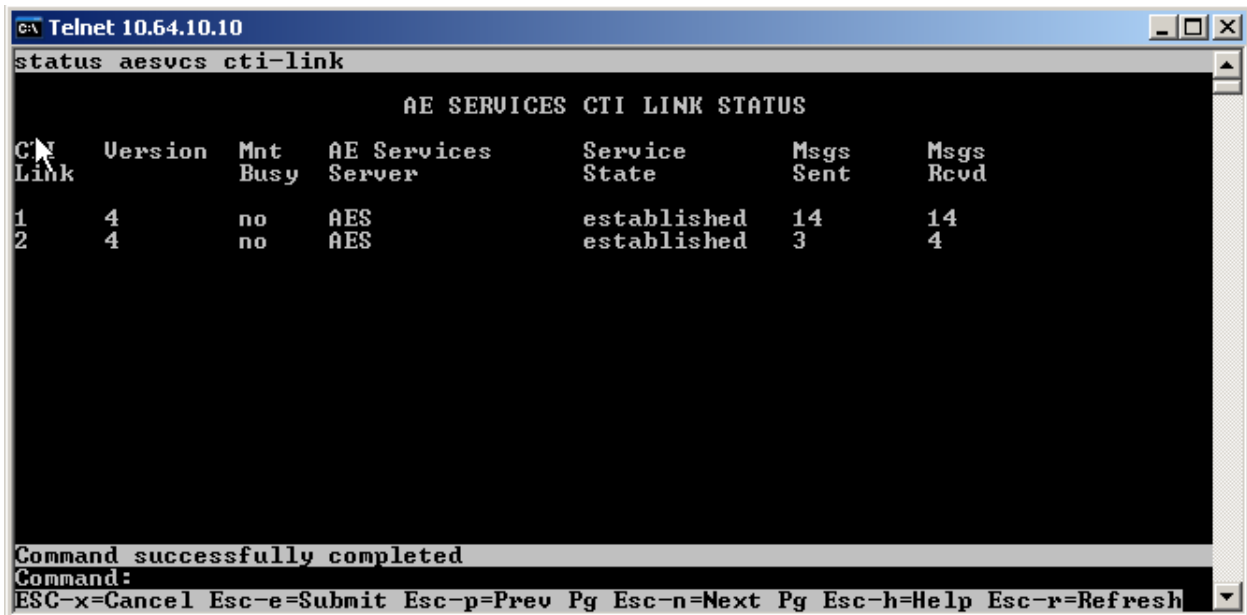
The verification of tests included manually checking of agent and VDN status from the various reports using the Customer Experience Reporting portal, checking system status via the Admin Console, and checking the accuracy of the historical reports over multiple test days from the portal.

All test cases passed. No errors were detected.

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services, and Customer Experience Reporting.

For Communication Manager, check the CTI Link status with the **status aesvcs cti-link** command. The link status should show **no** for maintenance busy (**Mnt Busy**) and the **Service State** should indicate **established**.



```
C:\ Telnet 10.64.10.10
status aesvcs cti-link

                          AE SERVICES CTI LINK STATUS

Link  Version  Mnt  AE Services  Service  Msgs  Msgs
Link                Busy  Server    State    Sent   Rcvd
1      4        no    AES         established  14    14
2      4        no    AES         established   3     4

Command successfully completed
Command:
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

For Application Enablement Services, the **TSAPI Service** should show as **Running, ONLINE,** and **Yes** for **Licenses Purchased**.

Welcome to CTI OAM Screens - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://10.64.10.20/MVAP/forms/cti/ctiHome.jsp>

AVAYA **Application Enablement Services**
Operations Administration and Maintenance

[OAM Home](#) [Help](#) [Logout](#)

You are here: > [CTI OAM Home](#)

Welcome to CTI OAM Screens

[craft] Last login: Mon Nov 2 20:01:05 2009 from 10.64.10.15

IMPORTANT: AE Services must be restarted for administrative changes to fully take effect.
Changes to the Security Database do not require a restart.

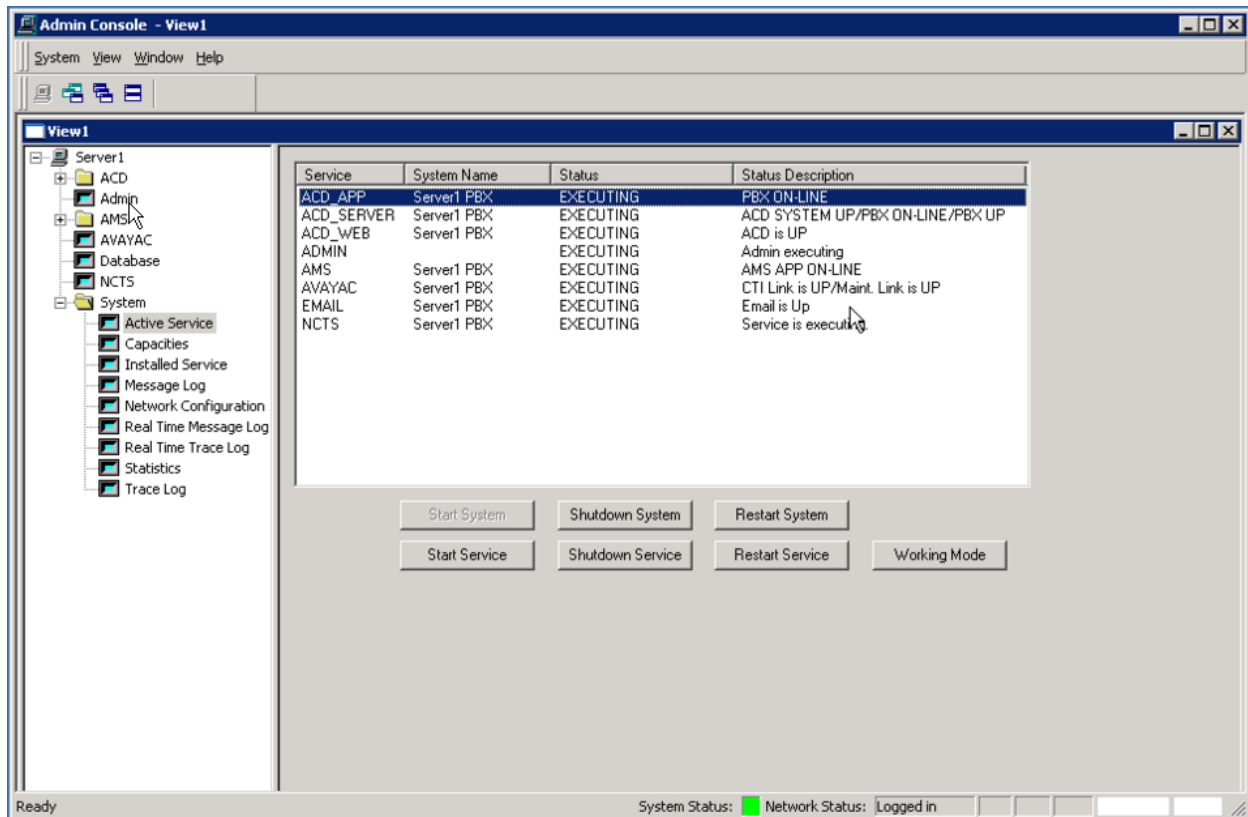
Service	Status	State	Licenses Purchased
ASAI Link Manager	Running	N/A	N/A
DMCC Service	Running	ONLINE	Yes
CVLAN Service	Running	ONLINE	Yes
DLG Service	Running	ONLINE	Yes
Transport Layer Service	Running	N/A	N/A
TSAPI Service	Running	ONLINE	Yes
SMS	N/A	N/A	Yes

For status on actual services, please use [Status and Control](#).

License Information

You are licensed to run Application Enablement (CTI) version 4.2.

In the Customer Experience Reporting Admin Console, the **System Status** box should show as green, and all other Services on this screen (**ACD_APP**, **ACD_SERVER**, **ACD_WEB**, **ADMIN**, **AMS**, **AVAYAC**, **EMAIL**, and **NCTS**) should be up and executing.



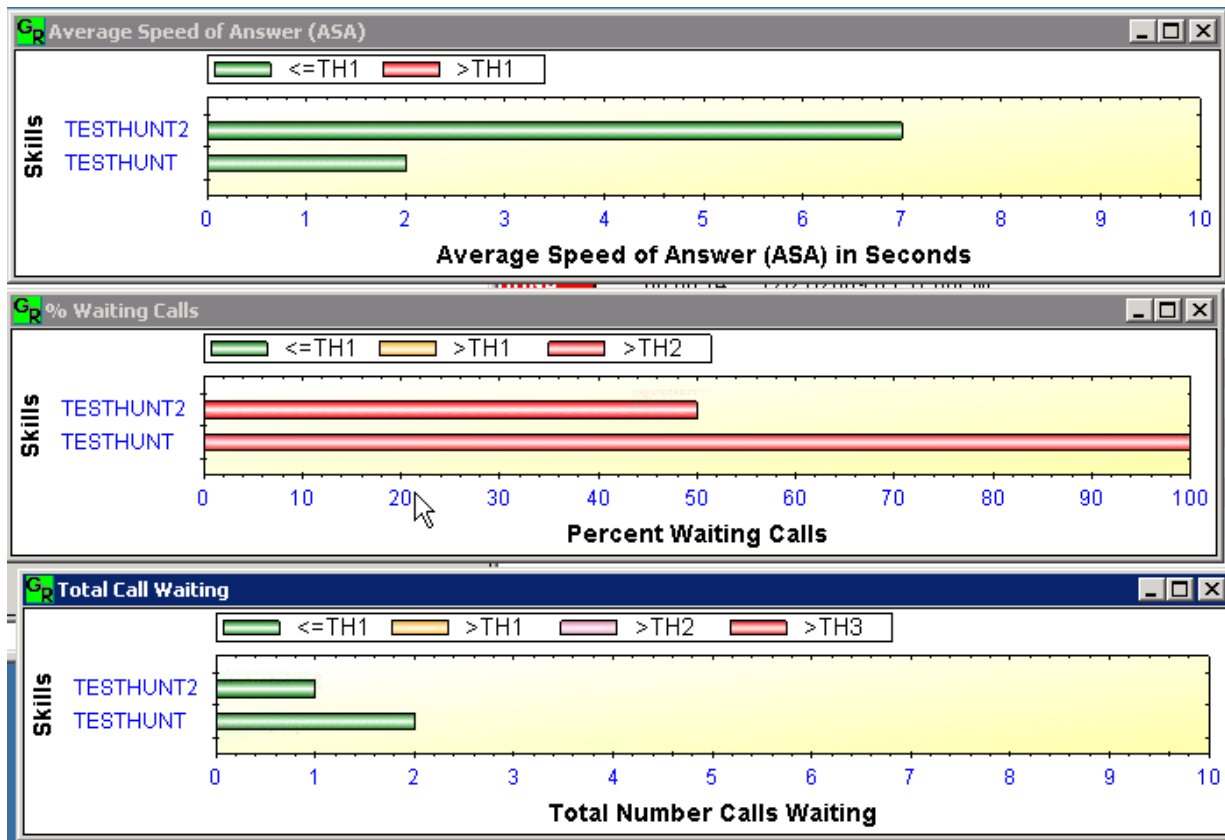
In the Skill Agent Status Report, Customer Experience Reporting shows all of the Agents that have been configured and their status real-time status.

Skill Agent Status Report: superuser - (10:TESTHUNT, 12:TESTHUNT2)																			
Agent Summary																			
Agents	ACD IN	AVAIL	ACW	EXT OUT	AUX	INT	EXT IN	UNAVAIL	HELD	RING	DIAL	GOS	NCW	LCW	>TH1	>TH2	ASA	%ABN	
5	0	4	0	0	1	0	0	0	0	0	0	100	0	0	0	0	0	0	0
Detail Agent Status																			
ID	Ext #	Name	Skill	Team	Alert	Pri	State	CI	St Time	Log In/Out Time	Reason								
5310	5200	AGENT 1	10	0		1	AVAIL		00:00:54	12/21/2009 05:07:30PM									
5311	5201	Agent 2	10	0		1	AVAIL		00:00:44	12/21/2009 05:07:41PM									
5312	5202	Agent 3	10				LOGOUT		00:00:00										
5313	5203	Agent 4	10	0		1	AVAIL		00:01:04	12/21/2009 05:07:20PM									
5314	5204	Agent 5	10	0		1	AUX		00:00:24	12/21/2009 05:07:59PM									
5315	5205	Agent 6	12	0		1	AVAIL		00:00:04	12/21/2009 05:08:10PM									
5316	5206	Agent 7	12				LOGOUT		00:00:00										
5317	5207	Agent 8	12				LOGOUT		00:00:00										
5318	5208	Agent 9	12				LOGOUT		00:00:00										
5319	5209	Agent 10	12				LOGOUT		00:00:00										

Once multiple calls are in progress and have been completed, the reporting can be verified with real time and historical reports, in this case by using the Skill Agent Status Report.

Skill Agent Status Report: superuser - (10:TESTHUNT, 12:TESTHUNT2)																			
Agent Summary																			
Agents	ACD IN	AVAIL	ACW	EXT OUT	AUX	INT	EXT IN	UNAVAIL	HELD	RING	DIAL	GOS	NCW	LCW	>TH1	>TH2	ASA	%ABN	
9	2	0	0	0	1	5	0	0	0	0	1	100	0	0	0	0	4	0	
Detail Agent Status																			
ID	Ext #	Name	Skill	Team	Alert	Pri	State	CI	St Time	Log In/Out Time	Reason								
5310	5200	AGENT 1	10	0		1	INTERNAL	CI	00:01:57	12/21/2009 05:31:47PM									
5311	5201	Agent 2	10	0		1	INTERNAL	CI	00:02:07	12/21/2009 05:31:06PM									
5312	5202	Agent 3	10	0		1	ACD IN	CI	00:02:13	12/21/2009 05:31:03PM									
5313	5203	Agent 4	10	0		1	INTERNAL	CI	00:02:13	12/21/2009 05:31:29PM									
5314	5204	Agent 5	10	0		1	INTERNAL	CI	00:01:57	12/21/2009 05:30:59PM									
5315	5205	Agent 6	12	0		1	ACD IN	CI	00:02:07	12/21/2009 05:31:25PM									
5316	5209	Agent 7	12	0		1	DIAL		00:00:57	12/22/2009 08:32:39AM									
5317	5207	Agent 8	12	0		1	INTERNAL	CI	00:01:17	12/21/2009 05:38:49PM									
5318	5208	Agent 9	12	0		1	AUX		00:52:00	12/22/2009 08:36:34AM									
5319	5209	Agent 10	12				LOGOUT		00:00:00										

Once calls have been made, graphical representations of the data can be confirmed for multiple report types. Shown below are the representations for the reports including **Average Speed of Answer**, **% Waiting Calls**, and **Total Call Waiting**.



Additions and changes to the system can be verified using the **System Configuration Changes Report**.

12-22-2009 11:01
Requested by: superuser

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SYSTEM CONFIGURATION CHANGES REPORT

12-21-09 00:00 - 12-22-09 23:59

Sup ID	Sup Name	Table Name	Mode	Record	Modified Time
Server1 PBX					
1	SUPERUSER	Skill Group	Inserted	Group: 10	12-21-09 16:17
1	SUPERUSER	Skill Group	Inserted	Group: 12	12-21-09 16:18
1	SUPERUSER	Agent	Inserted	Agent: 5310	12-21-09 16:24
1	SUPERUSER	Agent	Modified	Agent: 5310	12-21-09 16:25
1	SUPERUSER	Agent	Inserted	Agent: 5311	12-21-09 16:27
1	SUPERUSER	Agent	Inserted	Agent: 5312	12-21-09 16:27
1	SUPERUSER	Agent	Inserted	Agent: 5313	12-21-09 16:28
1	SUPERUSER	Agent	Inserted	Agent: 5314	12-21-09 16:28
1	SUPERUSER	Agent	Inserted	Agent: 5315	12-21-09 16:29
1	SUPERUSER	Agent	Inserted	Agent: 5316	12-21-09 16:30
1	SUPERUSER	Agent	Inserted	Agent: 5317	12-21-09 16:30
1	SUPERUSER	Agent	Inserted	Agent: 5318	12-21-09 16:31
1	SUPERUSER	Agent	Inserted	Agent: 5319	12-21-09 16:31
1	SUPERUSER	VDN	Inserted	VDN: 5610	12-21-09 16:36
1	SUPERUSER	VDN	Inserted	VDN: 5612	12-21-09 16:37
1	SUPERUSER	Vector	Inserted	Vector: 1	12-21-09 16:41
1	SUPERUSER	Vector	Inserted	Vector: 12	12-21-09 16:43

9. Conclusion

Customer Experience Reporting was compliance tested with Communication Manager and Application Enablement Services. Customer Experience Reporting successfully monitored and produced reports on phone activity for agents and ACD/skill groups. All test cases completed successfully.

10. Additional References

This section references the Avaya and Customer Experience Reporting product documentation that are relevant to these Application Notes.

The following Avaya product documentation can be found at <http://support.avaya.com>:

[1] *Administering AvayaTM Communication Manager*, Doc ID: 03-300509, Issue 5.0, Release 5.2, May 2009

[2] *Avaya MultiVantage Application Enablement Services Administration and Maintenance Guide*, Doc ID: 02-300357, Release 4.2, Issue 10, May 2008

[3] Customer Experience Reporting User's Guide, V1.1, available via request to inquiries@ccscallcenters.com

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