

# **Avaya Solution & Interoperability Test Lab**

Application Notes for Configuring Avaya Aura<sup>®</sup> Contact Center R6.2 with AMC Technology Contact Canvas Agent 2012 (Microsoft Dynamics Adapter) – Issue 1.0

#### **Abstract**

These Application Notes describe the configuration steps required for Avaya Aura® Contact Center R6.2 to integrate with Customer Relationship Management software from Microsoft using AMC Technology Contact Canvas Agent 2012. The Contact Canvas Agent solution features the Contact Canvas Server which includes the connector which provides Computer Telephony Integration for the Avaya Aura® Contact Center and the Adapter to connect to Microsoft Dynamics Customer Relationship Management.

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 to integrate Customer Relationship Management (CRM) applications using AMC Technology (AMC) Contact Canvas Agent with Avaya Aura® Contact Center (AACC). The Contact Canvas solution contains 3 main modules:

- 1) Contact Canvas Server Core Services
- 2) AMC Connector, which provides Computer Telephony Integration (CTI) through the Communication Control Toolkit (CCT) that enables Call Control, Agent Session Control and Screen Pops
- 3) AMC Adapter which resides on a Microsoft Dynamics Server which then allows connection to the Microsoft Dynamics CRM application

# 2. General Test Approach and Test Results

The general test approach was to configure a Contact Center to enable the Microsoft Dynamics CRM to connect to the CCT via the AMC Technology Contact Canvas Agent, See **Figure 1** for a network diagram. The AACC was connected to the Avaya Communication Server 1000E (CS1000E) using an Application Module Link (AML). The AACC was configured with a number of Co-Resident components:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Administrator (CCMA)
- Contact Center License Manager (LM)
- Communication Control Toolkit (CCT)

An Avaya Reference Client was used to verify the call state of the Microsoft Dynamics CRM. The configuration of the AML, the CS1000E, and the AACC is outside the scope of this document. The interoperability compliance test included both feature functionality and serviceability tests.

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.

## 2.1. Interoperability Compliance Testing

Feature functionality testing included

- Agent Log In/Log Out
- Agent Ready/Not Ready
- Agent state synchronization with Agent telephones
- Hold/Unhold
- Transfers, Blind/Consultative
- Conferencing

- Customer calls to Agents (direct to Agent number and via Automatic Call Distribution Queue)
- Calls from Agent to Agent
- Calls from Agent to Non Agent

#### 2.2. Test Results

All testcases were executed and passed successfully with one exception. During compliance testing it was observed that when the Agent logged out via the physical telephone the event was not updated on the Microsoft Dynamics client.

## 2.3. Support

Technical support for AMC Technology can be found as follows:

Web Portal: <a href="www.amctechnology.com">www.amctechnology.com</a>
 Email: <a href="mailto:support@amctechnology.com">support@amctechnology.com</a>

• Phone contact: +1 804 419 8600 or +1 800 390 4866

## 3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of a CS1000E R7.5 and a Contact Center R6.2. Contact Center Manager Server, License Manager, Contact Center Manager Administration and Communication Control Toolkit were Co-resident on the same server. The Communication Server 1000E was connected to the Contact Center using an Application Module Link. During compliance testing 2 Agents were configured on Communication Server 1000E and were configured as Domain Users on the Contact Center. These users were also added to the Domain Controller. 2 Microsoft Dynamics Clients communicated with the AACC through the Microsoft Dynamics Server via the Contact Canvas server connected to CCT using the Internet Protocol. An Avaya 1140E IP phone was used to make and receive calls to the Contact Center. An Avaya Reference Client was used to validate activities of the Microsoft Dynamics.

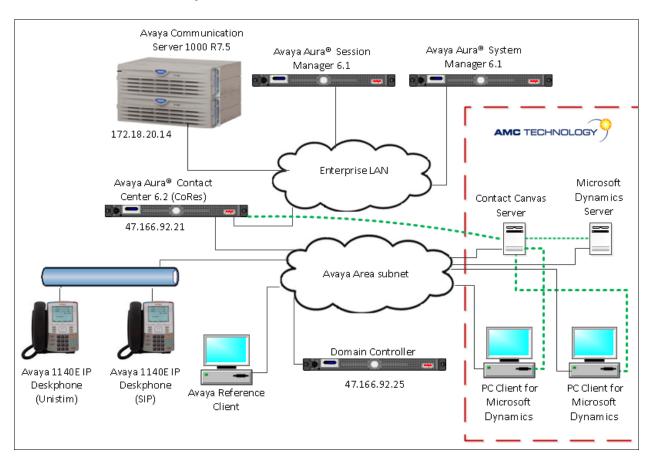


Figure 1: Avaya Aura® Contact Center R6.2 with AMC Technology Contact Canvas Agent Reference Configuration

## 4. Equipment and Software Validated

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

Avaya Equipment	Software / Firmware Version
IBM System x3250 M2 server running	Avaya Aura® Contact Center R6.2 SP5
Windows 2008 Server R2	including CoResedent:
	Contact Center Manager Server
	License Manager
	Contact Center Manager Administration
	Communication Control Toolkit
Call Processor Pentium Mobile (CPPM)	Avaya Communication Server 1000E R7.5
Avaya Media Gateway NTDW60	FPGA AA18
Avaya S8800 Server running Avaya Aura®	Avaya Aura® System Manager R6.1
System Manager	Build 6.1.0023
Avaya S8800 Server running Avaya Aura®	Avaya Aura® Session Manager R6.1
Session Manager	Build 6.1.0012
Avaya 1100 series IP Telephones	0625C8A (UniStim 5.0)
• 1140e	SIP FW 04.00.04.00.bin
Avaya Reference Client	Version 8.2.0.10
AMC Technology Equipment	Software / Firmware Version
Contact Canvas Server (resides on a Windows	Version 5.4.0.0
2008 64-bit Operating System)	
AACC6.2 AMC Connector	Version 5.4.0.9
AMC MSCRM Adapter	Version 5.4.0.2
Microsoft Dynamics CRM	MSCRM 4.0

## 5. Configure Avaya Communication Server 1000E

Configuration and verification operations on the CS1000E illustrated in this section were all performed using terminal access over a serial link to a Talk To You (TTY) port on the CS1000E using Telnet This section provides the procedure for configuring the CS100E. The procedure is limited to Agent Telephone set configuration as is necessary for CCT integration. It is implied a working system is already in place. For all other provisioning information such as Installation and Configuration, please refer to the product documentation in **Section 9**. For a list CS1000E Service Packs, deplist and Patches loaded on the system see **Appendix A.** The configuration operations described in this section can be summarized as follows:

• Create Agent Telephone sets

**Note:** In the telnet screenshots below only the unique prompt inputs are shown. To accept default values carriage return at all other prompts.

#### 5.1. Create Agent Telephone sets

Use the **NEW** command in **LD 20** to create Agent Telephone sets to interoperate with the AACC. These Agents are imported into CCT and were used by the Microsoft Dynamics CRM. Each Agent Telephone set require the following configured:

- Auto Hold Denied (AHD) and Automatic Call Distribution Agent (AGN) At the Class of Service prompt (CLS) enter AHD and AGN
- Associate Set Assignment for Meridian Link applications (AST)
   At the AST prompt enter 0 3 where 0 is the Automatic Call Distribution (ACD) Key and 3 is the Single Call Ringing (SCR) key.
- Event Group for UCM Message (IAPG) Enter 1 to send all messages for AST keys beginning at Key 0.
- Telephone set Key configuration (**KEY**) Enter the **KEY** configuration as per the Telnet screen shot below.

During compliance testing 2 Agent Telephone sets were created, Agent1 on Terminal Number (TN) 96 0 0 2 and Agent 2 on TN 96 0 0 3. In the example below an Avaya 1140 IP Deskphone was created using TN **96-0-0-2** and a **SCR** of 5002 on Key 3.

**Note:** the Terminal Number is required when configuring Agent Telephone sets on CCT.

LD 20

Prompt	Response	Description
>	LD 20	Enter Overlay 20
REQ	NEW	New Data
TYPE	1140	1140 Telephone set type
TN	96 0 0 2	Terminal number
CUST	0	Customer Number
ZONE	2	Zone number which Telephone set belongs
CLS	AHD AGN	Class of Service
AST	0 3	Key Assignments of Telephone set
IAPG	1	Event Group for UCM Message
KEY	0 ACD 2602 0 1600	ACD Key
KEY	1 NRD	Not Ready key
KEY	2 MSB	Make Set busy key
KEY	3 SCR 5002	SCR key

# 6. Configure Avaya Aura® Contact Center

No special configuration was required for the AACC or CCT Server to interoperate with AMC Contact Canvas Agent. The 2 Agents previously created on the CS1000E were added as Phonesets and Acquired on the AACC. It is implied that a CDN, Skillset and Scripts are configured correctly. During compliance testing the TN of each Agent created on the CS1000E were mapped to each CCT Agent. For provisioning information such as Installation and Configuration, please refer to the product documentation in **Section 9**. For a list of all AACC Service Packs, roll Ups and Patches see **Appendix B**.

## 7. Configure AMC Contact Canvas Agent

This section describes the steps preformed to connect the Contact Canvas Server, the main component of AMC Contact Canvas Agent to the CCT server. The procedure for configuring the Microsoft Dynamics CRM to the AMC solution is outside the scope of this document. It is implied that the Contact Canvas Server software is already installed. These configurations can be summarised as follows:

- Modifying the Config.ini file
- Restart Contact Canvas Server

#### 7.1. Modifying the Config.ini file

The Config.ini file contains all the information to connect to the CCT server. To modify the Config.ini file first navigate to Local Disk (C:)  $\rightarrow$  Program Files (x86)  $\rightarrow$  AMC Technology  $\rightarrow$  MCIS. Once the Config.ini file is located and opened, scroll down to the [CTIModule] section

Enter the following parameters:

CCTServer= Enter the IP address of the CCT Server
 CCTDomain= Enter the Domain Name of the CCT Server
 CCTUserName= Enter the User Name required to logon to CCT
 CCTPassword= Enter the password required to logon to CCT

Once the correct parameters are entered **Save** and **Close** the file.

[CTIModule]

TraceLevel=6

Channel=CTI1

InitialLoginState=NotReady

SetStateOnLogin=True

UseLoginWorkaround=False

**CCTServer=**<IP address>

**CCTDomain=**<Domain>

**CCTUserName=**<User Name>

**CCTPassword=**<Password>

CCTEncryptionLevel=None

DataStore=CTIModule

KnownQueues=2000,3000,31000,4000

CCTDataStoreFormat=STR

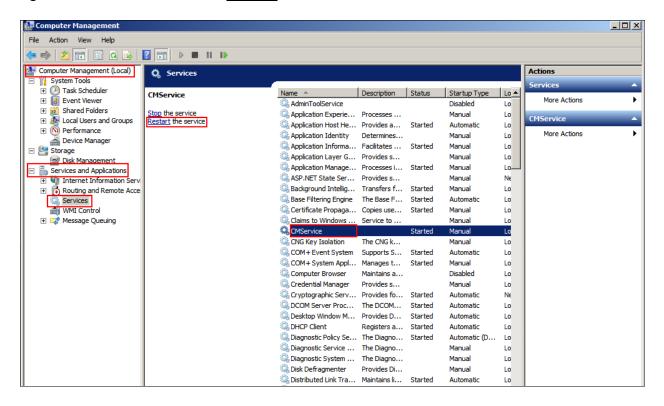
CompressAdditionCAD=true

UseLegacyCADFormat=true

DefaultObjectName=KEYVALUE

#### 7.2. Restart Contact Canvas Server

Once the Config.ini file is modified the Contact Canvas Server must be restarted. The following steps are required to restart the Contact Canvas Server: Click on Start, select All Programs, followed by Administrative tools and select Computer Management. Navigate to Computer Management (Local)  $\rightarrow$  Services and Applications  $\rightarrow$  Services. Select CM services in the right hand window and click on Restart.



## 8. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the CS1000E and the Contact Canvas Server.

#### 8.1. AMC Contact Canvas Server Connector to CCT Status

It is possible to verify the Contact Canvas Server connector status by viewing the **CTIModule.log**. To view the CTIModule.log navigate to **Local Disk (C:)**  $\rightarrow$  **Program Files (x86)**  $\rightarrow$  **AMC Technology**  $\rightarrow$  **MCIS**  $\rightarrow$  **Server**  $\rightarrow$  **Logs** and open the **CTIModule.log**. Something similar to the file below is required to show that the Contact Canvas Server connection to CTT is established.

```
I20120502-105411.887,0001,
                            0, Init: Config: CCTUsersFileName=C:\Program Files\AMC
Technology\Connectors\Nortel CCT8\CCTUserExt.txt
I20120502-105411.887,0001, 0, Init: Config: SupportHotdesking=False
I20120502-105415.007,0001,
                           0, Start: [Begin] Calling Base Start
D20120502-105415.007,0001,
                           0, AMCModuleBase::Start Module is Started
I20120502-105415.007,0001,
                           0, Start: Connecting to CCT.
120120502-105415.007,0001,
                           0,Start: [End]
I20120502-105415.007,0003,
                            0,ReconnectToCCT (Thread): [Begin]
I20120502-105415.007,0003,
                            O, ReconnectToCCT (Thread): Attempting to reconnect to CCT
Host=47.166.92.21, Port=29373
D20120502-105415.022,0003, 0,ConnectToCCT [Begin] Server=47.166.92.21, Port=29373
D20120502-105415.022,0003,
                            O, ConnectToCCT Connecting to CCT...
I20120502-105417.300,0003, 0,ConnectToCCT Connected to CCT.
```

#### 9. Conclusion

These Application Notes describe the configuration steps required for Avaya Aura® Contact Center R6.2 to successfully interoperate with AMC Technology Contact Canvas Agent 2012 using the Microsoft Dynamics Adapter. AMC Technology Contact Canvas Agent is considered compliant with Avaya Communication Server 1000E R7.5 All test cases have passed and met the objectives with one exception as outlined in **Section 2.2.** 

## 10. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from <a href="http://support.avaya.com">http://support.avaya.com</a> or from your Avaya representative.

- [1] Software Input Output Reference Administration Avaya Communication Server 1000 7.5, NN43001-611, 05.09 September 2011
- [2] Avaya Aura® Contact Center Installation Release 6.2, NN44400-311, 03.0, 16 March 2012
- [3] Avaya Aura® Contact Center Commissioning Release 6.2, NN44400-311, 03.0, 16 March 2012

Technical documentation for AMC Technology can be obtained by contacting AMC Technology Support. See Section 2.3 for contact details.

## Appendix A: Avaya Communication Server 1000E Software

```
Avaya Communication Server 1000E call server deplists
VERSION 4121
RELEASE 7
ISSUE 50 Q +
DepList 1: core Issue: 01 (created: 2011-03-15 10:26:33 (est))
IN-SERVICE PEPS
PAT# CR #
                     PATCH REF #
                                      NAME
                                                DATE
                                                             FILENAME
SPECINS
000
    wi00688505
                    ISS1:10F1
                                   p30595 1
                                            14/06/2011
                                                         p30595 1.cpl
                                                                         NO
001
     wi00835294
                    ISS1:10F1
                                   p30565 1
                                             14/06/2011
                                                         p30565 1.cpl
                                                                         NO
002
    wi00832106
                    ISS1:10F1
                                   p30550 1
                                             14/06/2011
                                                         p30550 1.cpl
                                                                         NO
                                   p30594 1
003
    wi00837618
                    ISS1:10F1
                                             14/06/2011
                                                         p30594 1.cpl
004
    wi00852365
                    ISS1:10F1
                                   p30707 1
                                             14/06/2011
                                                         p30707 1.cpl
                                                                         NO
                                   p30731 1
005
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                                             14/06/2011
                                                         p30731 1.cpl
                                                                         YES
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                                                         p30591 1.cpl
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                                                                         NO
007
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                    ISS2:10F1
                                   p30560 2
                                             14/06/2011
                                                         p30560 2.cpl
                                                                         NO
                    ISS1:10F1
008
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                                             14/06/2011
                                                         p30766 1.cpl
                                                                         NO
009
    wi00841980
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                                   p30618 1
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                                                                         NO
010
    wi00837461
                    ISS1:10F1
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                                             14/06/2011
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                                             14/06/2011
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                                   p30784 1
                    ISS1:10F1
                                             14/06/2011
                                                         p30784 1.cpl
                                                                         YES
016
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                    ISS1:10F1
                                   p30698 1
                                             14/06/2011
                                                         p30698 1.cpl
                                                                         YES
                                   p30613 1
     wi00836981
                    ISS1:10F1
                                             14/06/2011
                                                         p30613 1.cpl
                                                                         NO
```

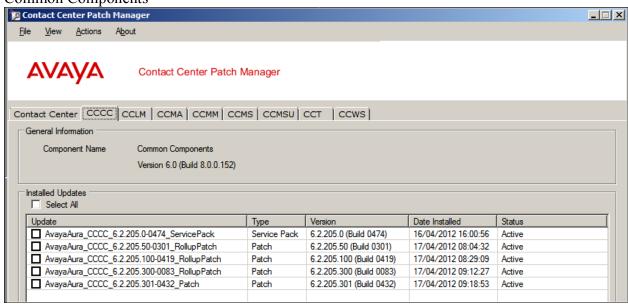
```
Avaya Communication Server 1000E Peripheral Software Version (PSWV) data
PSWV VERSION: PSWV 100
LCRI:
            VERSION NUMBER: AA02
XNET:
            VERSION NUMBER: AC23
XPEC:
            VERSION NUMBER: AC43
FNET:
            VERSION NUMBER: AA07
FPEC:
            VERSION NUMBER: AA08
MSDL:
            VERSION NUMBER: AJ73
SDI:
            VERSION NUMBER: AH51
            VERSION NUMBER: AA72
DCH:
            VERSION NUMBER: AK81
AML:
BRIL:
            VERSION NUMBER: AK83
BRIT:
            VERSION NUMBER: AK82
MISP:
            VERSION NUMBER: AJ71
MPH:
            VERSION NUMBER: AH51
            VERSION NUMBER: AJ71
BRSC:
            VERSION NUMBER: AH54
BBRI:
PRIE:
            VERSION NUMBER: AA87
BRIE:
            VERSION NUMBER: AK89
ISIG:
            VERSION NUMBER: AA33
SWE1:
            VERSION NUMBER: BA53
UKG1:
            VERSION NUMBER: BA51
AUS1:
            VERSION NUMBER: BA49
DEN1:
            VERSION NUMBER: BA48
            VERSION NUMBER: BA49
FIN1:
```

```
GER1:
            VERSION NUMBER: BA54
ITA1:
            VERSION NUMBER: AA54
NOR1:
            VERSION NUMBER: BA49
POR1:
            VERSION NUMBER: BA49
DUT1:
            VERSION NUMBER: BA50
            VERSION NUMBER: BA49
EIR1:
            VERSION NUMBER: BA53
SWI1:
            VERSION NUMBER: BA49
BEL1:
SPA1:
            VERSION NUMBER: BA51
NET1:
            VERSION NUMBER: BA48
FRA1:
            VERSION NUMBER: BA52
            VERSION NUMBER: BA48
CIS1:
ETSI:
            VERSION NUMBER: BA48
E403:
            VERSION NUMBER: BA07
N403:
            VERSION NUMBER: BA05
            VERSION NUMBER: AC08
JTTC:
TCNZ:
            VERSION NUMBER: AA13
            VERSION NUMBER: AA14
AUBR:
AUPR:
            VERSION NUMBER: AA04
            VERSION NUMBER: AA06
HKBR:
            VERSION NUMBER: AA08
HKPR:
SING:
            VERSION NUMBER: AA15
            VERSION NUMBER: AA07
THAI:
NI02:
            VERSION NUMBER: AA26
T1IS:
            VERSION NUMBER: AA10
T1ES:
            VERSION NUMBER: AA09
ESGF:
            VERSION NUMBER: AC30
ISGF:
            VERSION NUMBER: AC31
ESGFTI:
            VERSION NUMBER: AC29
ISGFTI:
            VERSION NUMBER: AC31
INDO:
            VERSION NUMBER: AA06
            VERSION NUMBER: AA16
JAPN:
MSIA:
            VERSION NUMBER: AA04
CHNA:
            VERSION NUMBER: AA04
INDI:
            VERSION NUMBER: AA03
PHLP:
            VERSION NUMBER: AA02
            VERSION NUMBER: AA03
TAIW:
EAUS:
            VERSION NUMBER: AA02
EGF4:
            VERSION NUMBER: AC14
DCH3:
            VERSION NUMBER: AA10
PUP3:
            VERSION NUMBER: AA14
T1E1:
            VERSION NUMBER: AA19
DITI:
            VERSION NUMBER: AA40
CLKC:
            VERSION NUMBER: AA20
3902:
            VERSION NUMBER: AA84
3903:
            VERSION NUMBER: AA91
3904:
            VERSION NUMBER: AA94
3905:
            VERSION NUMBER: AA94
MGC, MGX and MGS: CSP VERSION: MGCC CD01
  MSP VERSION: MGCM AB01
  APP VERSION: MGCA BA07
  FPGA VERSION: MGCF AA18
  BOOT VERSION: MGCB BA07
  DSP1 VERSION: DSP1 AB03
  DSP2 VERSION: DSP2 AB03
  DSP3 VERSION: DSP3 AB03
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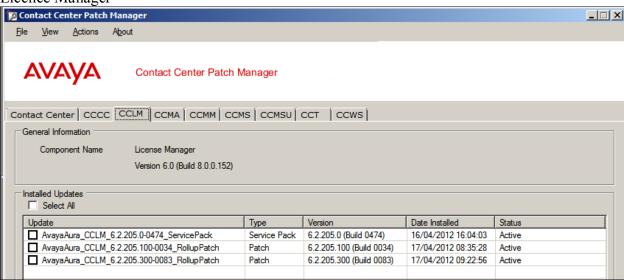
DSP4 VERSION: DSP4 AB01 DSP5 VERSION: DSP5 AA01 UDT VERSION NUMBER: AA42

# Appendix B: Avaya Aura® Contact Center Software, Service Packs, Rollups, and Patches

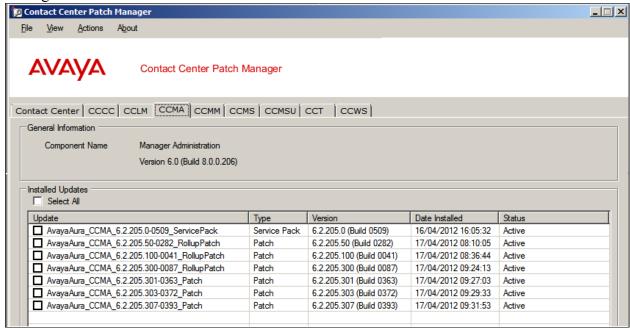
Common Components



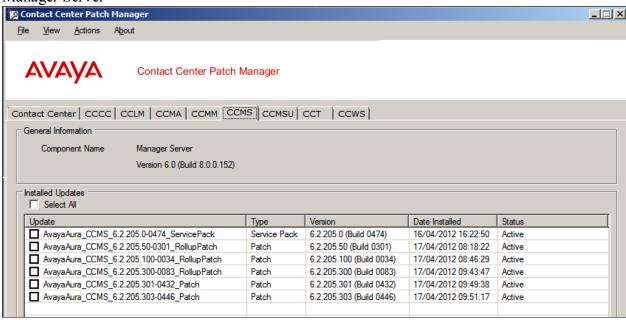
Licence Manager



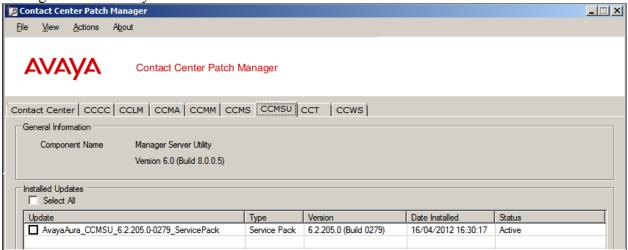
#### Manager Administration



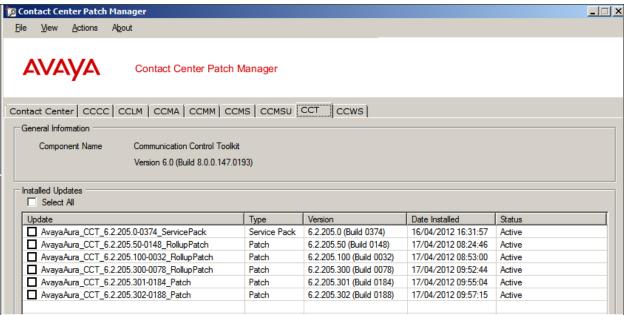
Manager Server



Manager Server Utility



#### Communication Control toolkit



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