

Avaya Solution & Interoperability Test Lab

Application Notes for AMC Application Adapter for Microsoft Dynamics CRM with Avaya Communication Control Toolkit – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate third-party business applications using the AMC Connector for Avaya Communication Control Toolkit (CCT) 7.0. The AMC Multi-Channel Integration Suite (MCIS), which includes the connector, provides call control, agent session control and screen pop to help contact center agents be efficient and to realize higher levels of customer satisfaction. The AMC connector provides computer telephony integration (CTI) to business applications from Microsoft, Oracle, Salesforce and SAP. For this compliance test, the AMC Connector was used to integrate Application Adapter for Microsoft Dynamics CRM with Avaya Communication Control Toolkit.

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

1. Introduction

These Application Notes describe the configuration steps to integrate third-party business applications using AMC Application adapter with MS CRM for Avaya (formerly Nortel) Communication Control Toolkit 7.0 (hereafter referred to as CCT). The AMC Multi-Channel Integration Suite (MCIS), which includes the connector, provides call control, agent session control and screen pop. The AMC connector provides CCT integration (through the CCT SDK) to business applications from Microsoft (MS), Oracle, Salesforce and SAP.

1.1. Interoperability Compliance Testing

The interoperability compliance test verified the following features that are available to agents with the AMC connector for MS CRM with CCT.

- Logging in and out.
- Monitoring agent states (e.g. Ready or Not Ready).
- Agent state synchronization with agent telephones.
- Establish calls with other agents and non-monitored devices and verifying the correct call states
- Basic telephony features such as call hold, transfer and conference.
- Restarting ACM connector.

1.2. Support

Technical support from AMC can be obtained through the following:

• **Phone:** +1 (800) 390-4866

• Email: support@amctechnology.com

2. Reference Configuration

The following diagram illustrates a sample configuration of a contact center environment with CCT integrated with MCIS server and AMC Application Adapter for MS CRM.

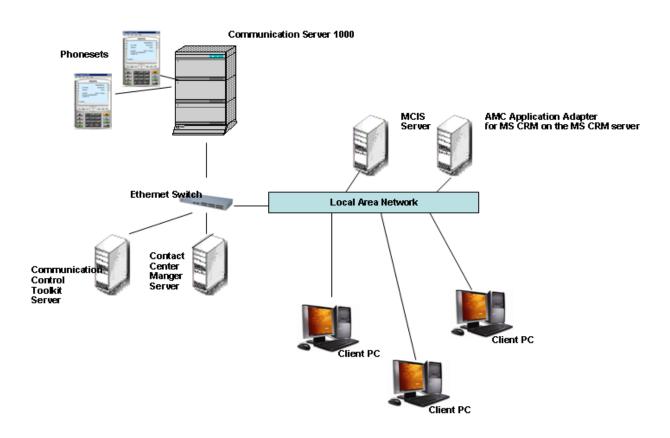


Figure 1: Reference Configuration

3. Equipment and Software Validated

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

Equipment	Software version
Avaya Contact Center Manager Server	7.0 (SU_02/SUS_0201)
running on Windows 2003 Server	
Avaya Communication Control Toolkit	7.0 (SU_02/SUS_0201)
running on Windows 2003 Server	
Avaya Communication Server 1000	Release 6.0
Avaya i2050 IP Softphones	2.0
AMC MCIS server running on Windows 2003	5.3
server	
AMC Application Adapter for MS CRM	AMC Application Adapter for Microsoft
running on Windows 2003 server.	CRM (Setup 5.3.0.3) with AMC
	Telephony Connector for Nortel CCT
	7 (NortelCCT7Connector.dll HF:
	5.3.0.2), MS CRM 4.0

4. Configure Avaya Communication Server

This section provides the procedure for configuring the Communication Server. The procedure is limited to phoneset configuration, and is limited to what is necessary for CCT integration with the Communication Server.

4.1. Phone Set configuration

Log into the Communication Server. In Overlay 11, list phone configuration and confirm AST is configured for the agent keys.

>ld 11 SL1000

MEM AVAIL: (U/P): 2523910 USED U P: 408503 115010 TOT: 3047423

DISK RECS AVAIL: 1152

TNS AVAIL: 32390 USED: 377 TOT: 32767

REQ: prt TYPE: i2050

TN 72 0 0 0

DATE PAGE DES

```
DES SCCS
TN
    072 0 00 00 VIRTUAL
TYPE I2050
CDEN 8D
CUST 0
ZONE 001
FDN
TGAR 1
LDN NO
NCOS 3
SGRP 0
RNPG 1
SCI 0
SSU
XLST
SCPW
SFLT NO
CAC CIS 3
CAC_MFC 0
CLS UNR FBD WTA LPR PUA MTD FND HTD TDD HFA CRPD
    MWD LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
    POD DSX VMD CMSD SLKD CCSD SWD LND CNDA
    CFTD SFD MRD DDV CNID CDCA MSID DAPA BFED RCBD
    ICDD CDMD LLCN MCTD CLBD AUTU
    GPUA DPUD DNDA CFXD ARHD CNTD CLTD ASCD
    CPFA CPTA HSPD ABDD CFHD FICD NAID DNAA RDLA BUZZ AGRD MOAD
    UDI RCC HBTD AHD IPND DDGA NAMA MIND PRSD NRWD NRCD NROD
    DRDD EXR0
    USMD USRD ULAD CCBD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
     FDSD NOVD VOLA VOUD CDMR ICRA
CPND LANG ENG
HUNT
PLEV 02
CSDN
SPID NONE
AST 00 03
IAPG 0
AACS YES
ACQ AS: AST-DN, AST-POSID
ASID 17
SFNB 1
        2 3 4 5 6 11 12 13 18 22 24 25 26
SFRB
USFB 1 2 3 4 5 6 7
                          9
                             10
                                11 12 13 14 15
CALB 0 1 3 4 5 6
                       8
                          9
                             10
FCTB
ITNA NO
DGRP
PRI 01
MLWU_LANG 0
DNDR 0
KEY 00 ACD 7203 0 720100
        AGN
        ANIE 0
```

```
01 NRD
     02 MSB
                           MARP
     03 MCR 720200 0
         ANIE 0
     94
     05
     06
     07
     98
     09
     10
     11
     12
     13
     14
     15
     16
     17 TRN
     18 A06
     19 CFW 16
     20 RGA
     21 PRK
     22 RNP
     23
     24 PRS
     25 CHG
     26 CPN
     27
     28
     29
     30
     31
DATE 26 JUN 2009
```

- Terminal name is identified as "TN 072 00 00 00" above. This information will be needed to configure a Terminal in Section 5.1.1.
- Key 00 above is the ACD (Automatic Call Distribution) key configured on the agent phoneset. "720100" is the PositionID assigned to the phoneset. This will be needed to configure an Address in Section 5.1.2. "7203" is the ACD queue configured for this phoneset. This will be needed for Agent configuration on AMC MS CRM adapter.
- Key 03 above is the personal DN (Directory Number) key configured on the agent phoneset. "720200" is the DN value assigned to the phoneset. This will be needed to configure an Address in Section 5.1.2.

If AST is not configured, then follow this procedure to configure it on the two DN keys (i.e., Key 0 and Key 3). Items in bold below need to be typed in, and followed by a carriage return.

```
>ld 11
SL1000
```

MEM AVAIL: (U/P): 2523910 USED U P: 408503 115010 TOT: 3047423

DISK RECS AVAIL: 1152

TNS AVAIL: 32390 USED: 377 TOT: 32767

REQ: chg
TYPE: i2050
TN 72 0 0 0
ECHG yes
ITEM ast 0 3

ITEM

MEM AVAIL: (U/P): 2523908 USED U P: 408503 115012 TOT: 3047423

DISK RECS AVAIL: 1152

TNS AVAIL: 32390 USED: 377 TOT: 32767

REQ:

Any phones currently supported by Contact Center Manager Server can be used for integration with Communication Control Toolkit. For the purpose of this compliance testing, i2050 IP Softphones were used.

5. Configure Contact Center

The compliance test environment consisted of a Contact Center Manager Server (CCMS), Contact Center Manager Administrator (CCMA), and a Communication Control Toolkit (CCT) server. A call center agent needs to be created on CCMA to enable agents to login to the call center through the AMC MS CRM interface.

This section describes a procedure for configuring:

- Phone sets on CCT
- Importing Windows Users from CCT Domain
- Creating Agents on CCMA.

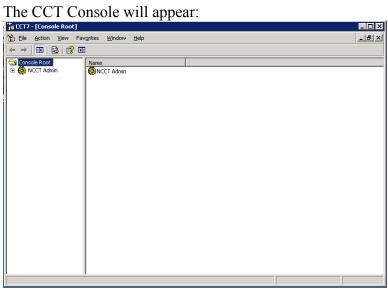
5.1. Configure phone set on Communication Control Toolkit

A phone set consists of one Terminal mapped to up to two Addresses. The following sections describe how to configure Addresses, Terminals, and how to map them to each other.

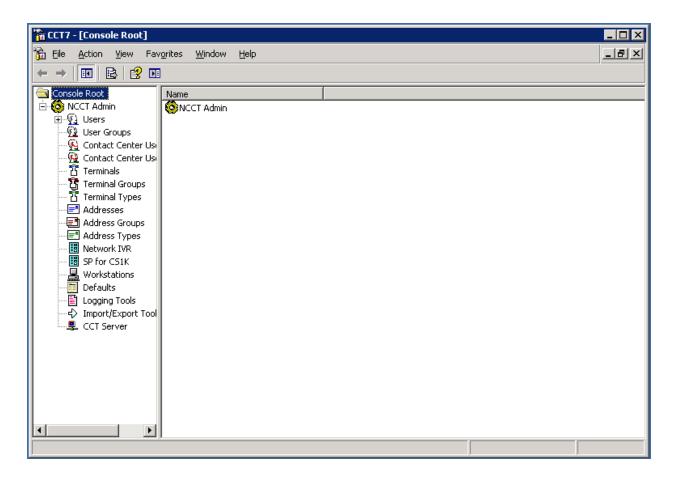
5.1.1. Configure Terminal

To configure a Terminal on CCT navigate to Start→Programs → Nortel → Communication Control Toolkit → CCT Console

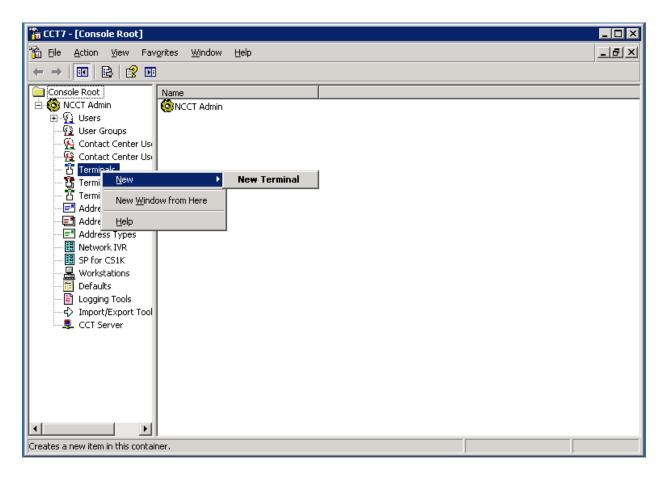




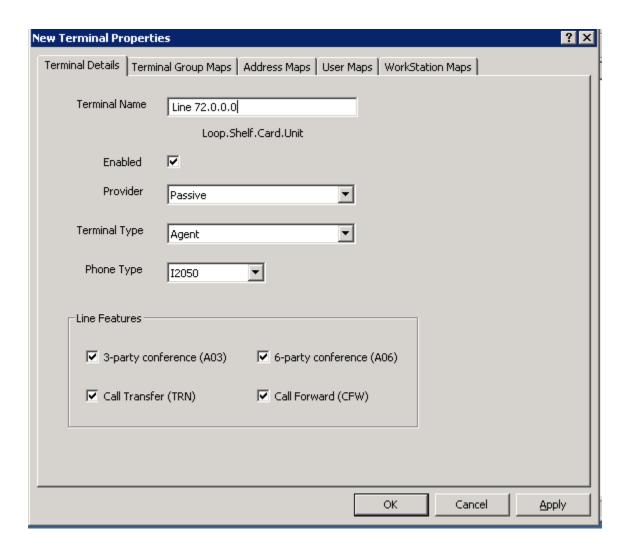
Click on '+' next to NCCT Admin in the left hand pane of the console:



Right-Click on Terminal and navigate to New → Terminal:



In the Terminal Details tab, enter the Phoneset information. The Terminal Name field must include the word 'Line' in the beginning with the terminal name as configured in section 4.2. All checkboxes should also be enabled. Phone Type should be chosen as appropriate. For this compliance test, i2050 phones were used.

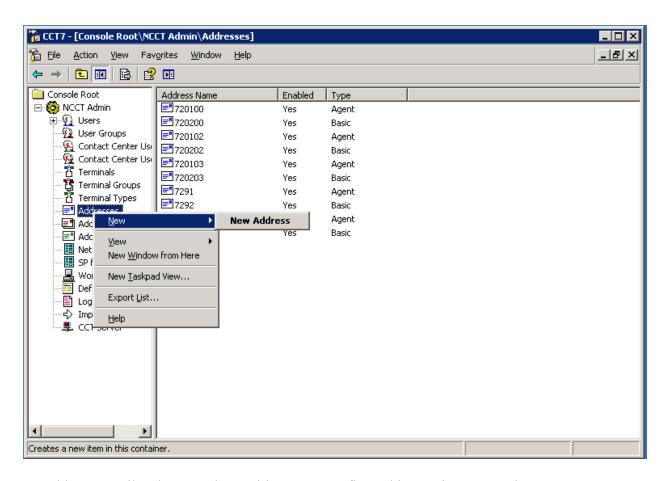


Click Apply and 'OK' to close the window. Continue to next section to configure Addresses.

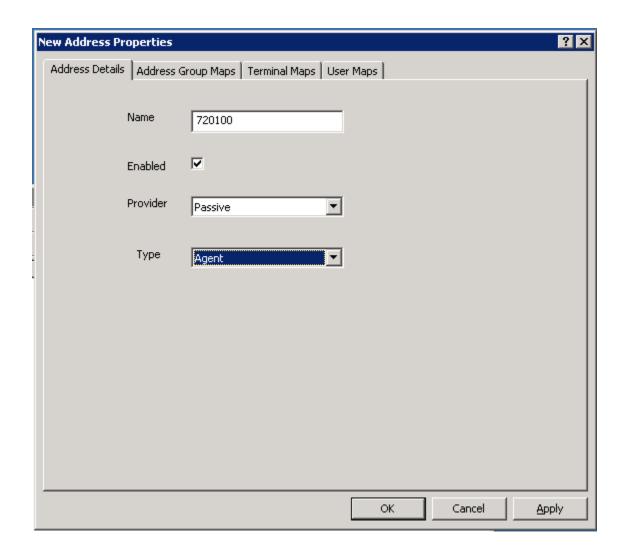
5.1.2. Configure Address

Configure an Address for each AST enabled DN on the phoneset in Section 4.1 (maximum 2).

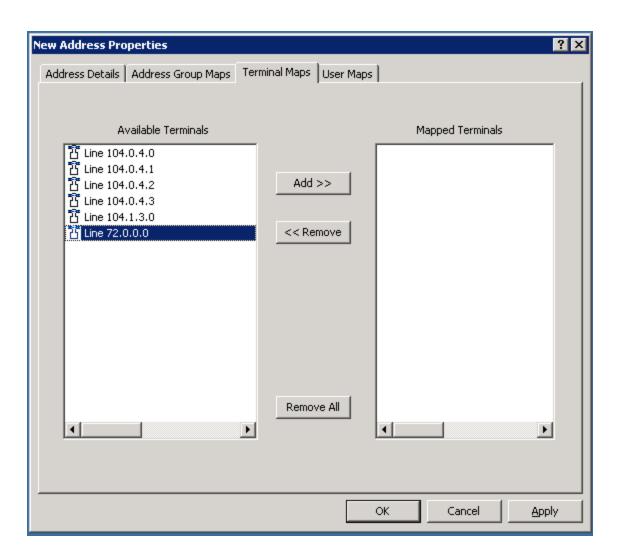
On CCT Console, Right-Click on Addresses and Navigate to New→ New Address:

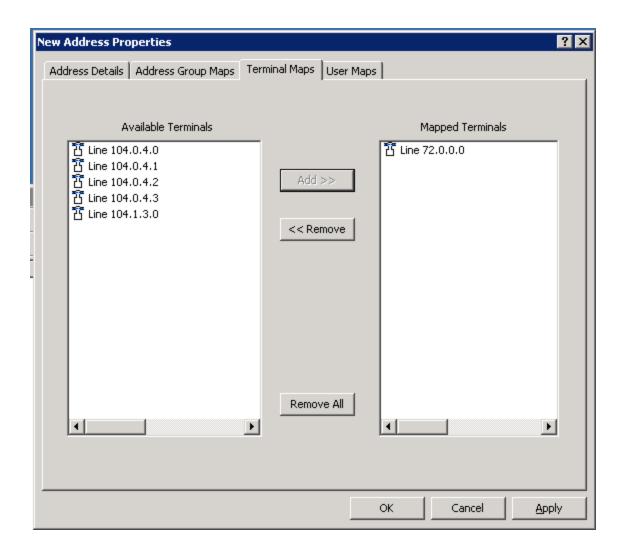


In Address Details tab, enter the PositionID as configured in Section 4.2. Select Type as "Agent".

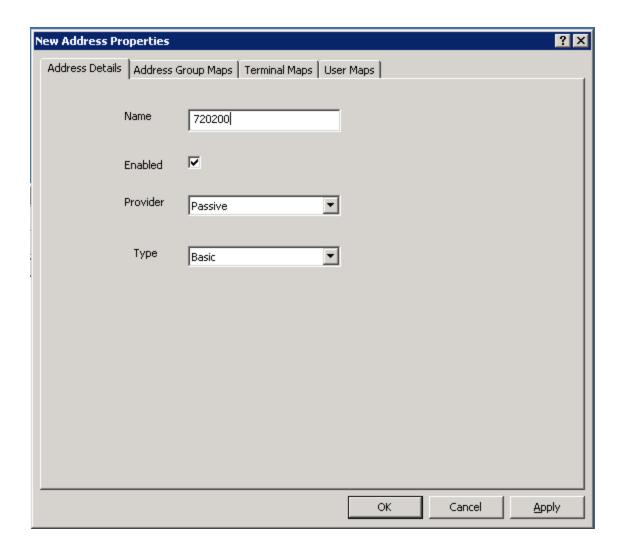


In Terminal Maps tab, map the newly created Address to the Terminal created in Section 5.1.1. Select the Terminal in the "Available Terminals" box and click on Add to complete the mapping. Click "Apply" to apply the changes and OK to close window.

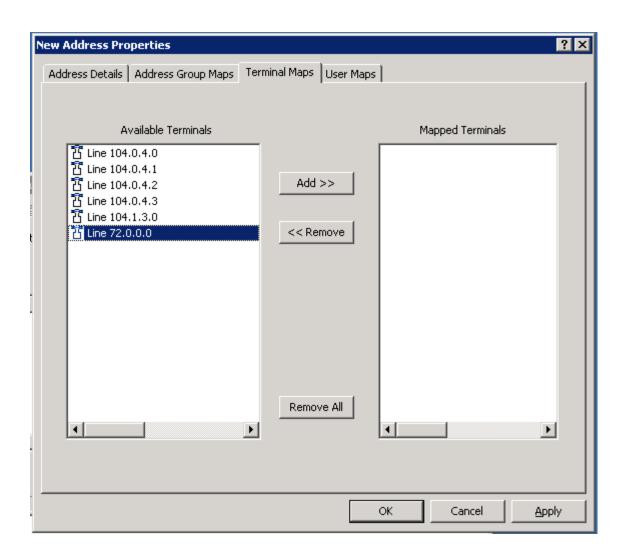


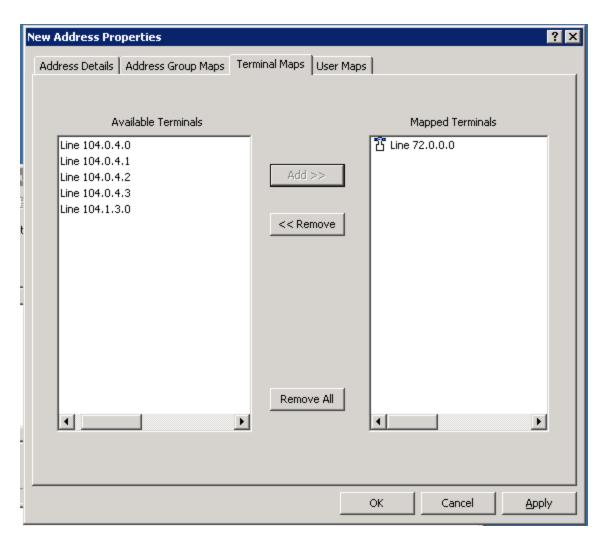


To create Address for Personal DN, right-click on Addresses on the CCT Console and navigate to New→ New Address. In Address Details tab, enter the Personal DN as configured in Section 4.1 for the Name field. All other fields can be left as default.



In the Terminal Maps tab, map the newly created Address to the Terminal created in Section 5.1.1. Select the Terminal in "Available Terminals" box and click on Add to complete the mapping. Click "Apply" to apply the changes and OK to close window.





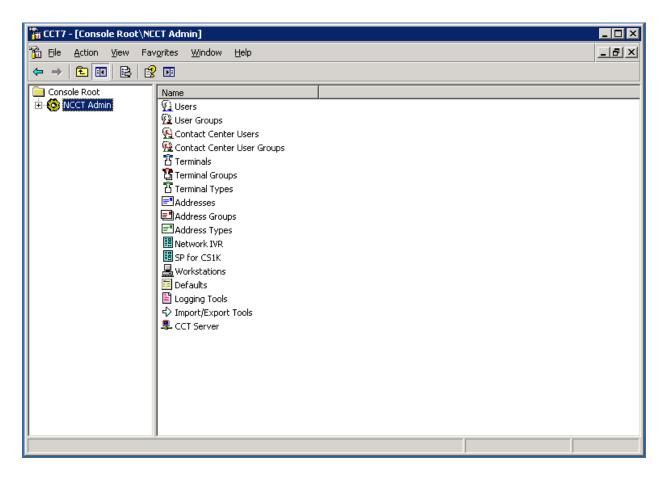
5.2. Import Windows users from CCT Domain and map to Terminal

This section describes the steps required to import Windows users from the server to the Communication Control Toolkit administration tool using the Import Windows Users tool.

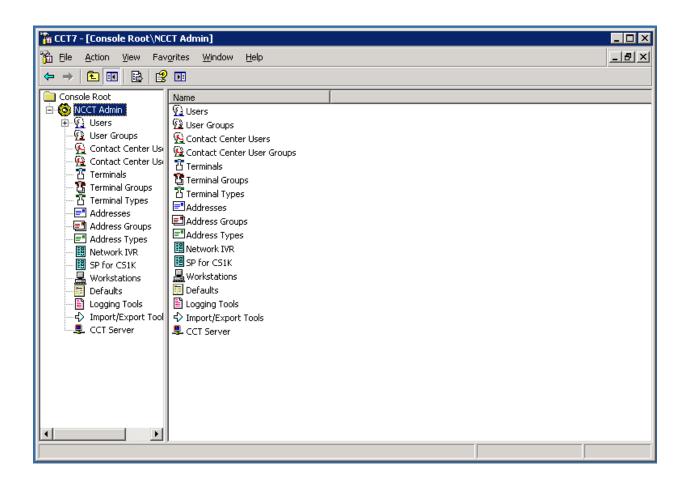
CCT services should be stopped before importing new users:

- 1. Log on to the Communication Control Toolkit server.
- 2. Navigate to Administrative Tools \rightarrow Services.
- 3. Stop the **NCCT SMON** service to stop all of the services on the Communication Control Toolkit server.
- 4. Start the NCCT Data Access Layer service.
- 5. Close the **Services** window.

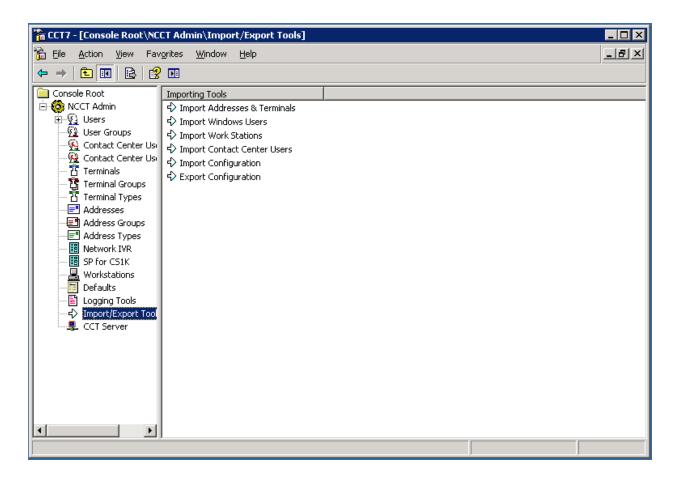
Open the CCT Console by navigating to All Programs → Nortel → Contact Center → Communication Control Toolkit → CCT Console.



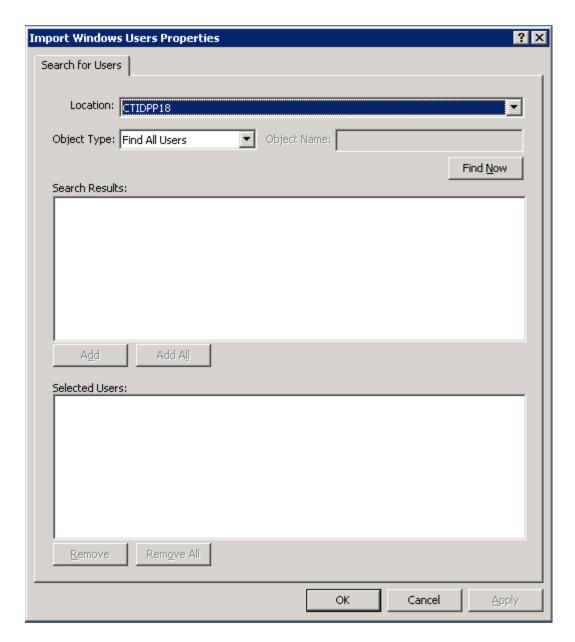
Expand NCCT Admin.



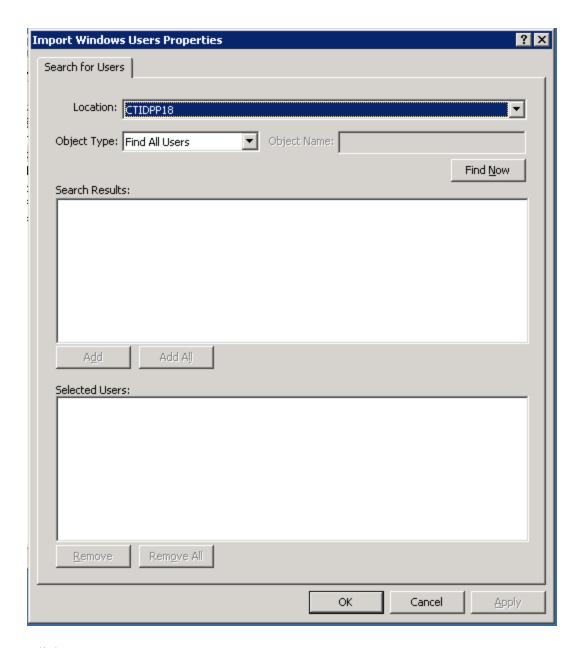
In the left pane of the CCT console, click Import/Export Tools.



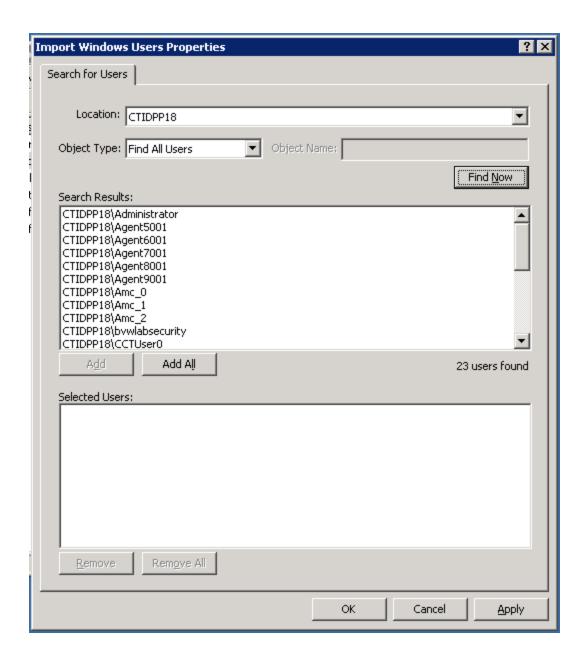
In the right pane of the CCT console, double-click Import Windows Users.



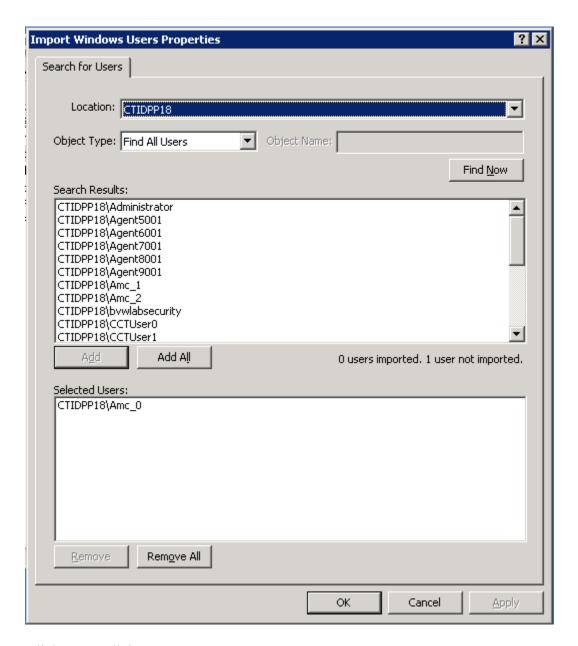
In the **Location** box, select the domain or server from which to search for windows users. In the **Object Type** box, select the group of users to display. In the **Object Name** box, type the text to use in a search for Windows Users.



Click Find Now.



In the **Search Results** box, select the Windows users you want to import. To select multiple users, press the **Ctrl** key while you select each user. To select all Windows users, click **Add All**. For the purpose of this compliance test, user AMC_0 was imported.

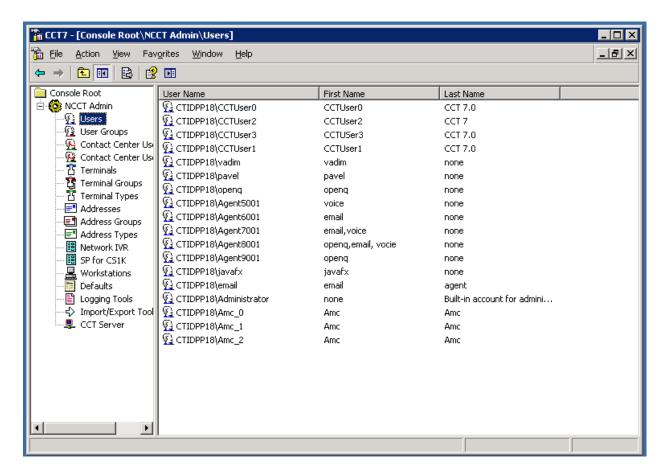


Click Add. Click Apply.

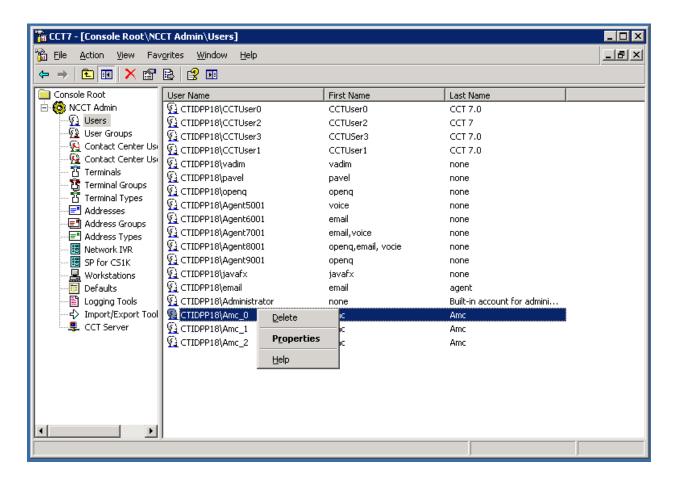
Start the NCCT SMON service to start all of the Communication Control Toolkit services.

The procedure to map user to Terminal is as follows.

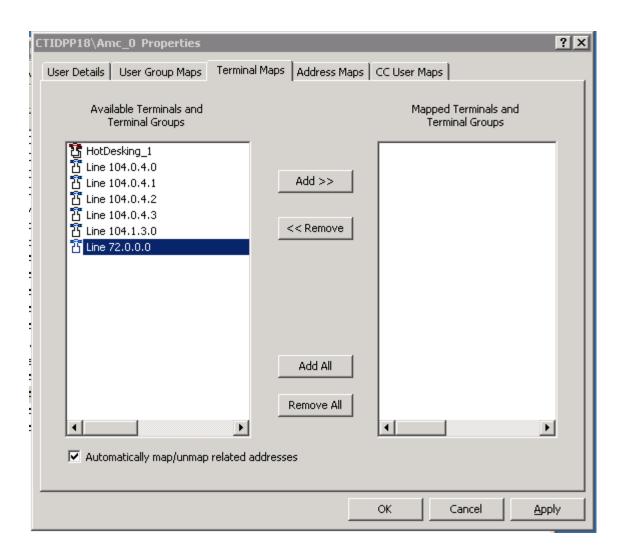
In CCT console, expand NCCT Admin. Select Users.

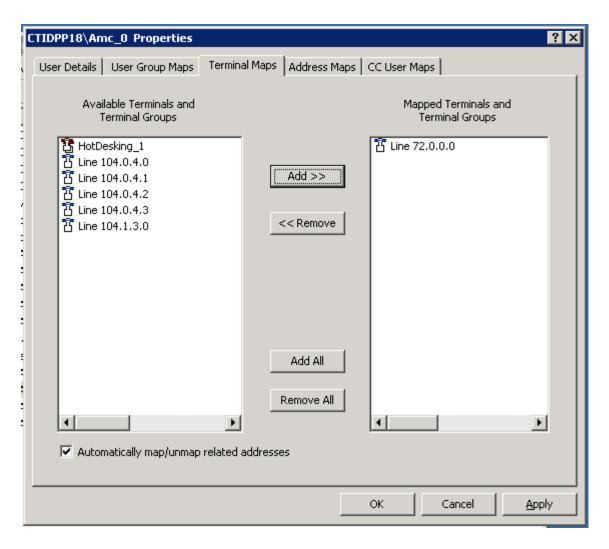


Right click on the user imported previously and navigate to **Properties**.



In the Terminal Maps tab, select the terminal configured in Section 5.1.1. Click Add.

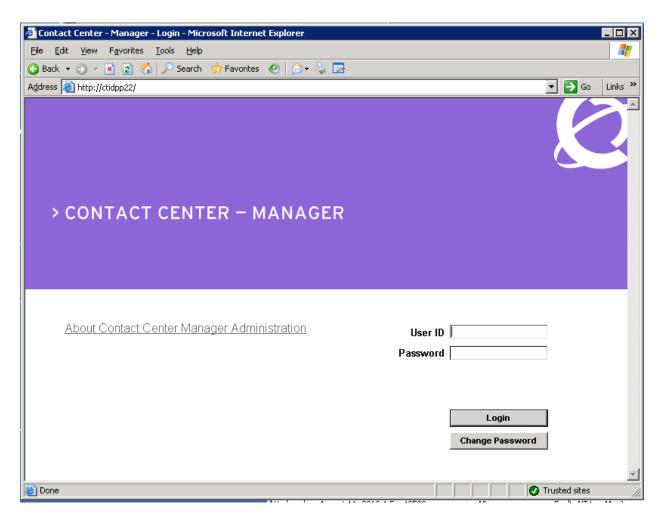




Complete the configuration of the user by clicking Apply.

5.3. Create Contact Center Agent on CCMA

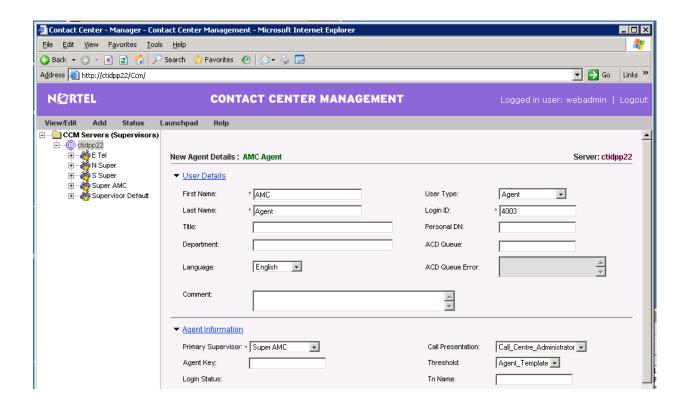
This section describes the procedure to create a call center agent on CCMA. Launch CCMA GUI on Internet Explorer by typing in the CCMA URL.



Login using the default user: webadmin (pw: webadmin).

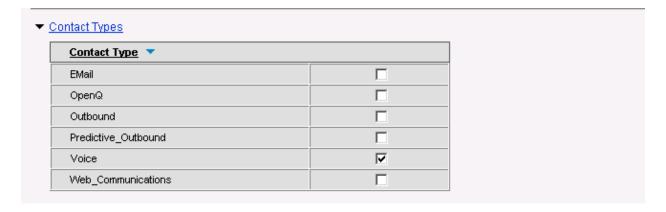


Go to Contact Center Management. Select the CCMS server configured, and navigate to Add \rightarrow Agent. Enter Agent Name information and Login ID. This Login ID will be used in the configuration of the Agent on MS CRM in **Section 6.3**. Assign a Supervisor.

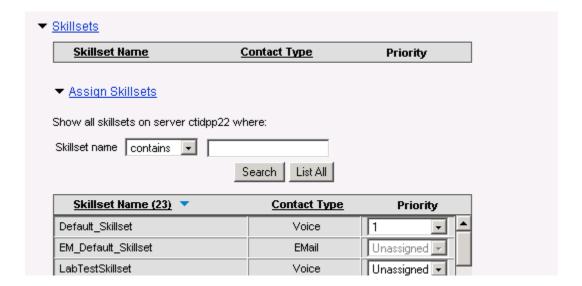


Assign Skillset Type "Voice" and the skillset required by the call center.

Click on "Contact Type" link and choose Voice out of the options given.



Click on "Skillsets" link and choose the skillset to be assigned to this agent. For the purpose of the certification testing, Default_Skillset was chosen.



6. Configure MCIS server and AMC Application Adapter for Oracle Siebel

6.1. Modifying config.ini

This section covers the procedure for configuring the AMC Connector and integrating it with Communication Control Toolkit.

• Modify **config.ini** in the C:\Program Files\AMC Technology\MCIS directory on the MCIS server as follows. Note that the complete file is not shown below.

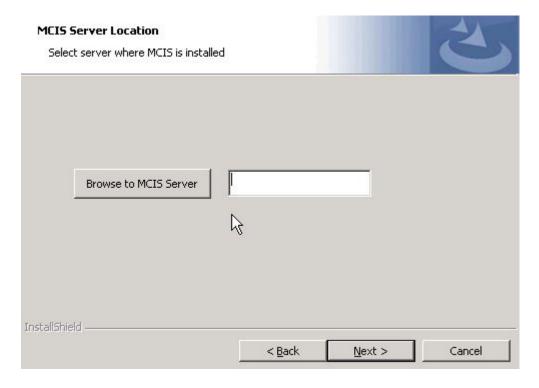
```
### CHANNEL SPECIFIC ###
### NULL Connector
ModuleClass=CTINullClass,CTI_NULL.AMC_CTI_NULL
# Module=CTIModule,CTINullClass
### Avaya CT/AES
ModuleClass=CentreVuCTI,CentreVuCTI.CentreVuCTIModule
ModuleClass=ARGRouterClass, CentreVuRouterDLL.AMCCentreVuRouter
# Module=CTIModule,CentreVuCTI
# Module=ARGRouter, ARGRouterClass
### Nortel CCT
ModuleClass=NortelCCTClass,NortelCCT7Connector.TelephonyConnector
Module=CTIModule, NortelCCTClass
### Cisco CTI
ModuleClass=CiscoCTI,Cisco.AMC_Cisco
# Module=CTIModule,CiscoCTI
### Aspect UIP CTI
ModuleClass=AspectUIP, AspectCTI. AspectConnector
# Module=CTIModule,AspectUIP
### CT Connect CTI
ModuleClass=NetMerge_ProgID, NetMerge.AmcNetMerge
# Module=CTIModule,NetMerge_ProgID
. . .
//
// Telephony Connector for Nortel CCT 7
//
TraceLevel=6
Channel=CTI1
InitialLoginState=NotReady
SetStateOnLogin=True
UseLoginWorkaround=False
CCTServer=47.249.66.148
CCTDomain=47.249.66.148
CCTUserName=Amc 2
CCTPassword=amc123
CCTEncryptionLevel=None
DataStore=DataStore
KnownQueues=7000
CCTDataStoreFormat=STR
CompressAdditionCAD=true
```

UseLegacyCADFormat=true
DefaultObjectName=KEYVALUE
...

The "CCTServer" and "CCTDomain" fields are configured with the IP address of the Communication Control Toolkit. The "CCTUserName" and "CCTPassword" fields are configured with the username and password of the user imported into CCT in **Section 5.2.** The value contained in the "RemotingPort" field is used to complete the AMC Application adapter configuration.

6.2. Configuring MS CRM Server for MCIS

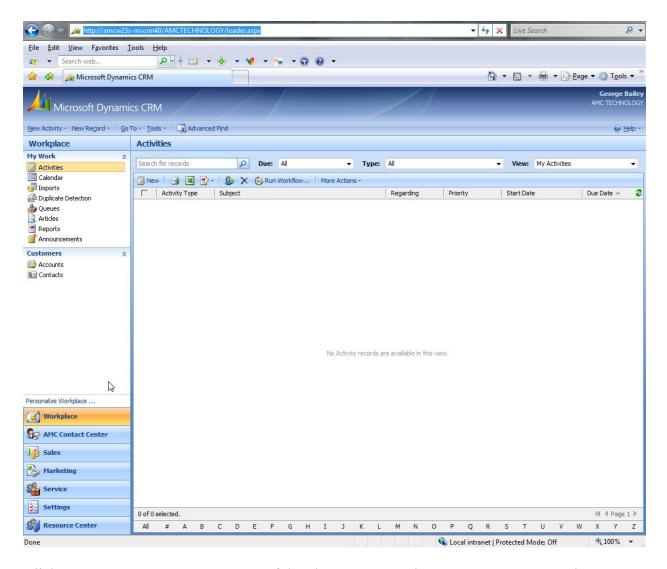
Because the adapter runs on the MS CRM server, it connects with the MCIS Server. When installing the adapter on the MS CRM server, prompts will appear to configure the MCIS server. Note that all steps in the installation process are not listed here – only those relevant to MCIS is listed.



Enter the server name in the text box. Continue on to complete installation.

6.3. Configuring new agents on MS CRM

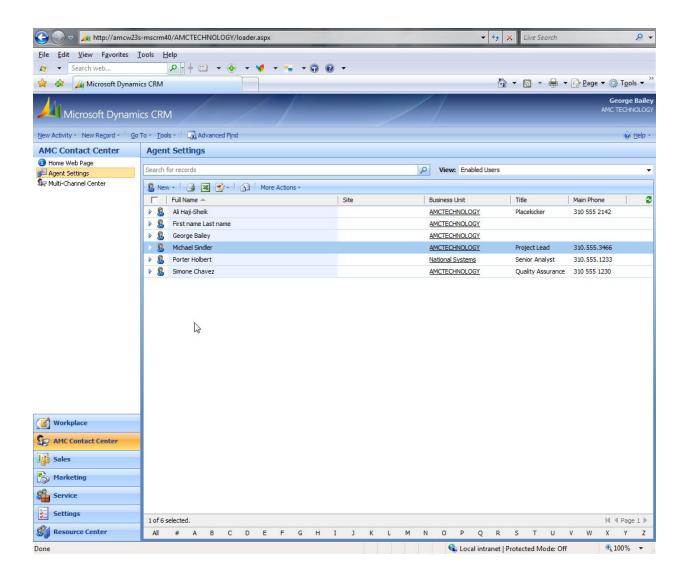
Configure new agents by logging on to the MS CRM system with administrator account.



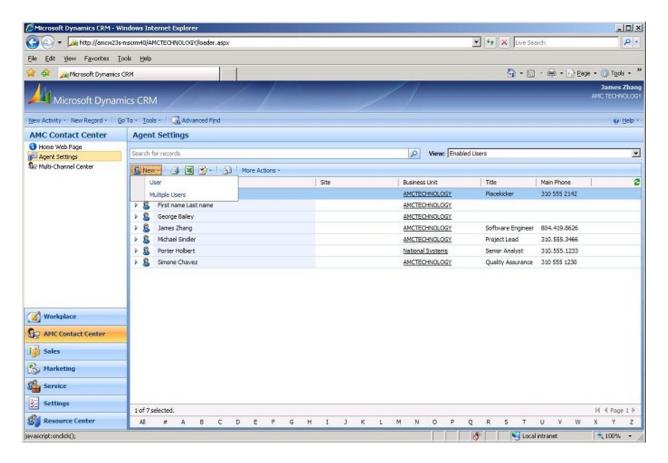
Click on "AMC Contact Center" on Left hand pane to go to the AMC Contact Center homepage.



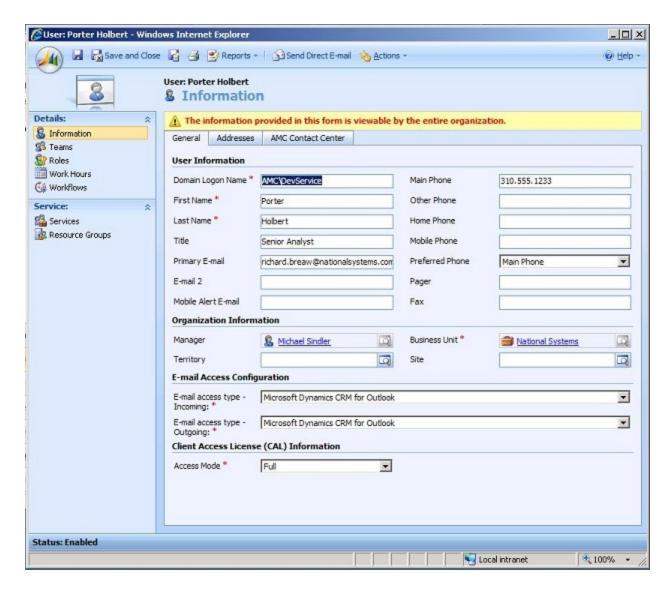
Click on "Agent Settings" to view all agents configured.



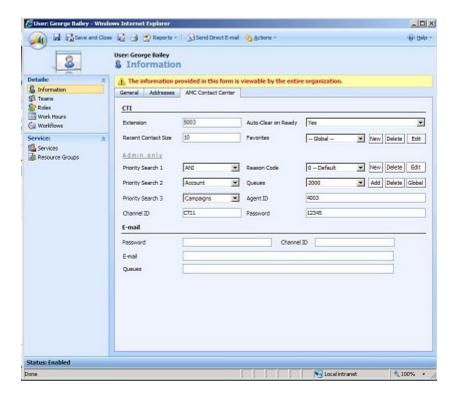
Create a new agent by selecting New -> Agents.



Enter user information.

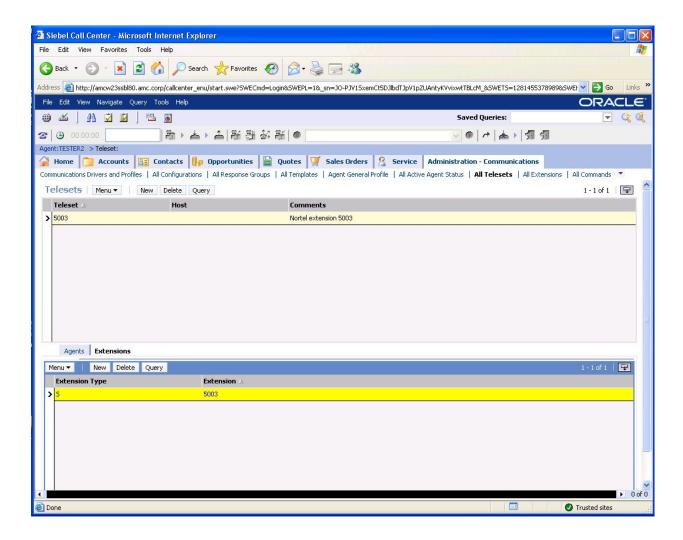


Go to the AMC Contact Center tab to enter telset information.



"Queue" is the ACD queue configured in **Section 4.1.** "Agent ID" is the Login ID configured in **Section 5.3**. All other entries are entered as per customer specifications.

• Configure telephone extensions implemented on CS1K and CCT in the "Telsets" tab. Choose new and enter telset information. "Extension" is the value configured for Key 00 or Key 03 in **Section 4.1**. Note the screenshot below is generic and does not match the values indicated in Section 4.1 of this document.



7. General Test Approach and Test Results

The test plan developed by AMC and DevConnect was implemented. The test plan included testing of various call flows and agent states. Agent and call states shown on the AMC agent console were visually inspected for verification against actual call states on the physical phonesets.

8. Verification Steps

Agent and call states shown on the AMC agent console were compared against the physical phonesets for verification.

9. Conclusion

These Application Notes describe the configuration steps required for AMC Application adapter with MS CRM to integrate with Communication Control Toolkit to successfully control and monitor agent and call states.

10. Additional References

Avaya product documentation for Contact Center Manager Server can be found at http://support.avaya.com/

The following documentation is provided by AMC:

[1] AMC Adapter for MS CRM Implementation Guide

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