



Avaya Solution & Interoperability Test Lab

Application Notes for Syntec CardEasy CCT service Version 1.0 with Avaya Aura® Contact Center Communication Control Toolkit Release 7.0 and Avaya Communication Server 1000 Release 7.6 Manager - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Syntec CardEasy CCT service with Avaya Aura ® Contact Center Communication Control Toolkit and Avaya Communication Server 1000. Syntec CardEasy enables secure payments over the phone, entered via DTMF, without an agent being able to see the secure information being entered.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required to integrate the Syntec CardEasy CCT (CardEasy CCT) service with Avaya Aura® Contact Center Communication Control Toolkit (CCT) and Avaya Communication Server 1000 (CS1000). CardEasy CCT enables secure payments over the phone, entered via DTMF, without an agent being able to see the secure information being entered.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on establishing contact center calls from simulated PSTN via SIP and PRI trunks to contact center agents that were being monitored by CardEasy CCT service. The basic telephony features were exercised, such as inbound, outbound call, hold and retrieve, DTMF, blind, consulted and conference from the Avaya agent phones.

The serviceability testing focused on verifying that the CardEasy CCT service would come back into service after re-connecting the network connection or rebooting the CCT services.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in this DevConnect Application Note included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with this Application Note, the interface between Avaya systems and the CardEasy CCT service did not include use of any specific encryption features.

Encryption (TLS/SRTP) was used internal to the enterprise between Avaya products.

2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- Proper transmission of DTMF tones from the CardEasy CCT service when contact center call is established by agent.
- Basic telephony features, including hold and resume, transfer, and 3-way conference, initiated from the Avaya agent phone.
- Proper system recovery after re-connecting of the CardEasy CCT service and restart the CCT services.

2.2. Test Results

All test cases passed with the following observation(s):

- When an agent receives a call from an internal user/agent and performs a blind transfer or a consult transfer to an outbound number, from the CCT Refclient that controls the agent phones, the CCT Refclient does not get the update with calling number and state when the transfer is completed. The CardEasy CCT service relies on this information to send out DTMF, therefore DTMF will not be sent to an external application. This is not a common scenario. The issue is currently being investigated by Avaya.

2.3. Support

For technical support and information on CardEasy CCT, contact Syntec support at:

- Tel: +44 020 7741 8000
- Website: <https://www.syntec.co.uk/>

3. Reference Configuration

Figure 1 illustrates a sample configuration with an Avaya Communication Server 1000, Avaya Aura® Contact Center and Syntec CardEasy CCT Service installed on a Windows 2012 server.

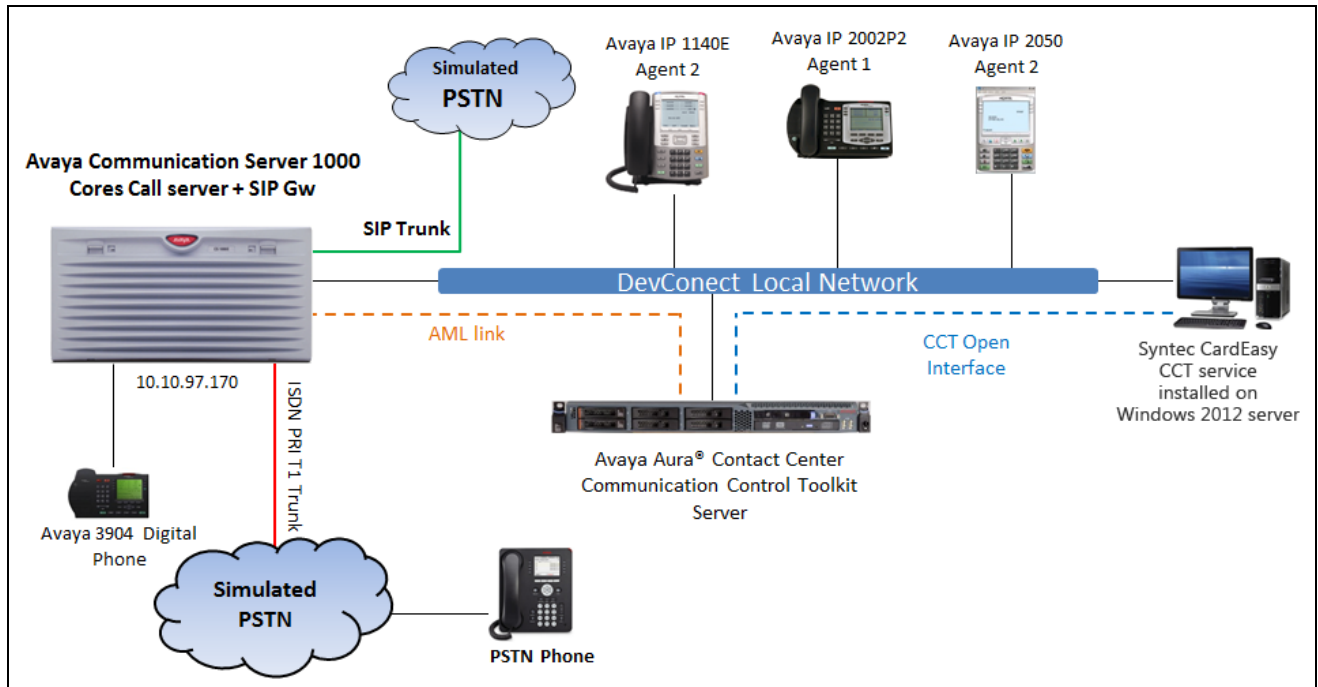


Figure 1: Test configuration diagram with Syntec CardEasy CCT service

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Communication Server 1000	7.6 SP9
Avaya Aura® Contact Center	7.0.2
Avaya 2050PC IP Softphone	4.4
Avaya IP 2002P2	4.0 (DCO)
Avaya 1140E IP Telephone	5.4
Syntec CardEasy CCT Service installed on Windows Server 2012	1.0.0

5. Configure Avaya Communication Server 1000

This document assumes that the CS100 system was properly installed and configured as per the product documents. This section provides the steps on how to provision the CS1000 to work with the Contact Center. For more information about how to install and configure CS100, please refer to **Section 10**.

The following summarizes the tasks which need to be done on the CS1000. This section just shows configurations provisioned by using overlay (LD) commands; the configurations can be also done by using Element Manger.

- Check Software Packages for Contact Center feature.
- Configure ELAN and VAS for Contact Center.
- Configure Automatic Call Distribution.
- Configure Controlled Directory Number.
- Configure Agent Station.

5.1. Check Software Packages for Contact Center Feature

Use overlay 22 to print software packages required for Contact Center feature. Make sure the following software packages are equipped in the CS 1000 system.

```
>ld 22
PT2000
REQ  PRT
TYPE PKG
BACD          40
ACDB          41
ACDC          42
LMAN          43
MUS           44
ACDA          45
ACDD          50
NGCC          311
```

Use the same overlay 22 command to print out allowed numbers of ACD agents, AST and AML.

```
>LD 22
PT2000
REQ  SLT
ACD AGENTS      32767    LEFT 32737    USED    30
AST             32767    LEFT 32717    USED    50
AML             16      LEFT   10      USED     6
```

5.2. Configure ELAN and VAS for Contact Center application

Use overlay 17 to create an Application Module over Ethernet (ELAN) for Contact Center application.

```
>LD 17
CFN000
REQ  CHG
TYPE ADAN
ADAN NEW ELAN 19
CTYP ELAN
DES  AACC70
LCTL
```

Use overlay 17 to create a Value Added Server (VAS) to associate with the ELAN above.

```
>LD 17
CFN000
REQ  CHG
TYPE VAS
VAS  NEW
VSID 19
ELAN 19
SECU Yes
INTL
MCNT
```

5.3. Configure Automatic Call Distribution (ACD) Queue

Use overlay 23 to create an ACD queue for Contact Center agent. The important fields are displayed below, for other fields in the command, keep hitting “Enter” key on the keyboard to use default value.

```
>LD 23
REQ  NEW
TYPE ACD
CUST 0
ACDN 4697
MWC NO
DSAC
MAXP 50 --> Maximum Agent Positions assigned to this queue, the number
range from 1-120
```

5.4. Configure Controlled Directory Number (CDN)

Use overlay 23 to create a CDN number for Contact Center agent. The important fields are displayed below, for other fields in the command, keep hitting “Enter” key on the keyboard to use default value.

```
>LD 23
REQ  NEW
TYPE CDN
CUST 0
CDN  4646
DFDN 4697
```

5.5. Configure Agent Station

User overlay 11 to create or change configuration for agent phone. The important fields are displayed below, for other fields in the command keep hitting “Enter” key on the keyboard to use default values. In the compliance test, 5 agents from agent1 to agent5 created for different phone types used for testing purpose. This configuration below just represents one of agent phone type, 2050PC.

```
>LD 11
REQ: NEW
TYPE: 2050PC
TN   96 0 1 12
DES  Agent3
CUST 1
ZONE 1
AST 00 03
KEY  00 ACD 4697 0 1052
      AGN
      01 NRD
      02 MSB
      03 SCR 54405 0      MARP
      CPND
          CPND_LANG ROMAN
          NAME Agent3 4652
          XPLN 23
          DISPLAY FMT FIRST, LAST
```


6. Configure Avaya Aura® Contact Center

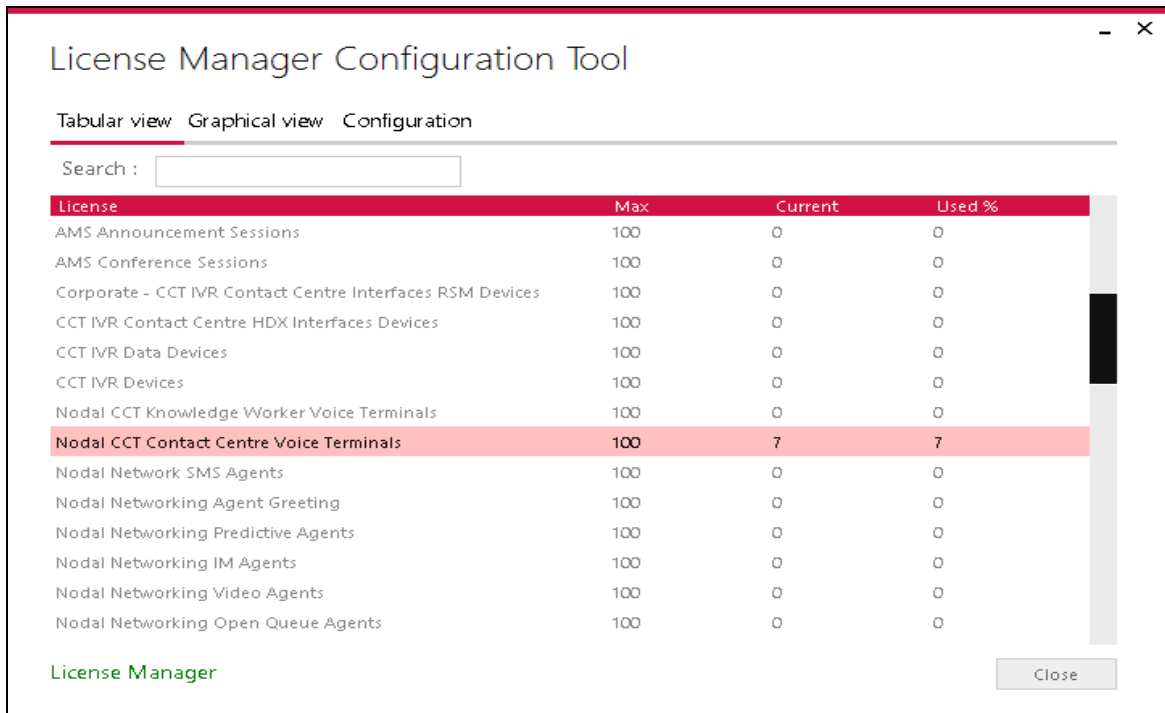
This section provides steps on how to configure Contact Center to work with Avaya Communication Server 1000 and the CardEasy CCT. This section assumes that Contact Center system is already installed and operated, the section provides steps for configuring the following configurations:

- Verify Contact Center License.
- Configure Contact Center Manager Server.
- Configure Windows users.
- Configure CCT Server.
- Configure CDN (Route Point).
- Configure Contact Phonesets.
- Configure Contact Center Agents.

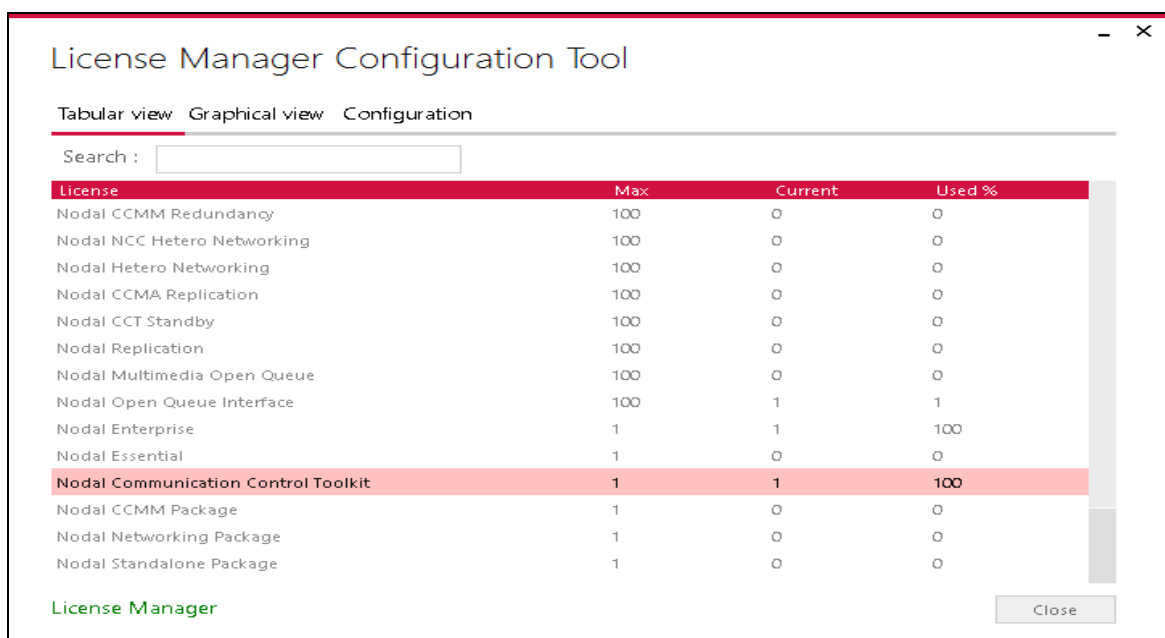
In the compliance test, the Contact Center system used is a co-res system which consists of Contact Center Manager Server, Contact Center Manager Administrator, Contact Center Communication Control Toolkit, and Contact Center License Manager.

6.1. Verify Contact Center License

From the Contact Center server where the License Manager is installed, navigate to menu **Start → All Programs → Avaya → Contact Center → License Manger → Configuration**. The **Contact Center Licensing window** is displayed; make sure CCT Contact Center Voice Terminals and Communication Control Toolkit Package and presented in the table as below.



License	Max	Current	Used %
AMS Announcement Sessions	100	0	0
AMS Conference Sessions	100	0	0
Corporate - CCT IVR Contact Centre Interfaces RSM Devices	100	0	0
CCT IVR Contact Centre HDX Interfaces Devices	100	0	0
CCT IVR Data Devices	100	0	0
CCT IVR Devices	100	0	0
Nodal CCT Knowledge Worker Voice Terminals	100	0	0
Nodal CCT Contact Centre Voice Terminals	100	7	7
Nodal Network SMS Agents	100	0	0
Nodal Networking Agent Greeting	100	0	0
Nodal Networking Predictive Agents	100	0	0
Nodal Networking IM Agents	100	0	0
Nodal Networking Video Agents	100	0	0
Nodal Networking Open Queue Agents	100	0	0



License	Max	Current	Used %
Nodal CCMM Redundancy	100	0	0
Nodal NCC Hetero Networking	100	0	0
Nodal Hetero Networking	100	0	0
Nodal CCMA Replication	100	0	0
Nodal CCT Standby	100	0	0
Nodal Replication	100	0	0
Nodal Multimedia Open Queue	100	0	0
Nodal Open Queue Interface	100	1	1
Nodal Enterprise	1	1	100
Nodal Essential	1	0	0
Nodal Communication Control Toolkit	1	1	100
Nodal CCMM Package	1	0	0
Nodal Networking Package	1	0	0
Nodal Standalone Package	1	0	0

6.2. Configure Contact Center Manager Server

From the Contact Center Manager Server machine, navigate to menu **Start → Apps → Avaya → Contact Center → Manager Server → Server Configuration**. The **Server Configuration** window is displayed, in the left navigation pane of the **Server Configuration** window, select **Local Settings**. The **Local Settings** window is displayed in the right, enter the following highlighted fields:

- **Site Name:** enter the computer name in CCMS server.
- **RSM IP address:** enter the Real-Time Statistics Multicast IP address in the box, the **234.5.6.10** is default IP address in the Contact Center when installed. Make sure the unique multicast IP used for the contact center.
- **Avaya Server Subnet:** Enter the contact center subnet IP in the box, e.g. 10.10.97.55.
- **Elan Subnet:** leave it blank if ELAN is not used.

The screenshot shows the 'Server Configuration' window with the 'Local Settings' tab selected in the left navigation pane. The main area displays the 'Contact Center Server Configuration' form. The form includes the Avaya logo and the title 'Contact Center Server Configuration'. The left navigation pane lists: Main Menu, Local Settings (selected), Licensing, Switch CS1000, CCT Server, WS Open Interfaces, and SalesForce. The main configuration area contains several input fields: 'Customer Information' with 'Customer Name' (DevConnect) and 'Company Name' (Avaya); 'Site Name' (AACCS1K); 'RSM IP Address' (Real-Time Statistics Multicast IP Address) with the value 234.5.6.10; 'Avaya Server Subnet' with 'Enter the CLAN Subnet IP Address' and 'IP Address' (10.10.97.55); and 'Elan Subnet' with a checkbox 'Enter the ELAN Subnet IP Address' (unchecked) and 'IP Address' (empty). At the bottom right, there are 'Exit' and 'Apply All' buttons.

Click on **Licensing** tab, the **License** window is displayed on the right. Depend on CCMS license, select proper CCMS package in the **CCMS Package** section, e.g. “**Nodal Enterprise**”. Check on the check box “**Open Queue**” in the **Optional Packages** window. Enter a proper serial number of CS1000 system in the **Serial Number** field, the serial number of CS1000 system can be found by issue overlay 22 with REQ ISSP. The License Server IP address section is kept as default if License Manager is installed on the same server with CCMS.

The screenshot shows the 'Server Configuration' window for Avaya Contact Center Server. The title bar reads 'Server Configuration'. The main header area displays the 'AVAYA' logo in red and the text 'Contact Center Server Configuration' in red. On the left is a 'Main Menu' tree with icons and labels: 'Local Settings', 'Licensing' (highlighted with a blue box), 'Switch CS1000', 'CCT Server', 'WS Open Interfaces', and 'SalesForce'. The main content area is divided into three sections. The 'License Manager Package' section contains a 'Package' dropdown menu set to 'Nodal Enterprise' and a 'Features' list with checkboxes: 'Networking', 'Web Based Statistics', 'Multiplicity', 'Open Queue' (checked), 'QI Open Queue' (checked), and 'QI Universal Networking'. Below this is a 'Serial Number' text field containing '46379'. The 'License Server IP Address' section contains a 'License Server IP' text field with the value '10.10.97.55'. At the bottom right are 'Exit' and 'Apply All' buttons. A progress bar is visible at the bottom left.

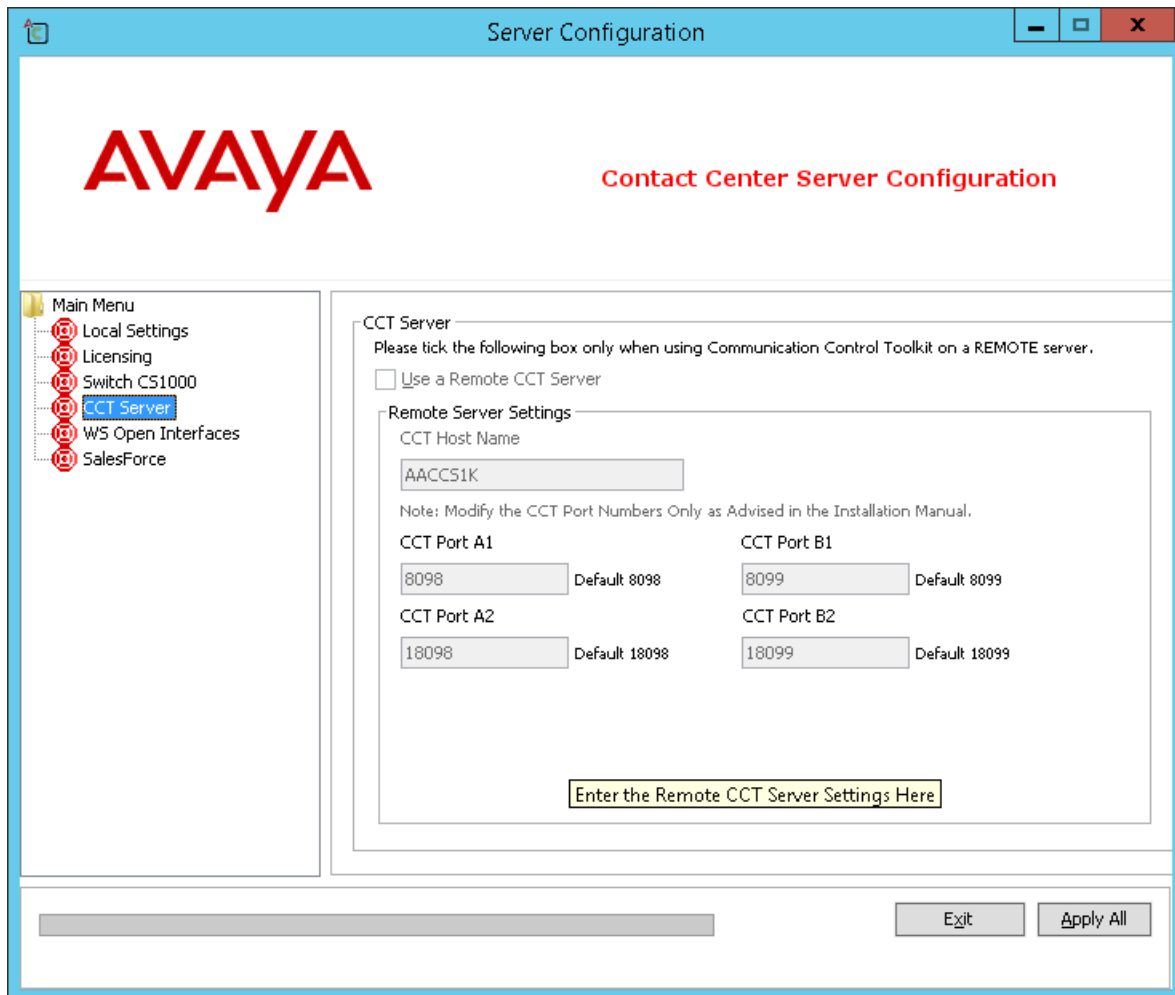
Click on **Switch CS1000** tab, the **Switch CS1000** window is displayed in the right. In the **CS1000 Switch Data** section, enter the name of call server CS1000 in the **Switch Name** field, e.g. “car2-cores”, an IP address in the **Switch IP**, e.g. “10.10.97.90”, and customer number in the **Switch Customer number**, e.gg “1”. Leave the **Voice Configuration Services** section as **None** if not used.

The screenshot shows the 'Server Configuration' window for Avaya Contact Center. The title bar reads 'Server Configuration'. The main header features the 'AVAYA' logo and the text 'Contact Center Server Configuration'. On the left is a 'Main Menu' with a tree view containing: Local Settings, Licensing, Switch CS1000 (highlighted), CCT Server, WS Open Interfaces, and SalesForce. The main area is divided into two sections: 'CS1000 Switch Data' and 'Voice Services Configuration'. The 'CS1000 Switch Data' section contains fields for 'Switch Name' (car2-cores), 'Switch IP' (10.10.97.90), 'Switch Customer Number' (1), 'Alternative Switch IP', 'Alternative Switch Customer Number', and 'Alternative Switch Serial ID'. The 'Voice Services Configuration' section has radio buttons for 'CallPilot', 'AAEP', and 'None' (selected), followed by fields for 'CallPilot ELAN IP Address', 'Port' (10008), 'CPHA Managed CLAN IP (optional)', and 'CallPilot CLAN IP Address'. At the bottom right are 'Exit' and 'Apply All' buttons.

Section	Field	Value
CS1000 Switch Data	Switch Name	car2-cores
	Switch IP	10.10.97.90
	Switch Customer Number	1
	Alternative Switch IP	
	Alternative Switch Customer Number	
	Alternative Switch Serial ID	
Voice Services Configuration	CallPilot / AAEP / None	None
	CallPilot ELAN IP Address	
	Port	10008
	CPHA Managed CLAN IP (optional)	
	CallPilot CLAN IP Address	

Click on **CCT Sever** tab, and leave it as default since the CCT server is installed on the same server with CCMS.

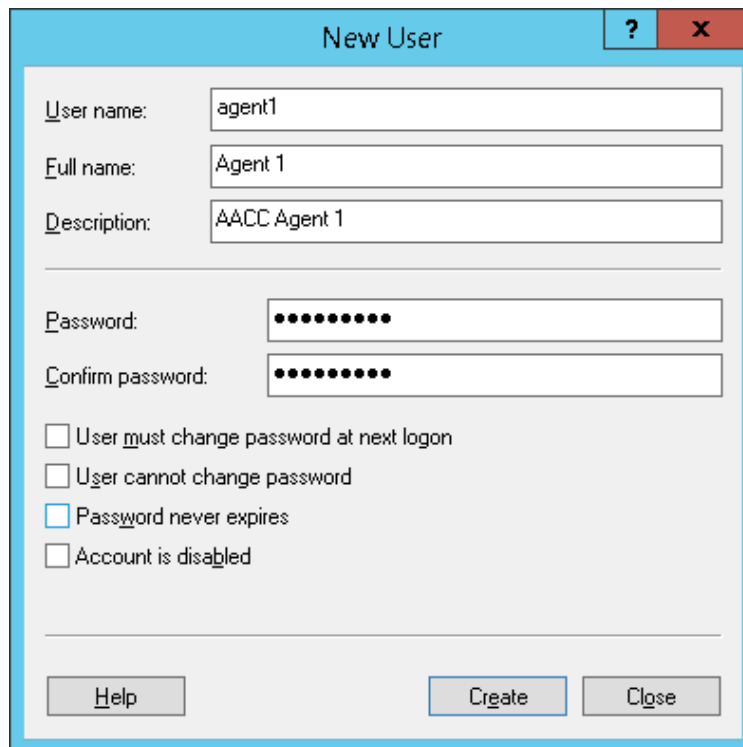
Click **Apply All** button to apply configuration to Contact Center Server Configuration and click **Exit** to close the window. The Contact Center CCMS needs a reboot for changes take effect.



6.3. Configure Windows Users

In the compliance test, the Contact Center CCT server is not joined to a domain therefore the Windows User used for CCT user login will be created in the local CCT server. In case of CCT server joins to a domain the Windows User needs to be created in the domain controller.

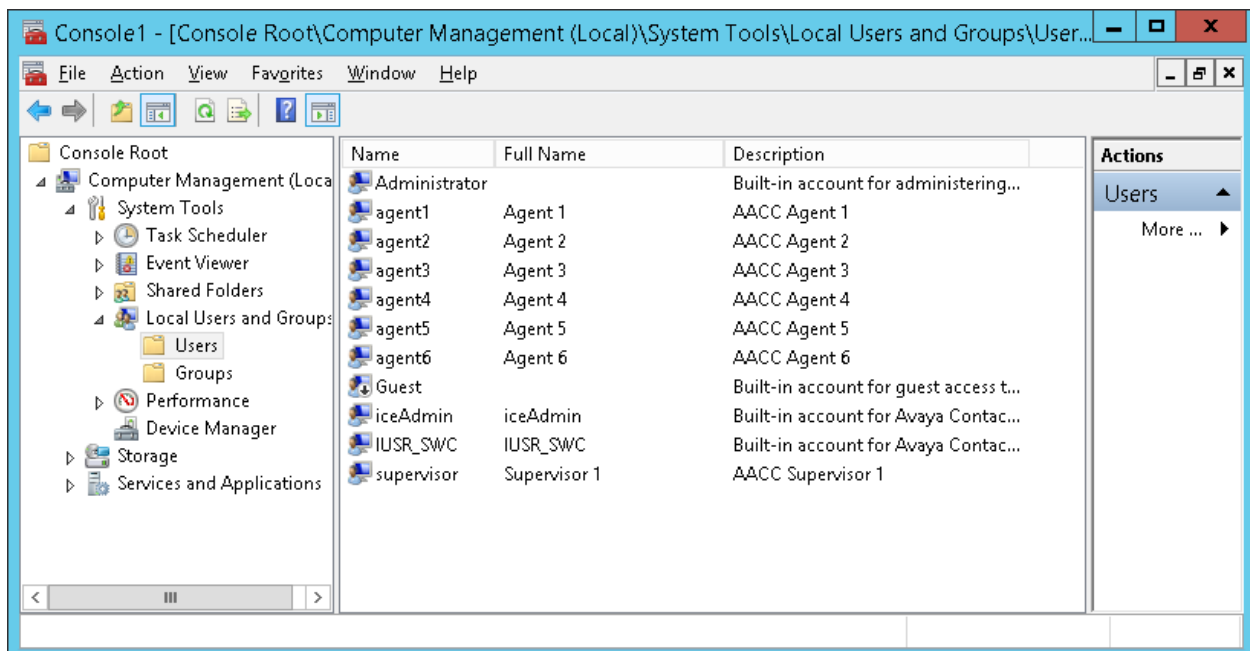
From the Contact Center CCT server, navigate to menu **Start → Administrative Tools → Computer Management**. The **Computer Management** window is displayed. Right click on **Users** folder under **Local Users and Groups** and then select **New**. The **New User** window is displayed, enter information for user as shown below. Click **Create** button to complete.



The 'New User' dialog box is shown with the following fields and options:

- User name:** agent1
- Full name:** Agent 1
- Description:** AACC Agent 1
- Password:** [masked with dots]
- Confirm password:** [masked with dots]
- ☐ User must change password at next logon
- ☐ User cannot change password
- ☐ Password never expires
- ☐ Account is disabled
- Buttons:** Help, Create, Close

The screen below shows the **Computer Management** window with 96 Windows users created from agent1 to agent6.



6.4. Configure CCT Server

6.4.1. Add the CCT server into Contact Center

The CCT server needs to be added into Contact Center system, this can be done from Contact Center Management Administrator (CCMA) webpage. Log in to the CCMA webpage (not shown) and navigate to **Launch Pad → Configuration → Server → Add Server**. The **Server Properties** window is displayed on the right, enter server name “AACCS1K” in the **Server Name** field, its IP address is auto filled out in the **IP Address** field because this is co-res Contact Center system, enter a display name e.g. “AACCS1K-CCT” for CCT in the **Display Name** field, check on radio option **Associated CCMS Servers**, and keep other fields as default. Click **Submit** button to complete.

The screenshot shows the Avaya Configuration page. The top navigation bar includes 'Server', 'Download', 'Status', 'Launchpad', and 'Help'. The left sidebar shows a tree view with 'AACCS1K' expanded, containing 'AACCS1K-CCT' and 'CCT Administration'. The main content area is titled 'Server Properties' and contains the following fields and sections:

- Type:** CCT (selected in a dropdown)
- Server Name:** AACCS1K
- IP Address:** 10.10.97.55
- Display Name:** AACCS1K-CCT
- Login ID:** (empty field)
- Password:** (empty field)
- DSN Prefix:** CCT
- Port Number:** 8081
- CCT Website: HTTP URL:** <http://AACCS1K:8081/WebAdmin/>
- CCT Website: HTTPS URL:** <https://AACCS1K:8445/WebAdmin/>
- Associated CCMS Servers:** A table with one entry: AACCS1K (selected with a radio button).
- Buttons:** Submit, Reset, and Clear Associations.

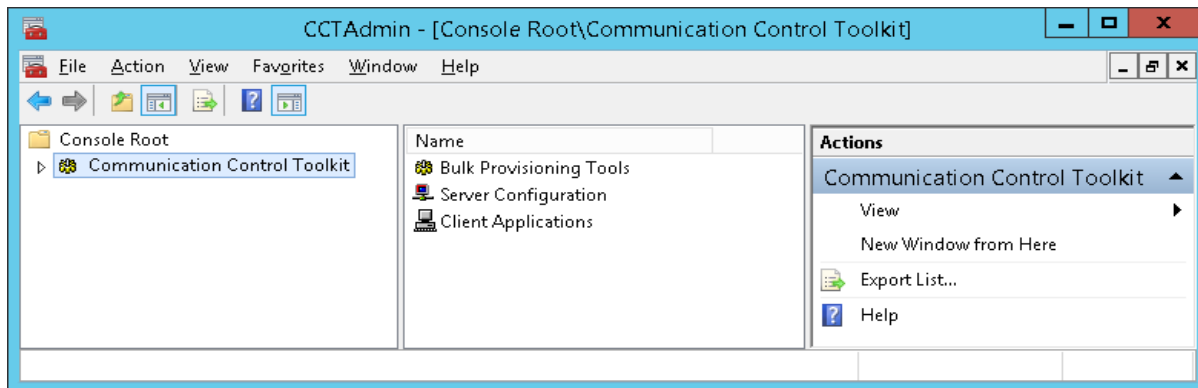
The screen below shows the CCT server already added to the Contact Center system.

The screenshot shows the Avaya Configuration page with the 'CCT Administration' section selected. The top navigation bar and left sidebar are the same as in the previous screenshot. The main content area is titled 'CCT Administration' and shows the following information:

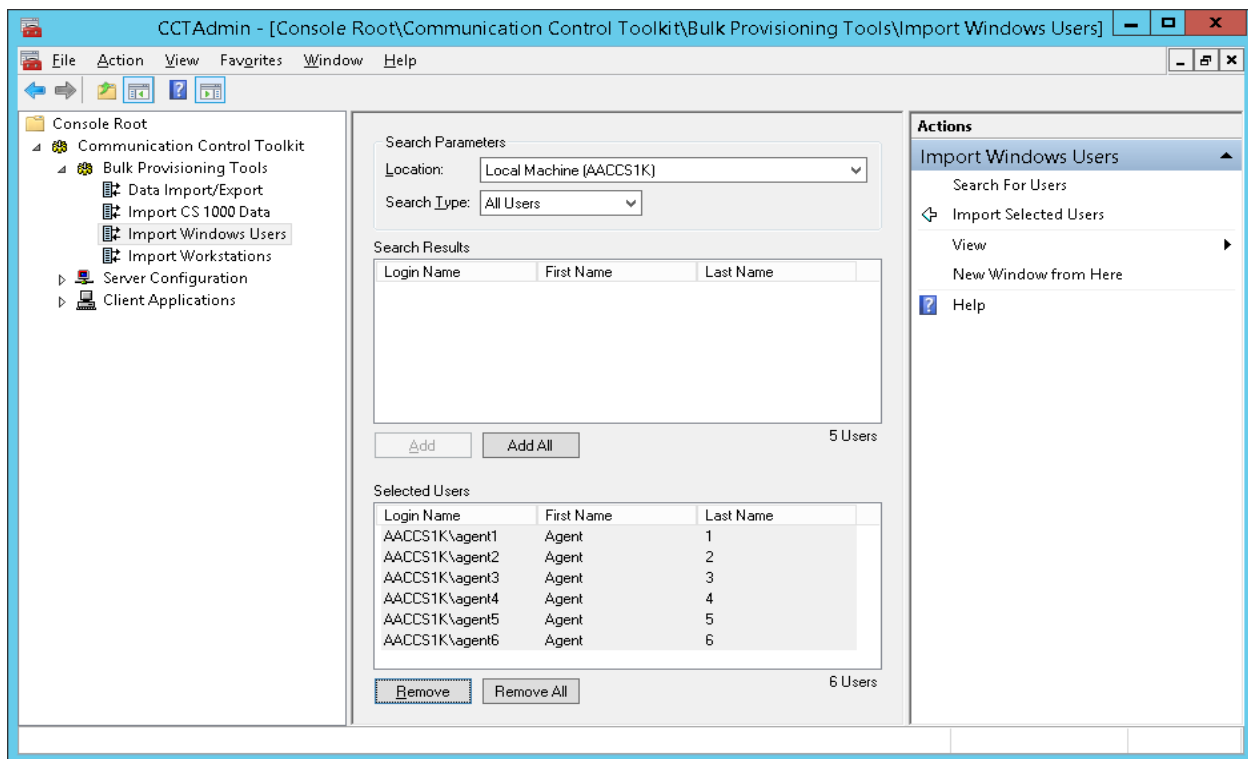
- Server:** AACCS1K
- CCT Administration HTTP URL:** <http://AACCS1K:8081/WebAdmin/>
- CCT Administration HTTPS URL:** <https://AACCS1K:8445/WebAdmin/>

6.4.2. Import Windows Users and Terminal Number of Contact Center

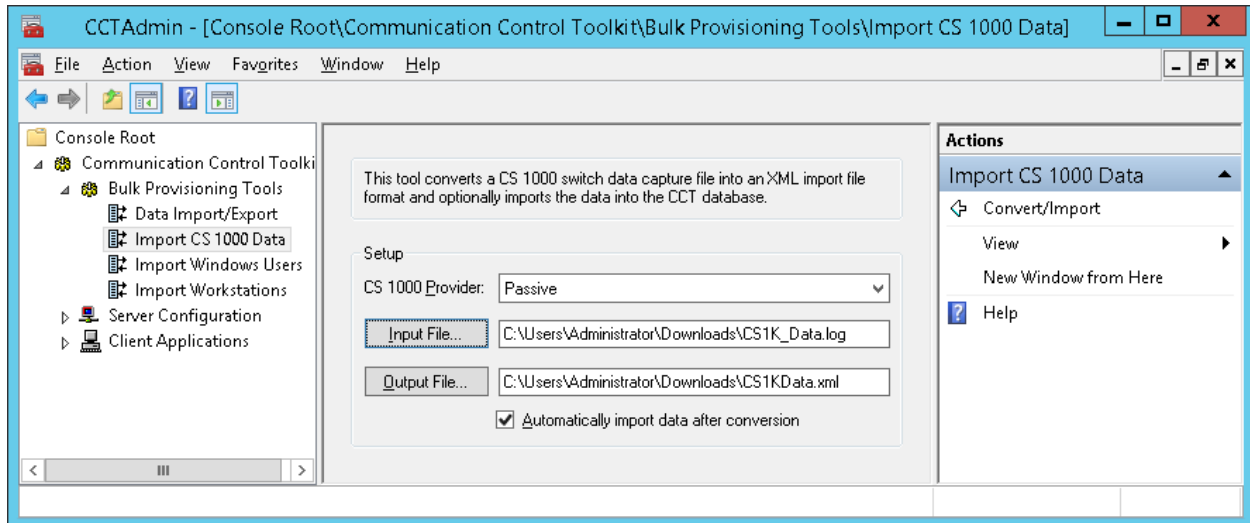
From the Contact Center server, navigate to menu **Start → Apps → Avaya → CCT Console**. The **CCTAdmin** console window is displayed as below.



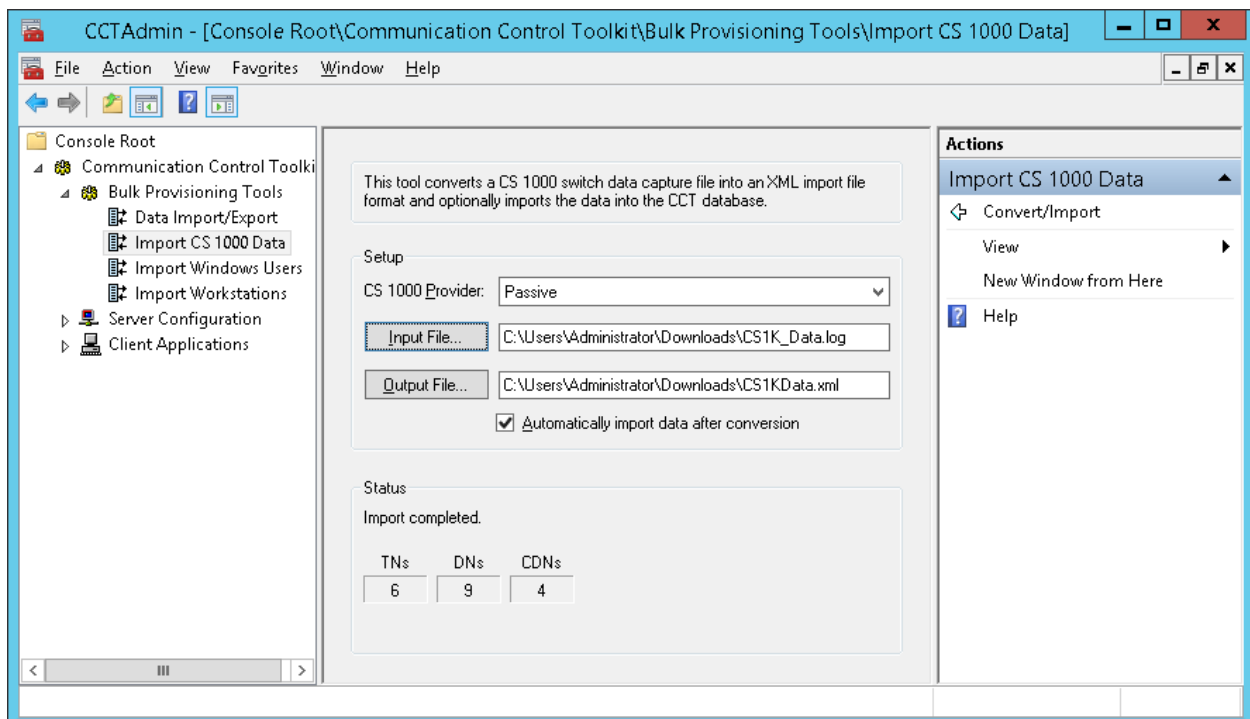
To import Windows users, navigate to **Console Root → Communication Control Toolkit → Bulk Provisioning Tools → Import Windows Users**. In the **Search Parameters** section, select "Local Machine" in the **Location** and "All Users" in the **Search Type** field and click on "Search for Users" in the **Action** column, all Windows users created in **Section 6.3** are listed in the **Search Results**, select all Windows users from agent1 to agent6 and click "Add" button to add it into the **Selected Users** section. Select "Import Selected Users" to import the selected Windows users into CCT server as shown in the picture below.



To import Terminal Number (TN) of contact center agent and knowledge worker, select **Import CS1000 Data**. In the **Setup** section, select “Passive” in the **CS 1000 Provider** dropdown menu and select “Input File” to upload the CS1000 data file from the local contact center server. Note that, the CS1000 data file can be obtained by using overlay command LD 20 to print out all of Terminal Number of CS1000.



From the **Actions** section, select “Convert/Import” to convert the text file of CS1000 data to XML format and import it to CCT server, the **Status** section shows number of TNs, DNs and CDNs imported successfully.



6.5. Configure Contact Center CDN (Route Points)

Login to CCMA webpage and navigate to **Launch Pad → Configuration**. The Configuration page is displayed, expand the Contact Center CCMS (AACCS1K) display name in the left navigation pane, and select CDN (Route Points). The **CDN (Route Points)** page is displayed in the right. Enter CDN name in the **Name** field, e.g. “CDN4646”, CDN number in the **Number** field e.g. “4646”, and check on the check box **Acquired?**, and click on next row to update the change. The screen below shows two CDN number 4646 is acquired.

Configuration Logged in user: webadmin | [Change Password](#) | [Logout](#)

Server Download Status Launchpad Help

AACCS1K

- Activity Codes
- Call Presentation Classes
- Call Recording and Quality
- CDNs (Route Points)
- Contact Types
- DNISs
- Formulas
- Global Settings
- Historical Statistics
- IVR ACD-DNs
- Phoneset Displays
- Phonesets and Voice Port
- Real-time Statistics
- Routes
- Skillssets
- Threshold Classes

AACCS1K-CCT

CDNs (Route Points) Server: AACCS1K

CDNs Open Queue Acquire All CDNs De-acquire All CDNs Refresh Status

Name	Number	Call Type	Acquired?	Status
CDN4646	4646	Local	<input checked="" type="checkbox"/>	Acquired
*			<input type="checkbox"/>	

6.6. Configure Contact Center Phonesets

The Phonesets are agent Terminal Numbers that are acquired by contact center. To configure Phonesets, from the CCMA webpage, navigate to **Launch Pad → Configuration**. The **Configuration** page is displayed, expand the Contact Center CCMS (AACCS1K) display name in the left navigation pane, and select **Phonesets and Voice Ports**. The **Phonesets/Voice Ports** page is displayed in the right with previous configured agents as shown in the picture.

Configuration Logged in user: webadmin | [Change Password](#) | [Logout](#)

Server Download Status Launchpad Help

AACCS1K

- Activity Codes
- Call Presentation Classes
- Call Recording and Quality
- CDNs (Route Points)
- Contact Types
- DNISs
- Formulas
- Global Settings
- Historical Statistics
- IVR ACD-DNs
- Phoneset Displays
- Phonesets and Voice Port
- Real-time Statistics
- Routes
- Skillssets
- Threshold Classes

AACCS1K-CCT

Phonesets/Voice Ports Server: AACCS1K

Refresh Status

Name	Type	Address	Channel	IVR Name	Acquired?	Status
Agent5	Agent	96-0-0-7			<input checked="" type="checkbox"/>	Acquired
Agent1	Agent	96-0-1-10			<input checked="" type="checkbox"/>	Acquired
Agent2	Agent	96-0-1-11			<input checked="" type="checkbox"/>	Acquired
Agent3	Agent	96-0-1-12			<input checked="" type="checkbox"/>	Acquired
Super1	Agent	96-0-1-14			<input checked="" type="checkbox"/>	Acquired
Agent6	Agent	96-0-1-16			<input checked="" type="checkbox"/>	Acquired
*					<input type="checkbox"/>	

6.7. Configure Contact Center Agent

Login to CCMA webpage and navigate to **Launch Pad → Contact Center Management → CCM Servers → AACCS1K**. Right click on a previous configured “1 Supervisor” and select Add Agent from the menu (not shown). The detail of New Agent Details window is displayed in the right hand side, enter following values for the new agent.

- **User Type:** select “Agent” from the list.
- **Login ID:** enter the login ID for agent, it can be any number, in this case the login ID is 1050 as same as the position ID.
- **Personal DN** and **ACD Queue** fields are optional.
- **Create CCT Agent:** checked this checkbox if this agent is also used as CCT Agent.

In the **Associate User Account** section, select the “select local operation system” and click on **List All** button.

The screenshot displays the Avaya Contact Center Management (CCM) web interface. The top navigation bar includes the Avaya logo, the title 'Contact Center Management', and user information: 'Logged in user: webadmin | Change Password | Logout'. Below the navigation bar, a sidebar on the left shows a tree view of 'CCM Servers (Supervisors)' with 'AACCS1K' selected. The main content area is titled 'New Agent Details: 1 Agent' and 'Server: AACCS1K'. The 'User Details' section contains fields for First Name, Last Name, Title, Department, Language (set to English), and Comment. To the right of these fields are dropdowns for User Type (set to Agent), Login ID (1050), Personal DN (4650), and ACD Queue (4697). Below these is a checkbox for 'Create CCT Agent' which is checked. A 'CCT Agent Login Details' section shows fields for Domain and User ID. The 'Associate User Account' section has three radio buttons: 'Search local operating system' (selected), 'Search local security server', and 'Search domain users'. Below these are search criteria fields: 'Search all user accounts where: Full Name starts with [] and includes all users'. At the bottom are buttons for 'Clear', 'Submit', 'Create Copy', 'Create Many', and 'Logout Agent'.

The search lists all Windows user in the Contact Center server, select a proper Windows user from the list in this case it is “agent1”. The CCT Agent Login Details displays information of agent such as Domain and User ID. Note that this Domain and User ID is later used by CCT RefClient and CardEasy CCT service.

Contact Center Management
Logged in user: webadmin | [Change Password](#) | [Logout](#)

[View/Edit](#)
[Add](#)
[Status](#)
[Launchpad](#)
[Help](#)

CCM Servers (Supervisors)

- AACCS1K
 - Supervisor
 - Supervisor Default

☒ Create CCT Agent

CCT Agent Login Details

Domain: AACCS1K
User ID: agent1

Associate User Account

☒ Search local operating system
 ☐ Search local security server
 ☐ Search domain users

Search all user accounts where:
 Full Name starts with and includes all users

User Name	Full Name (11)	Status
<input type="radio"/> Administrator		Available
<input checked="" type="radio"/> agent1	Agent 1	Available
<input type="radio"/> agent2	Agent 2	Available
<input type="radio"/> agent3	Agent 3	Available
<input type="radio"/> agent4	Agent 4	Available
<input type="radio"/> agent5	Agent 5	Available
<input type="radio"/> agent6	Agent 6	Available

Agent Information

In the **Agent Information** section, keep all fields as default values.

In the **Contact Type** section, select “Voice” from the list because this agent is used as voice agent.

AVAYA Contact Center Management Logged in user: webadmin | [Change Password](#) | [Logout](#)

View/Edit Add Status Launchpad Help

CCM Servers (Supervisors)

- 1 Supervisor
- Supervisor Default

Agent Information

Primary Supervisor: 1 Supervisor

Agent Key:

Login Status: Logged Out

Call Presentation: Call_Centre_Administrator

Threshold: Agent_Template

Tn Name:

Contact Types

Contact Type	
Scanned_Document	<input type="checkbox"/>
SMS	<input type="checkbox"/>
Social_Networking	<input type="checkbox"/>
Voice	<input checked="" type="checkbox"/>
Voice_Mail	<input type="checkbox"/>
Web_Communications	<input type="checkbox"/>

Skillsets

Partitions

In the **Skillsets** section, set **Priority** as “1” in the **Contact Type** “Voice”. The Default_Skillset is assigned to this agent with priority as “1”.

AVAYA Contact Center Management Logged in user: webadmin | [Change Password](#) | [Logout](#)

View/Edit Add Status Launchpad Help

CCM Servers (Supervisors)

- AACCS1K
 - 1 Supervisor
 - Supervisor Default

Skillsets

Skillset Name	Contact Type	Priority
Default_Skillset	Voice	1
EM_Default_Skillset	EMail	Unassigned
FX_Default_Skillset	Fax	Unassigned
OB_Default_Skillset	Outbound	Unassigned
OQ_Default_Skillset	OpenQ	Unassigned
SD_Default_Skillset	Scanned_Document	Unassigned
SM_Default_Skillset	SMS	Unassigned

Assign Skillsets

Show all skillsets on server AACCS1K where:

Skillset name contains

Partitions

Clear Submit Create Copy Create Many Logout Agent

On completion, select **Submit** button to create the new agent.

7. Configure Syntec CardEasy CCT service

This section provides instructions on how to install and configure the CardEasy CCT service; the installation and configuration of CardEasy CCT service during the compliance test was performed by Syntec test engineer.

- 1) On the server, where the CardEasy CCT is installed, launch Command Prompt as Admin
- 2) Direct the terminal to the current directory of the CardEasyCCT Service folder:

```
"cd  
C:/Users/"yourUser"/Desktop/CardEasyCCTService/CardEasyCCTService/bin/Debug"
```

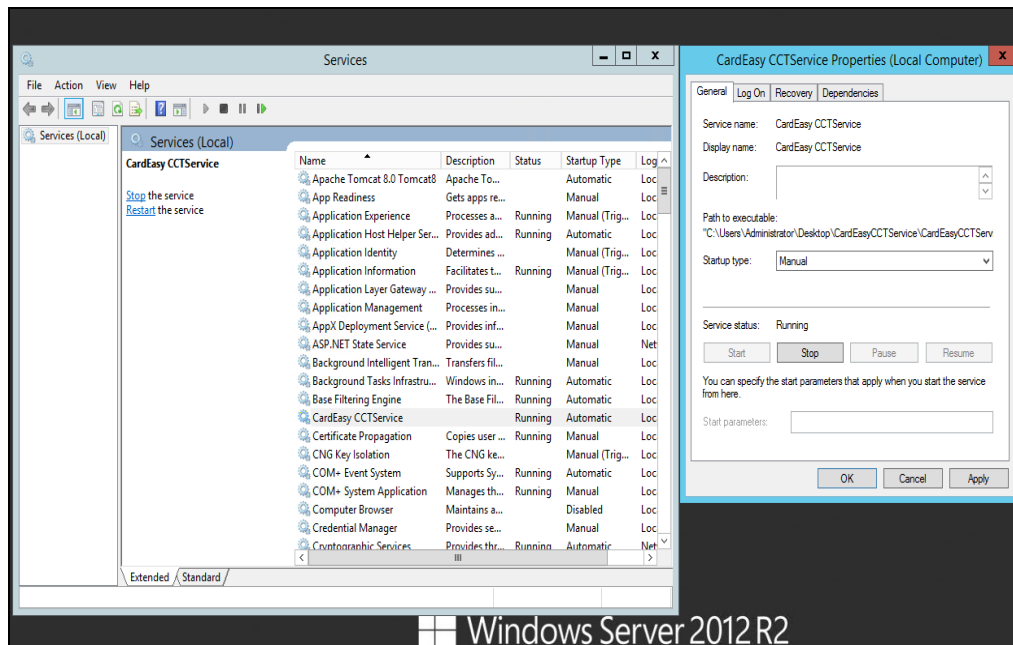
- 3) Execute the following command:

```
installutil.exe CardEasyCCTService.exe
```

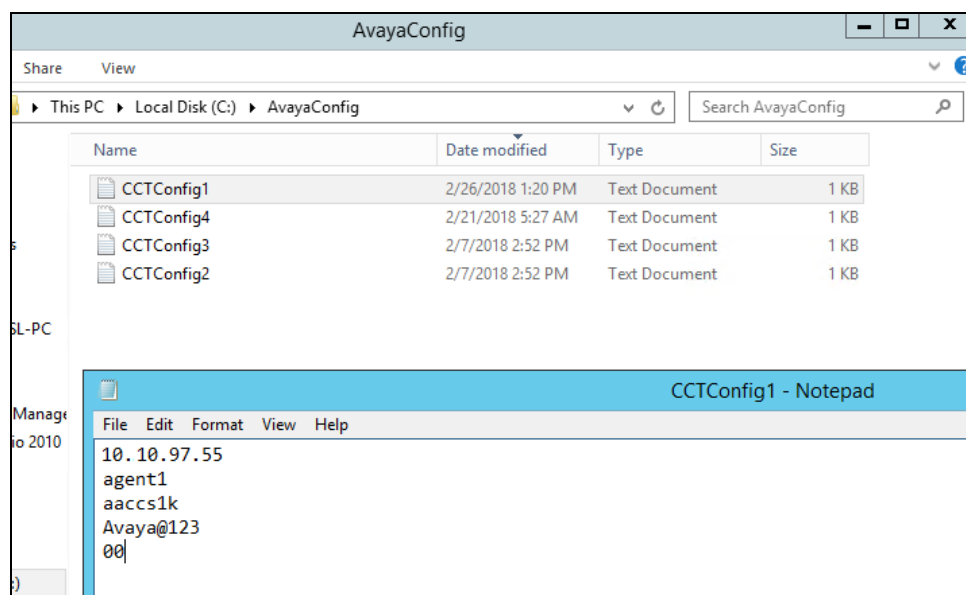
- 4) Following messages show up on the screen:

```
C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug>InstallUtil.exe CardEasyCCTService.exe  
Microsoft (R) .NET Framework Installation utility Version 4.7.2556.0  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Running a transacted installation.  
  
Beginning the Install phase of the installation.  
See the contents of the log file for the C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe assembly's progress.  
The file is located at C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.InstallLog.  
Installing assembly 'C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe'.  
Affected parameters are:  
  logtoconsole =  
  assemblypath = C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe  
  logfile = C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.InstallLog  
Installing service CardEasy CCTService...  
Service CardEasy CCTService has been successfully installed.  
Creating EventLog source CardEasy CCTService in log Application...  
  
The Install phase completed successfully, and the Commit phase is beginning.  
See the contents of the log file for the C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe assembly's progress.  
The file is located at C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.InstallLog.  
Committing assembly 'C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe'.  
Affected parameters are:  
  logtoconsole =  
  assemblypath = C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.exe  
  logfile = C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug\CardEasyCCTService.InstallLog  
  
The Commit phase completed successfully.  
  
The transacted install has completed.  
  
C:\Users\WariosL\Desktop\CardEasyCCTService\CardEasyCCTService\bin\Debug>
```


- 5) Launch the Windows Services Explorer. The CardEasy CCT Service should be seen, currently not running and with a Startup Type of Manual. It can be configured to startup automatically by right clicking and choosing “Properties”



- 6) On the root C:/ folder, create a new folder called “AvayaConfig”. It will contain 4 different .txt files there that will define the credentials of the 4 CCT Users that the service will be monitoring.



This .txt file should have 4 lines of text, with each line holding the following amount of information:

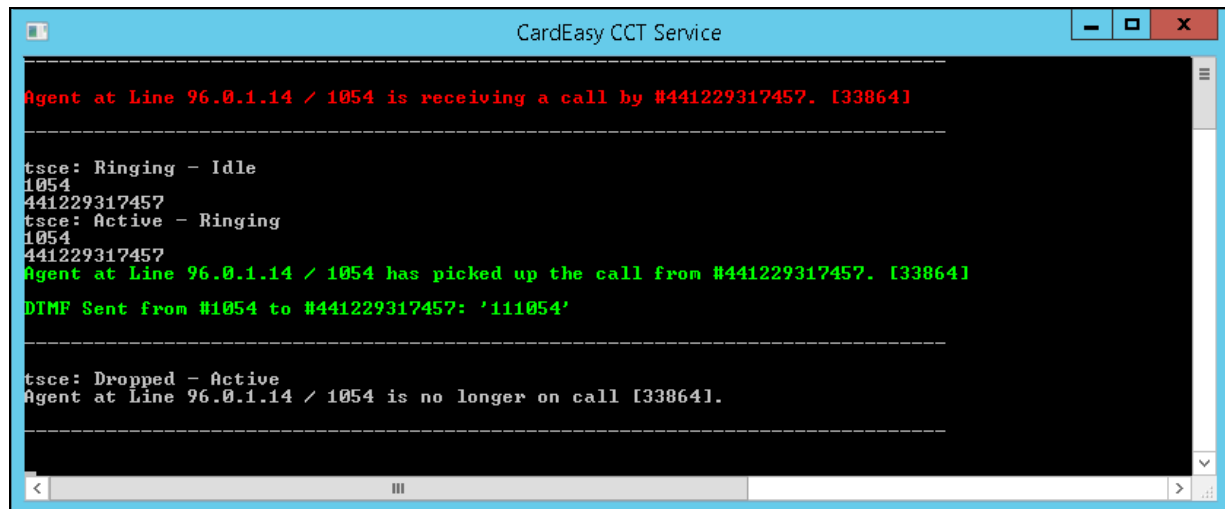
- i) Line 1 – IP address of the CCT Machine
- ii) Line 2 – The User ID
- iii) Line 3 – The Domain
- iv) Line 4 – The Password
- v) Line 5 – The 2-digit prefix that the service will send as DTMF

The CardEasy CCT Service requires these files on startup, otherwise it will terminate immediately.

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of the CardEasy CCT service with Aura Contact Center Communication Control Toolkit (CCT).

- Launch the CardEasy CCT Service. The window displays event message to show that it connects successfully to CCT and monitor the contact center agents.
- From external number places a call to contact center controlled directory number (CDN). The contact center call is routed to one of available agents that are currently monitored by the CardEasy CCT Service.
- Agent answers the call; the CardEasy CCT Service displays correct messages and send out EPID which is two defined digits plus the agent's login ID, for example "11" + "1054" to the external caller.



The screenshot shows a window titled "CardEasy CCT Service" with a black background and white text. The text displays the following sequence of events:

```
Agent at Line 96.0.1.14 / 1054 is receiving a call by #441229317457. [338641]
-----
tsce: Ringing - Idle
1054
441229317457
tsce: Active - Ringing
1054
441229317457
Agent at Line 96.0.1.14 / 1054 has picked up the call from #441229317457. [338641]
DTMF Sent from #1054 to #441229317457: '111054'
-----
tsce: Dropped - Active
Agent at Line 96.0.1.14 / 1054 is no longer on call [338641].
-----
```

- The external caller ends the call, the CardEasy CCT Service show the call is disconnected successfully.

9. Conclusion

These Application Notes have described the administration steps required to integrate Syntec CardEasy CCT service with Avaya Aura® Contact Center Communication Control Toolkit. All test cases passed with observations noted in **Section 2.2**.

10. Additional References

This section references the Avaya and Bose documentation relevant to these Application Notes. The following Avaya product documentation is available at support.avaya.com.

- [1] Avaya Aura® Contact Center and Avaya Communication Server 1000 Integration, November 2017, Release 7.0.2, Issue 06.03.
- [2] Avaya Aura® Contact Center Commissioning for Avaya Communication Server 1000, November 2017, Release 7.0.2, Issue 01.05.
- [3] Deploying Avaya Aura® Contact Center DVD for Avaya Communication Server 1000, November 2017, Release 7.0.2, Issue 01.

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