



Avaya Aura[®] Offsite Agent Installation and Commissioning Guide

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Chapter 1: New in this release

The following sections detail what is new in *Avaya Aura® Offsite Agent Installation and Commissioning* (NN44400-330).

- [Features](#) on page 5
- [Other changes](#) on page 6

Features

See the following sections for information about feature changes.

Offsite Agent licensing on Contact Center Manager Server

In Release 6.2, administrators apply Offsite Agent licensing on the Contact Center Manager Server (CCMS). This licensing enables the administration of Offsite Agent configuration through Contact Center Manager Administration (CCMA).

Agent configuration integrated with Contact Center Manager Administration

The agent configuration functions previously accessible through Element Manager are now in Contact Center Manager Administration (CCMA). In Release 6.2, administrators configure agents to use Offsite Agent by changing settings on the standard CCMA agent configuration page.

Support for Telecommuter mode

In previous releases, the Offsite Agent solution was available only for contact centers using the CS 1000 platform. In Release 6.2, customers have the option of configuring an offsite solution with Avaya Aura® Unified Communications platforms. This feature is called Contact Center Telecommuter mode. The agent experience at the desktop is almost identical, with small differences in the behavior of the calls from the contact center to the offsite telephone.

Agents using the Unified Desktop with Avaya Aura® Call Center Elite can use the existing CCE Telecommuter Mode. If you are using Agent Desktop to work with Call Center Elite, refer to *Avaya Aura® Agent Desktop User Guide* (NN44400-114).

Other changes

There are no other changes in this document.

Related resources

Support

Visit the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. On the Avaya Support website at <http://support.avaya.com>, search for notices, release notes, downloads, user guides, and resolutions to issues. Use the Web service request system to create a service request. Chat with live agents to help answer questions. If an issue requires additional expertise, agents can quickly connect you to a support team.

Avaya Mentor videos

Avaya Mentor is an Avaya-run channel on YouTube that includes technical content on how to install, configure, and troubleshoot Avaya products.

Visit <http://www.youtube.com/AvayaMentor> and do one of the following:

- Enter a key word or key words in the Search channel to search for a specific product or topic.
- Click the name of a playlist to scroll through the posted videos.

Chapter 2: Avaya Aura® Offsite Agent Solutions Overview

This section provides an overview of the Avaya Aura® Contact Center Offsite Agent solutions. It explains the customer requirements addressed by Offsite Agent, the different potential configurations, and some deployment considerations.

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The Offsite Agent solutions

Offsite Agent is a solution that extends a Contact Center to an agent's preferred environment, allowing them to handle skillset calls regardless of location. Whether an agent is at home or on the move, Offsite Agent solutions connect contact center calls to the agent's telephone (home telephone or mobile), without the agent needing special hardware.

For many contact centers, providing the ability for agents to be offsite gives a range of advantages. It can:

- increase employee satisfaction, by offering flexible working hours and zero travel time
- help retain highly skilled employees
- reduce the overhead of having agents working on-site (e.g., real estate costs)

- improve management of staffing levels at peak times (with the ability to quickly bring agents online)
- improve management of staffing levels during a pandemic (agents can work from home)

In all these situations, the ability for agents to work from home without specialized equipment, and with a small amount of additional training and orientation, provides an improved service to the customer and a clear business advantage.

Agents simply log in to the contact center using a smart client application on their home PC or their laptop. They receive skillset calls on PSTN home or mobile phones.

Offsite Agent makes these agents appear as local to the contact center, thus functionality such as availability in Contact Center Manager Server skillsets, visibility in contact center reports, and contact recording all function in the normal manner.

The Offsite Agent packaged application resides on its own server, which is a customer-supplied Product Vendor Independent (PVI) platform.

A broadband connection to the contact center is usually required, but because calls are routed to the PSTN phone, this does not need to provide voice-quality data streams.

Solution deployments

There are two different solution deployments possible to enable Offsite Agent, depending on which platform your Avaya Aura® Contact Center uses.

In contact centers using the Avaya Communication Server 1000 platform the Offsite Agent solution requires an Offsite Agent server and a SIP-TDM gateway to connect to the PABX. This is the same deployment as used in earlier versions of Offsite Agent.

Customers using Avaya Aura® Unified Communications platforms deploy Offsite Agent using a feature called Telecommuter mode. When using Telecommuter mode, the customer does not require an additional Offsite Agent server or a SIP-TDM gateway.

In both deployments, the agent experience at the desktop is almost identical, with small differences in the behavior of the calls from the contact center to the offsite telephone.

Agent operation

To use Offsite Agent, an agent accesses the corporate network, usually through a Virtual Private Network (VPN), and connects to a server hosting Avaya Aura® Agent Desktop (AAD). This allows them to launch the Agent Desktop client and specify that they are working offsite. Agent Desktop prompts the agent to select or enter the telephone number where they can

receive calls. This number can be any number that is directly dialable from the contact center PABX. The agent can then log in to the contact center.

The Offsite Agent server acts as a proxy between the offsite agent and the contact center, forwarding skillset calls to the agent's offsite phone number.

Once connected and logged in, the agent can use the Computer Telephony Integration (CTI) controls of the Agent Desktop desktop to carry out the call control commands normally available on a contact center telephone set. They can log in and log out, make themselves ready or not ready, and release, hold, transfer, and conference calls. The Agent Desktop functionality available to the offsite agent is consistent with the onsite agent experience.

Agent Connection Modes

Offsite Agent supports two connection modes for agents, to maximize the flexibility and efficiency of the solution. The modes are Permanent Connection and On Demand.

In Permanent Connection mode, the Offsite Agent server makes a single call to the offsite agent's telephone number once they log in through Agent Desktop. For each contact center customer call, Offsite Agent bridges through the customer to the agent's line.

Depending on the configuration applied by the Administrator, agents either:

- hear a tone to alert them to the incoming call, which they must take (mimicing a forced call answer presentation class), or
- use the Accept button on the Agent Desktop to accept the new call

In On Demand mode, the Offsite Agent server registers the offsite agent's login, but does not set up a call to their remote telephone. For each contact center customer call, Offsite Agent initiates a new call from the contact center switch to the offsite agent. The offsite agent needs to physically answer the telephone to take the call.

For more information on agent connection modes, see *Avaya Aura® Offsite Agent Administration and Maintenance* (NN44400-617).

Agent features

Offsite agents using Offsite Agent through Agent Desktop can take advantage of the following contact center features:

- Agent login/logout
- Ready/Not Ready
- Transfer (blind and supervised)
- Conference

- Release
- ANI, DNIS, and Skillset Name display (through Agent Desktop)
- Agent status and destination telephone number (through Agent Desktop)
- On Demand mode
- Permanent Connection mode, with either Force Answer or Accept Call configurations
- Emergency key
- Call supervisor
- Outbound calls through the Avaya Communication Server 1000

Technical overview–Avaya Communication Server 1000 deployments

Offsite Agent integrates easily into existing Avaya Communication Server 1000 TDM-based contact centers by extending lineside ACD capability to any directly-dialable telephone number. To deploy Offsite Agent on the contact center, the following Avaya products are required:

- Avaya Communication Server 1000 (CS 1000)
- Contact Center Manager Server (CCMS)
- Communication Control Toolkit (CCT)
- A SIP/TDM gateway
- Agent Desktop
- Offsite Agent

The CS 1000 and CCMS are installed and configured in the normal way for a contact center. The Offsite Agent application supports the offsite agents' connections and logins, and ensures that calls from the contact center are routed to them. Offsite agents connect to the contact center through the Agent Desktop application. A TDM-SIP gateway is required to bridge calls between the lineside TDM ports on the CS 1000 and the Offsite Agent server, which has a SIP-based architecture. The Agent Desktop client on the offsite agents' desktops uses CCT to provide call control on the CS 1000 lines.

Technical overview–Avaya Aura® Communication Manager deployments

Offsite Agent integrates easily into existing Communication Manager SIP-based contact centers by using the existing Telecommuter feature of Communication Manager. To deploy Offsite Agent on the contact center, the following Avaya products are required:

- Avaya Aura® Communication Manager
- Contact Center Manager Server (CCMS)
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)
- Agent Desktop
- Offsite Agent licensing on the CCMS

The Communication Manager and CCMS are installed and configured in the normal way for a contact center. The Offsite Agent license allows administrators to configure agents' offsite settings in CCMA and CCMM. The Agent Desktop client on the offsite agents' desktops uses CCT to provide call control on the Communication Manager lines.

Offsite Agent migration

Avaya Aura® Offsite Agent Release 6.2 does not support a direct migration from previous versions. This is because the management of the agent records moves from the Offsite Agent Element Manager to the Contact Center Manager Administration server. As a result of this change, administrators must manually enter agent details for Offsite Agent Release 6.2 implementations.

Chapter 3: Offsite Agent Planning and Engineering

This chapter describes the planning and engineering considerations for an Avaya Aura® Offsite Agent solution. It provides an overview of the types of Offsite Agent solution and details how to plan each of the elements of the solution.

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Offsite Agent component overview–Avaya Communication Server 1000

Offsite Agent extends existing contact centers based on Avaya Communication Server 1000 to allow agents to work at offsite locations, while receiving the same experience as an agent

working onsite. To deploy Offsite Agent on a CS 1000-based contact center requires the following core Avaya products:

- an Offsite Agent server
- an Avaya Communication Server 1000 PABX with SIP trunk and Lineside E1/T1
- a Contact Center Manager Server (CCMS) server (and associated Contact Center Manager Administration (CCMA) capability)
- a Communication Control Toolkit (CCT) server
- Avaya Aura® Agent Desktop (AAAD), installed on a Contact Center Multimedia (CCMM) server, co-resident on the CCT or CCMA server, or on a co-resident CCMS/CCMA/CCT server, depending on the Contact Center configuration

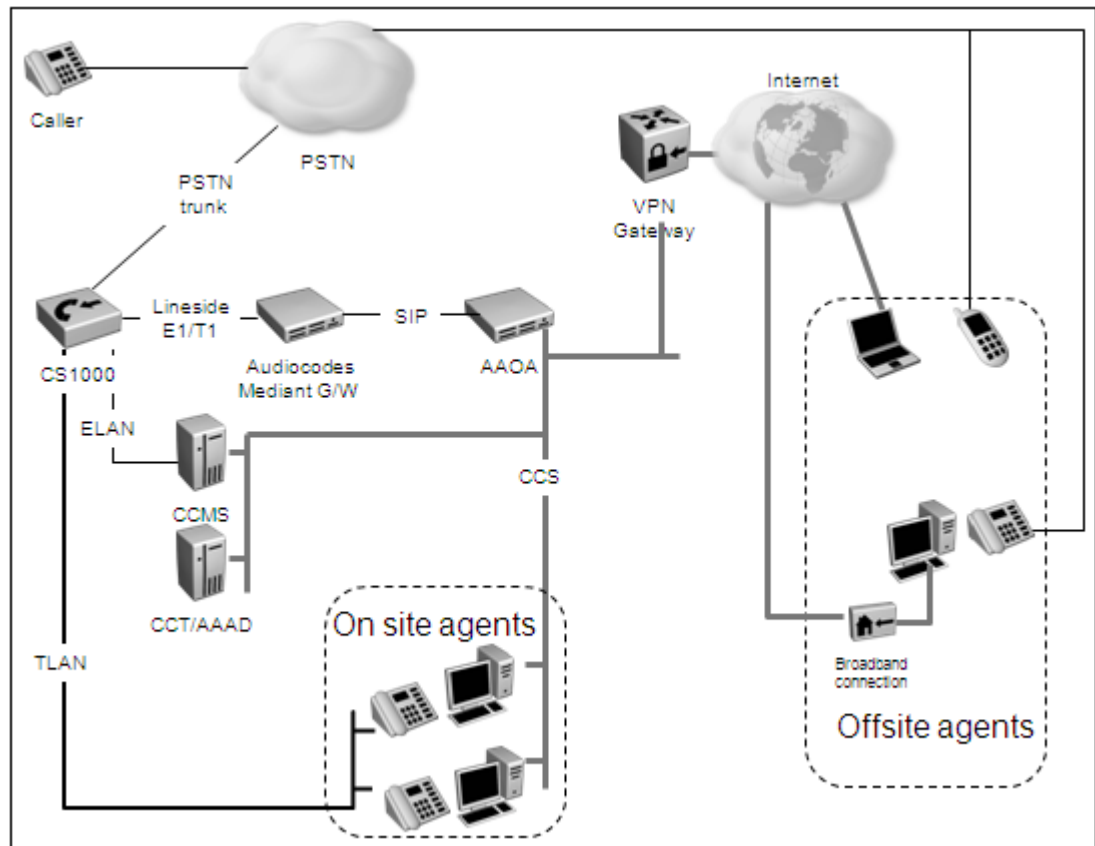


Figure 1: Offsite Agent solution overview

Offsite Agent component overview–Avaya Aura® Communication Manager

Offsite Agent solutions extend existing contact centers based on Communication Manager to allow agents to work at offsite locations, while receiving the same experience as an agent

working onsite. This solution uses the Telecommuter mode feature. To deploy Offsite Agent on the contact center requires an Offsite Agent license along with certain core Avaya products:

- Communication Manager PABX commissioned to work with Avaya Aura® Contact Center
- Contact Center Manager Server (CCMS) server (and associated Contact Center Manager Administration (CCMA) capability)
- Communication Control Toolkit (CCT) server
- Avaya Aura® Agent Desktop (AAD), installed on a Contact Center Multimedia (CCMM) server, co-resident on the CCT or CCMA server, or on a co-resident CCMS/CCMA/CCT server, depending on the Contact Center configuration

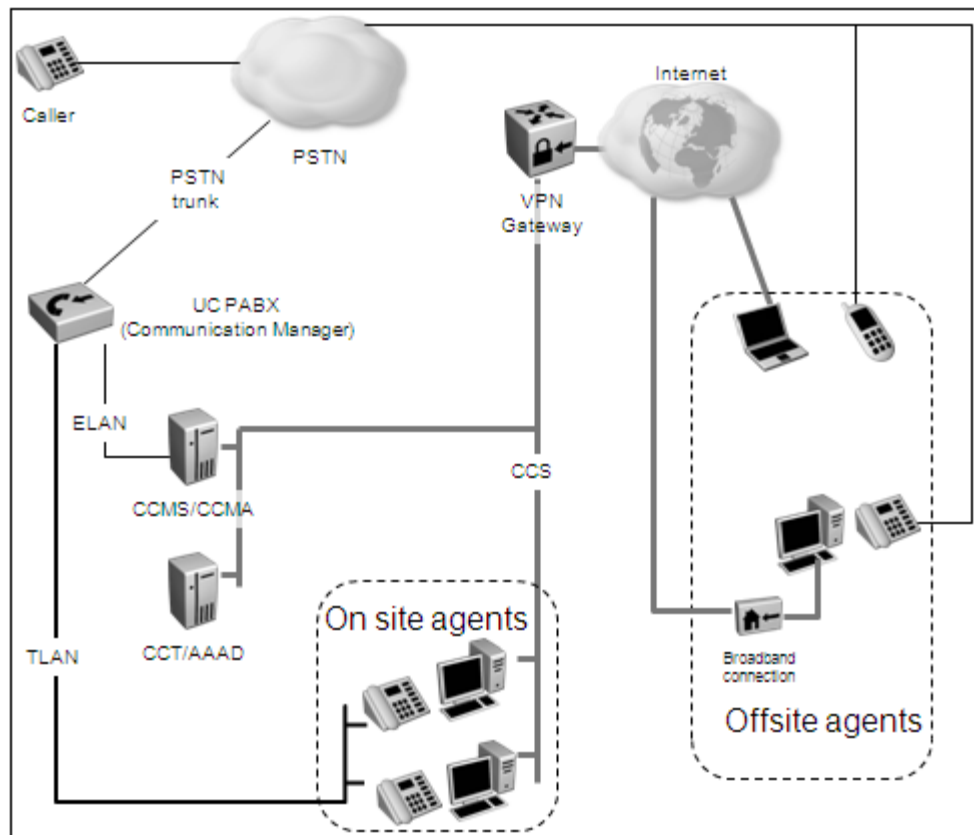


Figure 2: Offsite Agent Telecommuter mode solution overview

Offsite Agent server requirements

The Offsite Agent packaged application re-uses many of the components of the Avaya Media Server software. However, the Offsite Agent packaged application installer automatically completes the full install of Avaya Media Server on the server. The Avaya Media Server

Element Manager tool, also included in the Offsite Agent install, provides management and administration functions for Offsite Agent.

There is no requirement to order or configure an Avaya Media Server: it is completely bundled in the Offsite Agent order codes and the Offsite Agent installation.

While underlying Avaya Media Server elements are fully installed on the Offsite Agent server, only the Offsite Agent packaged application is supported on this server. That is, you cannot co-reside other Avaya Media Server functions (such as IVR functions) or Avaya Media Server-based packaged applications (e.g. the Avaya Notification Suite) on the Offsite Agent server.

Offsite Agent supports customer-supplied servers that meet the Avaya Media Server PVI requirements. The Offsite Agent install automatically runs the Avaya Media Server PVI checker, which stops the installation if the server is not at the correct specification. The Offsite Agent server requirements are:

- Dual CPU, 1.2GHz or better
- 2GB RAM
- a single 100Mb Ethernet LAN connection connected to the Contact Center Subnet
- 3GB free disk space
- A hard disk partition labelled C: or D:
- DVD drive

For more information on the required server specifications, see *Avaya Media Server Planning and Engineering (NN44471-200)*.

The Offsite Agent packaged application supports the same operating system as Avaya Media Server, namely:

- Windows Server 2008 Release 2 Enterprise 64-bit Edition

Offsite Agent requires a specific license for the base package and specific licenses per agent as follows:

- Contact Center Offsite Agent Base Package; NT6W14GA (EMEA/AsiaPac) or NT9S14GA (North America)
- Contact Center Offsite Agent 1 Agent Increment; NT6W21PA (EMEA/AsiaPac) or NT9S21PA (North America)

Each offsite agent increment comprises two session licenses—when an administrator views licenses in the Element Manager Licensing General Settings window they see double the number of agent licenses configured.

You do not need an Offsite Agent server for contact centers using Communication Manager with the Telecommuter mode feature.

Avaya Communication Server 1000 requirements

Offsite Agent supports CS 1000 software releases 5.0, 5.5, 6.0, 7.0, and 7.5. The following additional components are required for Offsite Agent:

- E1/T1 Lineside ports
- a dial path to your offsite agents' locations
- SIP trunk capability

To provide for call routing to offsite agents, Offsite Agent uses ports on a Lineside E1/T1 card in the Communications Server 1000. The ports appear as analog 500 terminals configured for contact center agent use. Offsite Agent also uses CCT to provide call control on the port, which means each port must also be AST enabled. These ports can be considered as agent terminals for CCT use. An analog device license and an AST license are required on the CS 1000 for each lineside port.

Each lineside pack is capable of supporting 24 terminals if configured for T1 (North America) and 30 terminals if configured for E1 (EMEA or AsiaPac). The packs used vary depending on whether they are for CS 1000 small system or large system.

Avaya Communication Server 1000 small systems

Where the contact center switch is a small system CS 1000, each lineside card requires an IP Media Gateway (IPMG) for housing. Each lineside pack consumes two slots in the IPMG. Additional considerations for adding to small systems include call server configurations, Digital Signalling Processor (DSP) capacity, and conference resources. Sufficient Digit Tone Receiving (DTR) must be configured per IPMG to allow 14 seconds of DTR usage per call according to CS 1000 traffic engineering. For full details on all aspects of Lineside pack planning and installation, see *Communication Server 1000 Circuit Card Reference (NN43001-311)*.

The card requires a clock controller, and this must be provided using the MGC DECT Clock Reference Cable (NTDW67AAE5). Where the distance between the CS 1000 main cabinet and the IPMG is too great to use this cable, a potential workaround is to use a digital trunk pack, with clock controller card, set to free run and installed in the same IPMG.

The following small system cards are supported for Avaya Aura® Offsite Agent (AAOA):

- NT5D34 (E1 small system)
- NT5D14 (T1 small system)

Avaya Communication Server 1000 large systems

Where the contact center switch is a large system CS 1000 each lineside card requires two slots in an Integrated Peripheral Equipment (IPE) shelf. In a large system there is no need to

make specific arrangement for clocking. However, the normal engineering considerations for large system IPE cards must be reviewed. Sufficient Digit Tone Receiving (DTR) must be configured per IPE shelf to allow 14 seconds of DTR usage per call according to CS 1000 traffic engineering. For full details on all aspects of Lineside pack planning and installation, see *Communication Server 1000 Circuit Card Reference (NN43001-311)*.

The following large system cards are supported for AAOA:

- NT5D33 (E1 large system)
- NT5D11 (T1 large system)

SIP trunk requirements

Offsite Agent requires the capability to make an outbound call through the CS 1000 to forward each contact center call it receives to the correct offsite agent. This requires a SIP trunk between the Offsite Agent server and the CS 1000, with a channel for each offsite agent supported. In addition, the CS 1000 must have sufficient inbound PSTN ports for incoming calls from customers.

Depending on the configuration of the CS 1000, it may need the addition of a Signalling Server (based on either a Common Off-The Shelf (COTS) server or Call Processor Pentium Mobile (CPPM) pack) with Network Routing Service (NRS) installed.

Offsite Agent connects to the CS 1000 using underlying Avaya Media Server components. For full information on configuring the SIP trunk to the CS 1000, see *Avaya Media Server Commissioning (NN44471-301)*.

TDM-SIP gateway

Offsite Agent operates on a telephony architecture that is SIP-only. In order to enable communication between the Offsite Agent server and a CS 1000, you must install a TDM-SIP gateway. Offsite Agent Release 6.2 supports only the Audiocodes Mediant 2000 gateway.

For Offsite Agent, the number of spans (T1 or E1) supported on to the Audiocodes Mediant 2000 gateway is either 1, 2, 4, or 8. This allows for up to 240 channels in an E1 environment, and up to 192 channels in a T1 environment. However, Offsite Agent supports 500 offsite agents, so you require up to three gateways to provide full capacity. It is possible to configure the spans across any number of Mediant 2000 gateways if necessary (e.g., where several gateways already exist on the customer premises, each with some available spans.)

The Audiocodes Mediant 2000 is available under Avaya part numbers NT2210Ax and NT2210Bx. (The NT2210Cx TP-260 gateways are not supported.)

To use the lineside units, you must have answer supervision enabled on the Audiocodes Mediant 2000. This requires an Audiocodes license. Audiocodes gateways purchased from Avaya have the Answer Supervision license, but if you purchase the Audiocodes gateways from elsewhere, or if you use an existing gateway, then you must order this license from Audiocodes.

Offsite Agent outbound trunking on Avaya Communication Server 1000

To allow for calls from Offsite Agent out to the offsite agents, Offsite Agent uses a SIP trunk directly routed to the Avaya Communication Server 1000 CS 1000. This requires a Signaling Server (SS) and Network Routing Service (NRS) to be provisioned on the CS 1000. If the CS 1000 software is Release 7.5, use a Session Manager (SM) in place of an NRS. The CS 1000 needs an additional PSTN trunk channel for each concurrent offsite agent supported.

An additional consideration in this configuration arises if the outbound trunk to the PSTN uses TDM (i.e., PRI or Analog trunk). In this case you need to consider the number of DSPs available in the CS 1000, to be able to successfully tandem the SIP calls to the TDM channels. For more information on DSP requirements see *Communication Server 1000M Large System Planning and Engineering (NN43041-220)*.

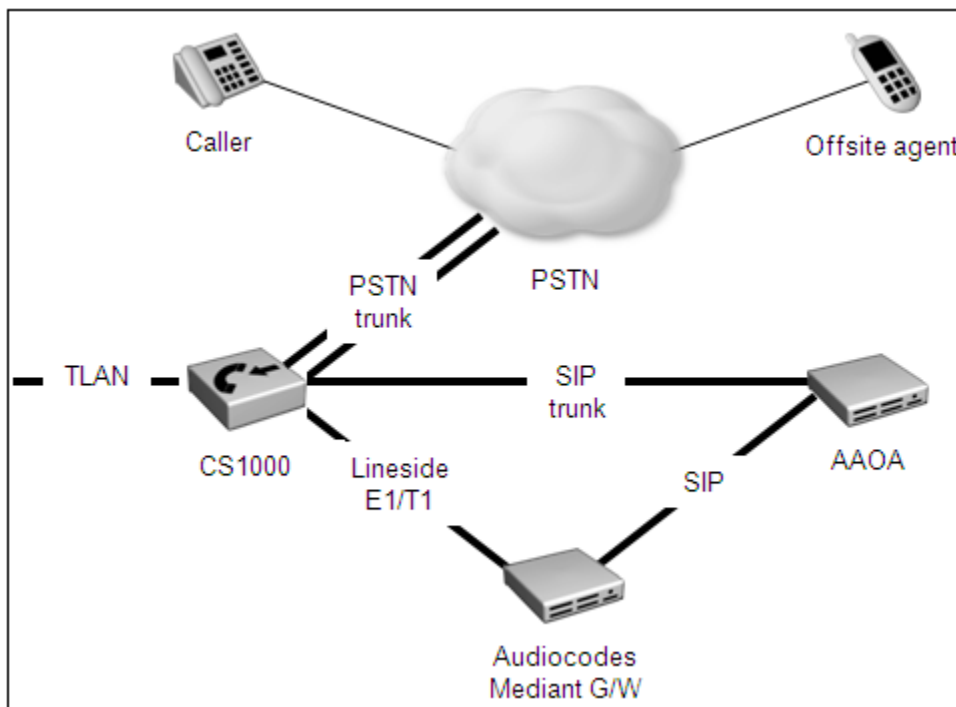


Figure 3: Offsite Agent with SIP-TDM Gateway connection and outbound SIP trunk

Avaya Aura[®] Communication Manager requirements

Offsite Agent supports contact centers using Avaya Aura[®] Unified Communications platforms. The supported releases are the same as those supported by the core Contact Center product.

Each agent using Agent Desktop to work offsite requires a licensed and configured H.323 endpoint. The agent can use the same endpoint whether working onsite or offsite.

The Communication Manager (CM) needs an additional PSTN trunk channel for each concurrent offsite agent supported. In addition, you need to consider the number of DSPs available in the CM, to be able to successfully tandem the SIP calls to the TDM channels.

Contact Center requirements

To deploy Offsite Agent, you require a functional Avaya Aura[®] Contact Center in place, including CCMS, CCMA, CCT, and Agent Desktop. Offsite Agent supports only Avaya Aura[®] Contact Center Release 6.2. On an Avaya Communication Server 1000 PABX, Offsite Agent does not support SIP-based or Microsoft Office Communications Server (OCS) Contact Center. You must review the following additional considerations:

- Agent Desktop provides the desktop client for Offsite Agent
- Communication Control Toolkit (CCT) provides call control for Agent Desktop

Offsite agents use Agent Desktop to provide call control for their contact center calls. Each offsite agent requires a CCT device license (this is the same license as that used for onsite agents requiring CCT features). Offsite agents' broadband connections to the central office must have sufficient bandwidth and low latency to receive CCT notifications in a timely manner.

A key difference in providing call control for offsite agents is that CCT is not be able to import the offsite agent workstation in the normal manner. For each Offsite Agent terminal, the administrator creates a manual mapping to a 'virtual' workstation name that corresponds to the terminal Position ID (POSID). When Offsite Agent has assigned to an offsite agent a terminal from its resource pool, it uses these mappings to broker CCT communications with the offsite workstations.

Where a customer uses CTI applications for their onsite agents, they must carefully consider the implications of this for offsite agents. Avaya recommends that the customer engages their Distributor or Avaya Professional Services to review such applications.

All Contact Center components must be at the latest patch levels, and must be patched at the same time.

Offsite Agent offsite VPN connection

One of the key advantages of using Offsite Agent is that it does not depend on providing a voice-quality data connection to the offsite agent's PC. The Offsite Agent solution does depend on offsite agents being able to access the corporate network from their offsite PCs. Most organizations use a VPN for this purpose, to provide security and reliability.

The VPN connection must allow direct connection to the Contact Center Subnet (CCS), (the subnet where the CCT server and Offsite Agent server are located). The VPN gateway must have sufficient ports for the additional connections by offsite agents, and you must engineer sufficient bandwidth to support them.

Offsite agents' broadband connections to the central office must have sufficient bandwidth and low latency to receive CCT notifications in a timely manner.

The Agent Desktop client and CCT server are tolerant of long delays in notification delivery, and do not time out for delays in excess of 10 seconds. However, if the Agent Desktop is significantly out of synchronization with the telephone, it can cause usability problems for agents. This is probably not as important for agents working in Permanent mode with a Force Answer configuration, who hear a tone to alert them to an incoming call, and can possibly tolerate a delay in Agent Desktop updating the call status and information. For agents working in On Demand mode, or in Permanent mode with an Accept Call configuration, however, if the delay is significant then they are not able to determine the status of a call ringing on their telephone. If the round trip time on the link is greater than 500ms, then Avaya recommends that you take steps to improve the link.

Offsite Agent PC client requirements

The Offsite Agent solution uses Avaya Aura® Agent Desktop to provide the desktop application for offsite agent call control. Agent Desktop supports the following Microsoft desktop operating systems:

- Windows Vista Business SP1 (32-bit)
- Windows Vista Enterprise SP1 (32-bit)
- Windows XP Professional Service Pack 2 or later
- Windows 7

Agent Desktop has a dependency on the Microsoft .NET framework, as follows:

- Avaya Aura® Agent Desktop Release 6.2 requires .NET 3.5 or later

Avaya Aura® Agent Desktop Release 6.2 requires the following (or better) physical PC specifications:

- Intel-based CPU - Pentium IV 1.8GHz
- 1 GB of RAM
- 7200 RPM disk drive with at least 4GB of free space
- VGA color monitor
- Keyboard, mouse
- TCP/IP capable network connection
- Network connection (typically via VPN) to the Contact Center Subnet (subnet where CCT server and Offsite Agent server are located)

Offsite Agent offsite telephone requirements

The offsite telephone can be any PSTN telephone type. It must be possible for a terminal on the contact center PABX to dial the offsite telephone directly.

Consider what can happen if the offsite agent has personal telephone services such as an answering machine or call waiting. The agent's call presentation class must be configured to prevent a contact center call reaching such services. Avaya recommends the use of a call presentation class with **Return to Queue after n seconds** set to less than the time required to activate the phone service.

Capacity

Offsite Agent Release 6.2 supports 500 offsite agents. Offsite Agent Release 6.2 does not impact the normal Avaya Aura® Contact Center Release 6.2 agent or call capacities.

Summary of software requirements

The following table summarizes the software requirements for Offsite Agent.

Table 1: Avaya Aura® Offsite Agent summary of software requirements

Product	Supported Version	Additional information
CCMS	Avaya Aura® Contact Center Release 6.2	Includes CCMA versions supported on CCMS 7.0 The latest patch levels must be installed as specified in the Contact Center DTR.
CCT	Avaya Aura® Contact Center Release 6.2	The latest patch levels must be installed as specified in the Contact Center DTR.
Agent Desktop	Avaya Aura® Contact Center Release 6.2	Installed on a CCMM server if contact center has CCMM, alternatively installed on either the CCMA or CCT server. The latest patch levels must be installed as specified in the Contact Center DTR.
CS 1000	R5.0	Appropriate packages for Contact Center must be applied.
	R5.5	Appropriate packages for Contact Center must be applied.
	R6.0	Appropriate packages for Contact Center must be applied.
	R7.0	Appropriate packages for Contact Center must be applied.
	R7.5	Appropriate packages for Contact Center must be applied.
Communication Manager	5.2.1	Appropriate packages for Contact Center must be applied.
	6.0.1	Appropriate packages for Contact Center must be applied.
	6.2	Appropriate packages for Contact Center must be applied.
Avaya WFO	10.1	Only TDM trunkside recording supported. The latest patch levels must be installed as specified in the Work Force Optimization DTR.

Summary of hardware requirements

The following table summarizes the hardware requirements for Offsite Agent.

Table 2: Avaya Aura® Offsite Agent summary of hardware requirements

Solution Component	Per No. Agents	Hardware Required	Additional information
CS 1000	30 agents 24 agents	E1 Lineside Pack NT5D34ACE5/ NT5D33 Lineside Pack T1 NT5D14AD/ NT5D11AE Components to support SIP Trunk	
Communication Manager	Any	No additional hardware components required	No specific additional hardware components are required, although you possibly need to provision additional DSPs to support the external PSTN lines for the offsite agents.
Offsite Agentserver (for CS 1000 only)	500 agents	Windows-capable Server (is on the Microsoft Hardware Compatibility List for Windows Server 2008)	See Offsite Agent server requirements on page 15.
TDM-SIP Gateway (for CS 1000 only)	up to 500 agents	Audiocodes Mediant 2000	The gateway is available with 1, 2, 4, or 8 spans. To achieve the 500 agent maximum, up to 17 spans of E1 or 21 spans of T1 are required; three gateways are required to support these numbers of spans.

Summary of licensing requirements

Each offsite agent with a reserved Offsite Agent terminal uses licenses on the CS 1000, CCMS, CCT, and Offsite Agent server. On the CS 1000 they use one System TN, one Analogue Telephone, one AST, and one ACD license. They also require a CCMS agent license and a CCT device license. On the Offsite Agent server they use one Offsite Agent increment.

In addition, Offsite Agent requires Answer Supervision licenses on the Audiocodes gateway.

Table 3: Contact Center Offsite Agent summary of license requirements

Solution Component	Per No. Agents	License Required	Additional information
CS 1000	1 agent	1 System TN ISM license 1 Analogue Telephone ISM license 1 AST ISM license 1 ACD ISM license	Each Offsite Agent terminal uses a TN license, an Analogue Telephone license, an ACD license to configure the agent capability, and an AST license to allow for CCT call control.
Communication Manager	1 agent	1 IP_Agent or IP_Supv license	Each agent requires a H.323 endpoint.
CCMS	1 agent	1 agent license	
CCT	1 agent	1 device license	
Offsite Agent server	500 agents	1 Offsite Agent Base Package	NT6W14GA (EMEA/AsiaPac) or NT9S14GA (North America).
	1 agent	1 Offsite Agent 1 Agent Increment	NT6W21PA (EMEA/AsiaPac) or NT9S21PA (North America).
TDM-SIP Gateway	Per install	Answer Supervision	Gateways purchased directly from Avaya include the Answer Supervision license.

Scalability

Offsite Agent Release 6.2 supports one Offsite Agent server for each CCMS node in the contact center. That is, a single CCMS server can support one Offsite Agent server. If further Offsite

Agent ports are needed, then it is necessary to install a second CCMS and network it with the first.

Each Offsite Agent server supports 500 agents. If the connection to the CS 1000 uses TDM-SIP gateways, the spans can connect to the Offsite Agent server through more than one gateway.

To achieve the 500 agent maximum, up to 17 spans of E1 or 21 spans of T1 are required. This in turn requires three gateways: however, is possible to configure the spans across any number of Mediant 2000 gateways if necessary (e.g., where several gateways already exist on the customer premises, each with some available spans).

Redundancy and Resiliency

The Offsite Agent solution does not implement redundancy or resiliency features, other than those inherent in the solution component parts. The impact on the offsite agent varies depending on the part of the solution that experiences a failure.

Avaya recommends that all offsite agents use a Call Presentation Class (CPC) with Return to Queue enabled. This provides the best experience for callers as it ensures that their calls continue to queue even if some element of the Offsite Agent solution fails.

Failure of the Contact Center servers

Where a failure occurs in the contact center, both Contact Center Manager Server and Communication Control Toolkit become unavailable. The PABX commences routing calls to agents using basic ACD. While these calls are extended to offsite agents, CCT is not available to provide call control. Offsite agents continue to receive calls but have no call control capability apart from that on their home phone (for example, answer and release). In the case of agents working in Permanent Connection mode, they have no call control at all, and need to rely on customers hanging up to terminate calls.

From an agent perspective, the system behavior is the same if just the CCT server fails.

Recovery of the Contact Center servers

When the contact center recovers, agents sometimes have to re-connect their Agent Desktop. Agent Desktop clients attempt to re-synchronize automatically.

Failure of the Offsite Agent server

Where a failure occurs on the Offsite Agent server, CCMS directs skillset calls to offsite agents, but Offsite Agent is not able to forward these calls. When the call is not answered, the call presentation class must return the call to the queue and make the agent Not Ready. This ensures that no further calls are directed to that agent.

Agent Desktop detects that the agent is no longer connected to the Offsite Agent server, and notifies the agent that they need to re-connect with the Offsite Agent server.

Recovery of the AAOA server

Agents need to re-connect to the Offsite Agent server once it becomes operational again.

Failure of the TDM-SIP Gateway

Where a failure occurs on the SIP-TDM gateway, CCMS continues to direct skillset calls to the Offsite Agent terminals, but Offsite Agent is not able to forward these calls. When the call is not answered, the call presentation class must return the call to the queue and make the agent Not Ready. This ensures that no further calls are directed to that agent.

TDM-SIP Gateway recovery

The other elements in the Offsite Agent solution remain connected and synchronized during a gateway failure. Agents see calls presented on their Agent Desktop, but no physical calls are presented to their telephone. Once the gateway becomes established, agents begin to receive skillset calls again.

Failure of the outbound SIP trunk or the PSTN connection

Where a failure occurs on the outbound SIP trunk, the contact center server still routes calls to the Offsite Agent terminal. This results in the offsite agent receiving call notifications on the Agent Desktop, but the voice calls do not come through to the offsite telephone. Since the voice call is not answered, the Return to Queue presentation class redirects the call to the contact center and makes the agent Not Ready.

Outbound SIP trunk or PSTN connection recovery

When the outbound SIP trunk recovers, the offsite agents need to set themselves Ready to be able to take calls again.

Redundancy

Offsite Agent Release 6.2 does not support redundancy in the TDM-SIP Gateway or the Offsite Agent server. Other components in the Offsite Agent solution provide various levels of redundancy.

Chapter 4: Offsite Agent installation overview

This chapter provides you with an overview of the steps needed to install and commission Avaya Aura® Offsite Agent. The subsequent chapters provide a detailed explanation on these steps.

Prerequisites

- The telephony PABX (CS 1000 or Communication Manager) is installed, commissioned, and configured for a working Contact Center.
- Avaya Aura® Contact Center Release 6.2 is installed, commissioned, and operational.
- The agents' CCMS logins are programmed on CCMA and tested on a local contact center telephone.
- The agents' CCT user ids are created, either as domain users, or local users on the CCT server.
- For CS 1000 deployments, the Mediant 2000 TDM-SIP gateway (if applicable) is physically installed and commissioned, to the point where it has an assigned IP address and is available to the administrator through a browser session for configuration.
- For CS 1000 deployments, the Offsite Agent server is physically installed and loaded with the operating system.
- The offsite agents' VPN connections are configured and have been tested to prove the required latency and bandwidth.
- The offsite agents' desktop PCs are physically installed and meet the required specifications.

Overview of Offsite Agent installation

About this task

This workflow shows the high-level steps you need to carry out to install and commission Offsite Agent. To link to any task go to [Navigation](#) on page 31.

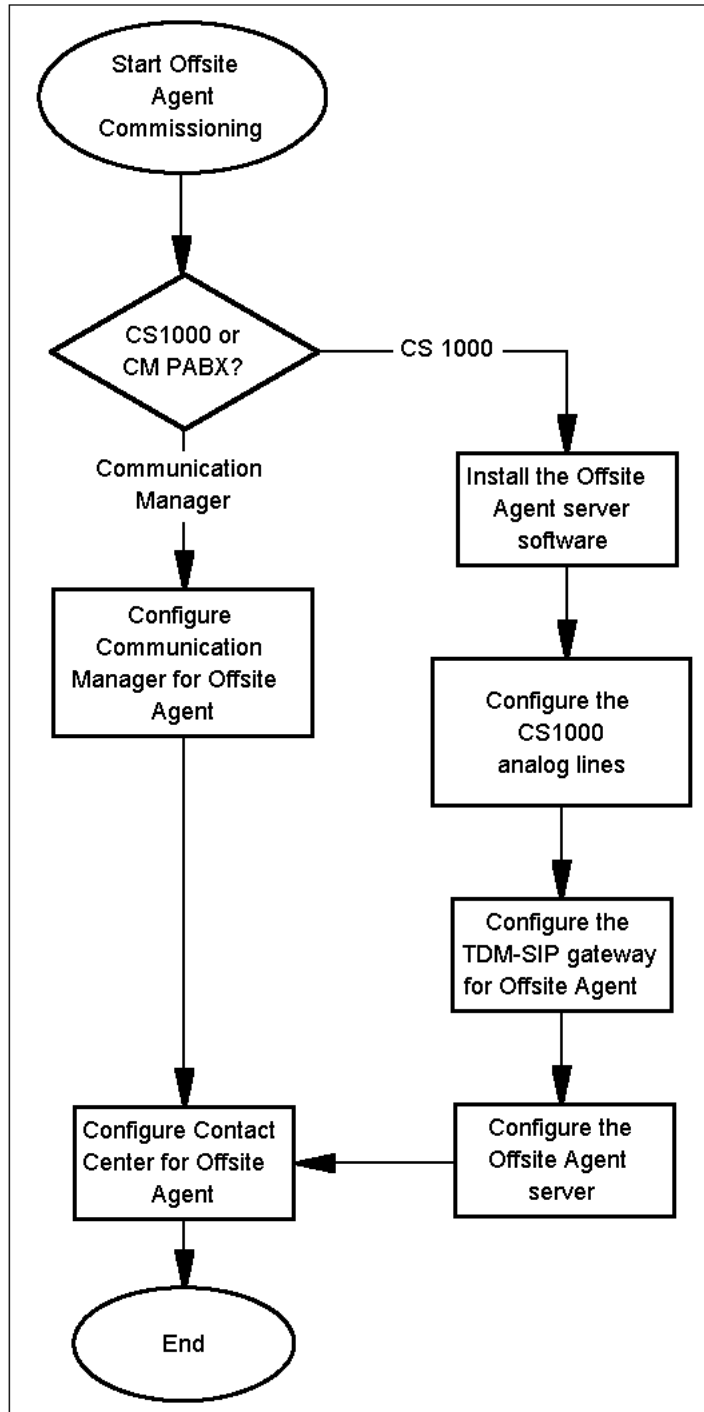


Figure 4: Workflow of Offsite Agent installation and commissioning tasks

Navigation

- [Configure the Avaya Aura® Communication Manager for Offsite Agent](#) on page 33
- [Install the Offsite Agent server software](#) on page 35
- [Configure the Avaya Communication Server 1000 with analog lines for Offsite Agent](#) on page 41
- [Configure the Audiocodes TDM-SIP gateway for Offsite Agent](#) on page 51
- [Configure the Offsite Agent server](#) on page 65
- [Configure Contact Center for Offsite Agent](#) on page 75

Chapter 5: Configure the Avaya Aura[®] Communication Manager for Offsite Agent

This chapter details the procedures to configure the Communication Manager PABX for Offsite Agent. This configuration consists of setting the Service Link Mode on the H.323 endpoints that the agents use to work onsite or offsite.

Communication Manager configuration task flow

About this task

The following diagram outlines the taskflow for configuring the Communication Manager for Offsite Agent:

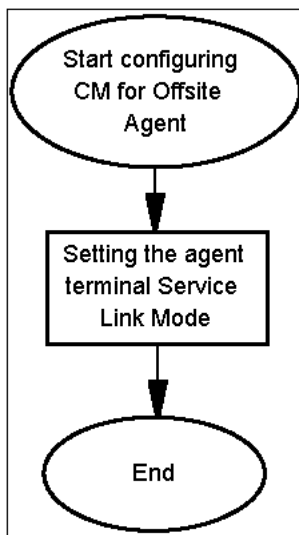


Figure 5: Configuring the Communication Manager for Offsite Agent

Taskflow Navigation

- [Setting the agent terminal Service Link Mode and auto answer configuration](#) on page 34

Setting the agent terminal Service Link Mode and auto answer configuration

Before you begin

- Know the user ID and password to access the Communication Manager administration client.
- Understand maintenance procedures for H.323 endpoints on the Communication Manager.
- Ensure you have provisioned sufficient IP_Agent or IP_Supv licenses for the endpoint(s) and have completed and tested the basic endpoint configuration.

About this task

This procedure describes how to set the Service Link Mode and auto answer configuration on the Communication Manager H.323 terminal that the agent uses to work offsite.

There are many ways to access the Communication Manager for administration purposes. This procedure describes the steps at a high-level that is not specific to any specific Communication Manager administration client.

Procedure

1. Connect to the Communication Manager with your administration client.
 2. Access the H.323 endpoint that you want a Contact Center agent to be able to use offsite.
 3. Set the Service Level Mode for the set as required: **permanent** provides Permanent Connection mode and **as-needed** provides On Demand mode.
 4. Set Auto Answer for the set: **none** means the agent must manually answer each call, **acd** means that ACD calls automatically answer on the agent set, and **all** means that all calls automatically answer on the agent set.
 5. Save your changes and exit.
-

Chapter 6: Install the Offsite Agent server software

This chapter describes the taskflows that you follow to successfully install the Avaya Aura® Offsite Agent server software. You install Offsite Agent server software components on the Offsite Agent server.

Offsite Agent Release 6.2 does not support a direct upgrade or migration from Offsite Agent R6.0. If you are re-using server hardware from an earlier release of Offsite Agent, ensure you fully uninstall the earlier release of Offsite Agent and of Avaya Media Server.

Prerequisites

- Install the server hardware. This server must meet the PVI specification.
- Install the Operating System on the Offsite Agent server.
- Download the latest Offsite Agent documentation from the support portal www.avaya.com/support.

Offsite Agent server installation steps

About this task

This workflow shows the high-level steps you need to carry out to install and commission Offsite Agent. To link to any task go to [Navigation](#) on page 36.

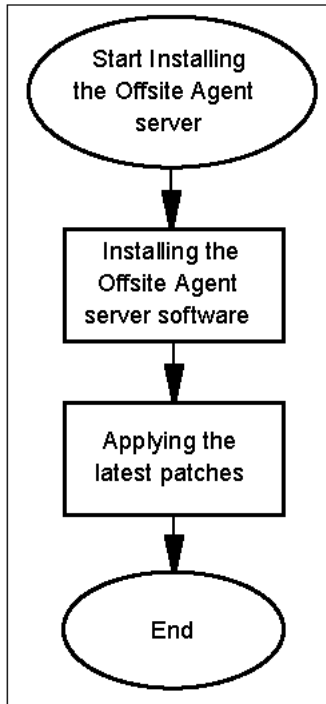


Figure 6: Installing the Offsite Agent server software

Navigation

- [Installing the Offsite Agent server software](#) on page 36
- [Applying the latest patches from the DVD](#) on page 38
- [Uninstalling the Offsite Agent server software](#) on page 38

Installing the Offsite Agent server software

Before you begin

- Log on to the Offsite Agent server with Administrator privileges.

! Important:

Offsite Agent uses the underlying architecture of Avaya Media Server. As a result of this you see references to Avaya Media Server during the installation.

! Important:

As part of the Offsite Agent installation, you need to restart your Offsite Agent server.

About this task

This procedure explains the steps you take to install the Offsite Agent server software.

Procedure

1. Insert the Avaya Aura® Offsite Agent DVD into the DVD ROM drive of your server. The installer displays the Avaya Aura Offsite Agent Installer - Welcome screen.
 2. Click **View README** to display the README file to check for important instructions.
 3. Click **Next**.
The installer displays the Avaya Aura Offsite Agent Installer - License Agreement screen.
 4. Select the **I accept the terms of the License Agreement** checkbox, and click **Next**.
The installer displays the Avaya Aura Offsite Agent Installer - PVI Checker screen, and performs the System Readiness check.
 5. Review the overall and detailed results. If the Overall result is a Fail you must exit the install.
Review the detailed results and decide whether to proceed if there are warnings.
 6. Click **Next**.
The installer displays the Avaya Aura Offsite Agent Installer - Summary screen.
 7. Click **Install....**
The installer displays the Avaya Aura Offsite Agent Installer - Install Progress screen.
 8. When the install is complete, the installer displays the Avaya Aura Offsite Agent Installer - Finish screen. Click **Finish**.
 9. Click **Yes** to reboot the server.
-

Applying the latest patches from the DVD

Before you begin

- Install Offsite Agent.

About this task

This procedure explains the steps you take to apply the latest patches distributed on the Offsite Agent DVD.

Procedure

1. Insert the Offsite Agent DVD in the Offsite Agent server DVD drive.
2. Browse the DVD to the patch folder \Supplementary Software.
3. Open each QFE.zip file in the folder, and follow the installation instructions in the README.txt file.

You must install QFE files in order.

Uninstalling the Offsite Agent server software

Before you begin

- Log on to the Offsite Agent server with Administrator privileges.

Important:

Offsite Agent uses the underlying architecture of Avaya Media Server. As a result of this you see references to Avaya Media Server during the uninstallation.

Important:

As part of the uninstall, you need to restart your Offsite Agent server.

About this task

This procedure explains the steps you take to uninstall the Offsite Agent server software.

Procedure

1. On the server desktop, select **Start > All Programs > Avaya > Contact Center > Uninstall Offsite Agent**.
The installer displays the Avaya Aura Offsite Agent Installer - Welcome screen.

2. Click **Next**.
The installer displays the Avaya Aura Offsite Agent Installer - Maintenance screen.
 3. Select the **Remove** radio button and Click **Next**.
The installer displays the Avaya Aura Offsite Agent Installer - Summary screen, listing Avaya Media Server and Offsite Agent.
 4. Click **Remove**.
The installer displays the Avaya Aura Offsite Agent Installer - Uninstall Progress screen.
 5. When the uninstallation is complete, the installer displays the Avaya Aura Offsite Agent Installer - Finish screen. Click **Finish**.
 6. Click **Yes** to reboot the server.
-

Install the Offsite Agent server software

Chapter 7: Configure the Avaya Communication Server 1000 with analog lines for Offsite Agent

This chapter details the procedures to configure the Avaya Communication Server 1000 (CS 1000) PABX with analog lines for Offsite Agent. This includes setting up the SIP trunk for outbound calls, installing the E1/T1 lineside packs, and entering the Offsite Agent terminals.

CS 1000 configuration task flow

About this task

The following diagram outlines the taskflow for configuring the CS 1000 for Offsite Agent:

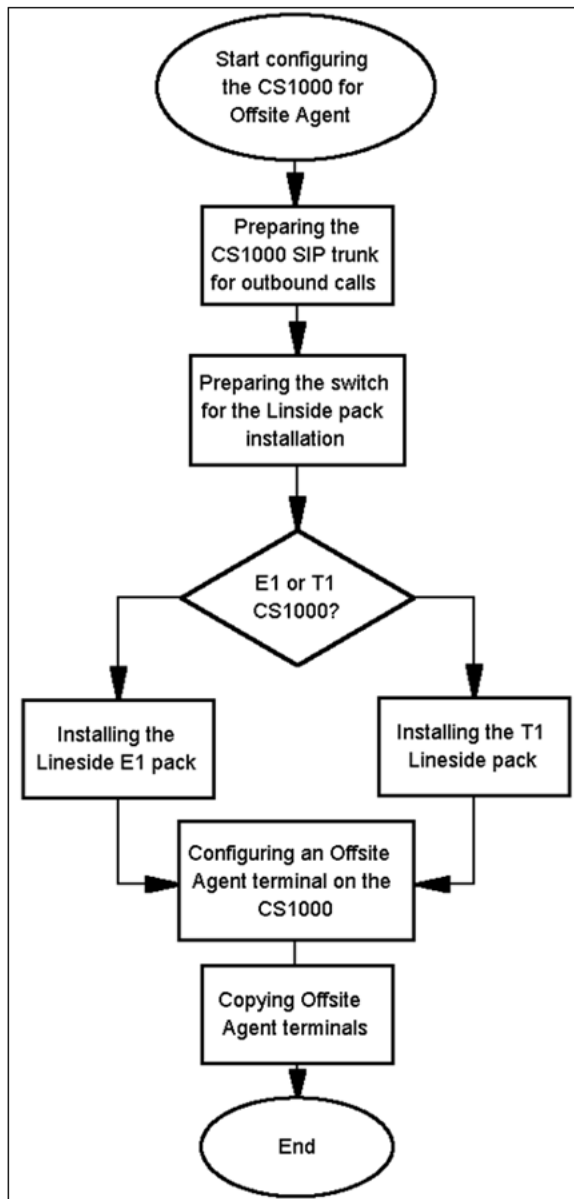


Figure 7: Configuring the CS 1000 for Offsite Agent

Taskflow Navigation

- [Preparing the CS 1000 SIP trunk for Offsite Agent outbound calls](#) on page 43
- [Preparing the switch for the Linside pack installation](#) on page 44
- [Installing the Linside E1 pack](#) on page 45
- [Installing the T1 Linside pack](#) on page 46

- [Configuring an Offsite Agent terminal on the CS 1000](#) on page 47
- [Copying Offsite Agent terminals](#) on page 49

Preparing the CS 1000 SIP trunk for Offsite Agent outbound calls

Before you begin

- Understand IP Telephony, especially SIP trunking, on the CS 1000.
- Assemble all hardware needed to add your choice of SIP implementation to your particular CS 1000 installation.
- Engineer and configure the CS 1000 system so it is capable of supporting SIP, in particular DSP hardware resources to support TDM/IP transcoding. Incoming PSTN calls require one DSP per call. Offsite Agent terminals each require another DSP. For more information, see *Communication Server 1000M Large System Planning and Engineering* (NN43021-220) and *Communication Server 1000E Planning and Engineering* (NN43041-220).
- Obtain suitable licenses and packages for SIP trunking.
- Know the user ID and password to log on to the switch administration terminal.
- Understand switch Change and Diagnostics overlays.

About this task

This procedure outlines the high-level steps required to configure the CS 1000 SIP trunk to support Offsite Agent outbound calls. Depending on your switch configuration and choice of signalling server, there are many variations in the details of these steps.

For an overview of SIP trunk concepts and configuration on the CS 1000, see *Communication Server 1000 IP Peer Networking Installation and Commissioning* (NN43001-313) available on the Technical Support portal at www.avaya.com/support.

Procedure

1. Engineer your Telephony LAN (TLAN) as a quality voice network.
2. Connect to the Call Server.
3. Configure the bandwidth zone data in Overlay 117.
4. Configure the virtual trunk super-loops in Overlay 97.
5. Configure the SIP D-channel via Overlay 17.
6. Configure the Route Data Block via Overlay 16.
7. Configure the Trunk Data Block (SIP channels) via Overlay 14.

8. Configure the dialing plan information for the Offsite Agent outbound trunk to match your network (i.e. CDP or UDP).
 9. Disconnect from the Call Server.
 10. Provision your CS 1000 Node to handle the SIP trunk on either CPPM Signalling Server hardware or external COTS Signalling Server hardware.
 11. Configure the NRS or SPS with your CS 1000 Node endpoint and routing information.
-

Preparing the switch for the Lineside pack installation

Before you begin

- Review the information in *Communication Server 1000 Circuit Card Reference (NN43001-311)*.
- Assemble all equipment needed to add your choice of Lineside pack and SIP implementation to your particular CS 1000 installation.
- Understand CS 1000 planning, engineering, and hardware installation, and licensing.
- Plan, install, and commission appropriate PSTN trunk channels and DSP resources (if applicable) to support the addition of the offsite agents.
- Plan and order appropriate licensing for the additional TN, ACD, and AST requirements.

About this task

This procedure outlines the high-level steps required to prepare the CS 1000 for Offsite Agent generally and the installation of the Lineside pack and SIP trunk specifically. Depending on your switch configuration and choice of pack, there are many variations in the details of these steps. For full details on all aspects of Lineside pack planning and installation, see *Communication Server 1000 Circuit Card Reference (NN43001-311)*.

Procedure

1. Update your CS 1000 licensing with the TN, ACD, and AST licenses required.
2. Arrange the clocking requirements (if any) for the Lineside pack. Clocking for the Lineside pack may not be required and may use a cable or digital trunk card.
3. Attach the appropriate backplane cables to connect the Lineside pack to the TDM-SIP gateway.
4. Ensure you have sufficient licensing on the CS 1000 to support the additional TNs.
5. Ensure you have sufficient Digit Tone Receiving (DTR) on each CS 1000 shelf that contains a Lineside pack for Offsite Agent use.

6. Install the additional hardware (if required) to support your SIP trunks.
-

Installing the Lineside E1 pack

Before you begin

- Understand CS 1000 switch hardware and its installation.
- Review *Communication Server 1000 Circuit Card Reference (NN43001-311)*.

Important:

The dip switch settings described in this procedure work for most installations. If you are using the MMI feature, review whether you need to change some dip switches to match your configuration.

About this task

This procedure details setting the Lineside E1 pack dip switches so that the pack operates with the Audiocodes TDM-SIP gateway.

Because of the wiring in some of the system modules and cabinets, the Lineside E1 works only in certain card slot pairs. These restrictions depend on the type of module or cabinet.

The Lineside E1 pack contains two dip switches, each containing eight switch positions. They are located in the upper right corner of the motherboard circuit card.

Procedure

1. Remove the E1 Lineside pack from its packaging.
 2. Locate the first switch (S1).
 3. Set all the dip switches to OFF.
 4. Locate the second switch (S2).
 5. Set dip switch 3 to ON and set all the other dip switches to OFF.
 6. Mount the pack in the planned slot in the IPMG.
 7. Connect the cabling to the amphenol connector on the IPE input/output (I/O) panel.
 8. Route the cable to the location of the TDM-SIP gateway, either directly or through a distribution panel.
-

Installing the T1 Lineside pack

Before you begin

- Understand CS 1000 switch hardware and its installation.
- Review *Communication Server 1000 Circuit Card Reference (NN43001-311)*.

! Important:

The dip switch settings described in this procedure work for most installations. If you are using the MMI feature, review whether you need to change some dip switches to match your configuration.

About this task

This procedure details setting the T1 Lineside pack dip switches so that the pack operates with the Audiocodes TDM-SIP gateway.

The Lineside T1 pack contains two dip switches, each containing eight switch positions. They are located in the upper right corner of the motherboard circuit card.

Procedure

1. Remove the T1 Lineside pack from its packaging.
 2. Locate the first switch (S1).
 3. Set dip switch 8 to ON and set all the other dip switches to OFF.
 4. Locate the second switch (S2).
 5. Set dip switch 3 to ON and set all the other dip switches to OFF.
 6. Mount the pack in the planned slot in the IPMG.
 7. Connect the cabling to the amphenol connector on the IPE input/output (I/O) panel.
 8. Route the cable to the location of the TDM-SIP gateway, either directly or through a distribution panel.
-

Configuring an Offsite Agent terminal on the CS 1000

Before you begin

- Know the user ID and password to log on to the switch administration terminal.
- Understand switch Change and Diagnostics overlays.
- Provision sufficient TN, ACD, and AST licenses for the terminal you are adding.

About this task

This procedure describes how to set up the terminals that Offsite Agent uses to interface to the CS 1000 and CCMS. You configure these on the E1/T1 Lineside pack TNs. The configuration is the same as that for an analog 500 set configured for use by a contact center agent.

You must acquire the Offsite Agent terminals on the Contact Center Manager Server. For more information, see [Acquiring the Offsite Agent terminals on CCMS](#) on page 79.

Procedure

1. Connect to the Call Server.
2. Enter LD 10.
3. Enter the appropriate values. For prompts not listed, press Enter to accept the default.
4. To exit the overlay, type four asterisks (****) and press Enter.

Variable definitions

Prompt	Response	Descriptions
REQ	NEW	Add a new set.
TYPE	500	You can configure only the 500 set type on a E1/T1 Lineside pack.
TN	I s c u	Enter the Terminal Number.
DES	Name	Enter a name for the terminal.
CUST	0–99	Enter the Customer number.
DN	xxxx	Where xxxx=the DN of this terminal.

Prompt	Response	Descriptions
AST	YES	You must configure AST to allow Offsite Agent to control the terminal.
IAPG	1	Meridian Link Unsolicited Status Message (USM) group. Assign Associate (AST) telephones to a USM group defined in LD 15. These groups determine which status messages are sent to the host computer for an AST telephone. The default Group 0 sends no messages, while Group 1 sends all messages.
CLS	<various>	Enter the class of service parameter equivalent to contact center agents on this switch. You must set at least the following: AGTA XFA C6A LDTD Avaya recommends that you also set UNR.
PRI	1-4	The priority level for the ACD agent, used in basic ACD. Must be any non-zero value for an ACD set.
AACD	YES	You must configure AACD.
FTR	ACD xxxx yyyy	Where xxxx = ACD-DN, and yyyy = Agent position ID
FTR	OSP	You must set OSP.
FTR	ISP	You must set ISP.
FTR	<CR>	Press Enter to exit the overlay, saving all of the changes entered.

Copying Offsite Agent terminals

Before you begin

- Know the user ID and password to log on to the switch administration terminal.
- Understand switch Change and Diagnostics overlays.
- Provision sufficient AST licenses for the terminals you are adding.

Important:

The CS 1000 copy function allows you to make multiple copies of your first configured port to configure all the TNs on the Lineside card. However, certain parameters do not copy. After the copy procedure, you must manually configure each port with an individual value each for the AST and AACD prompts.

About this task

This procedure describes how to copy multiple Offsite Agent terminals from a single terminal that you have configured on the E1/T1 Lineside pack.

You must acquire the Offsite Agent terminals on the Contact Center Manager Server. For more information, see [Acquiring the Offsite Agent terminals on CCMS](#) on page 79.

Procedure

1. Connect to the Call Server.
2. Enter LD 10.
3. Enter the appropriate values. For prompts not listed, press Enter to accept the default.
This configures multiple TNs with the settings of the TN you are copying.
4. Edit each TN (using the REQ CHG) to set the individual AST and AACD settings.
5. To exit the overlay, type four asterisks (****) and press Enter.

Variable definitions

Prompt	Response	Descriptions
REQ	CPY x	Copy terminals. x=number of terminals you want to create by copying the original terminal.

Prompt	Response	Descriptions
TYPE	500	You can configure only the 500 set type on a E1/T1 Lineside pack.
CTTN	l s c u	Copy From Terminal Number: the terminal you want to copy.
DES	Description	Enter a description for the terminals.
SFMT	auto	Selecting Auto causes the copy function to automatically increment the TN, DN, and POS for each copied terminal.
TN	l s c u	The TN of the first new terminal.
DN	xxxx	xxxx = the first DN for the range of new terminals.
POS	yyyy	xxxx = the first POSID for the range of new terminals.

Chapter 8: Configure the Audiocodes TDM-SIP gateway for Offsite Agent

This chapter details the procedures to configure the Audiocodes Mediant 2000 TDM-SIP gateway for Offsite Agent. These include wiring the gateway to the CS 1000 E1/T1 Lineside spans, setting the E1/T1 parameters, and creating the call routes.

TDM-SIP gateway configuration task flow

About this task

The following diagram outlines the taskflow for configuring the TDM-SIP gateway:

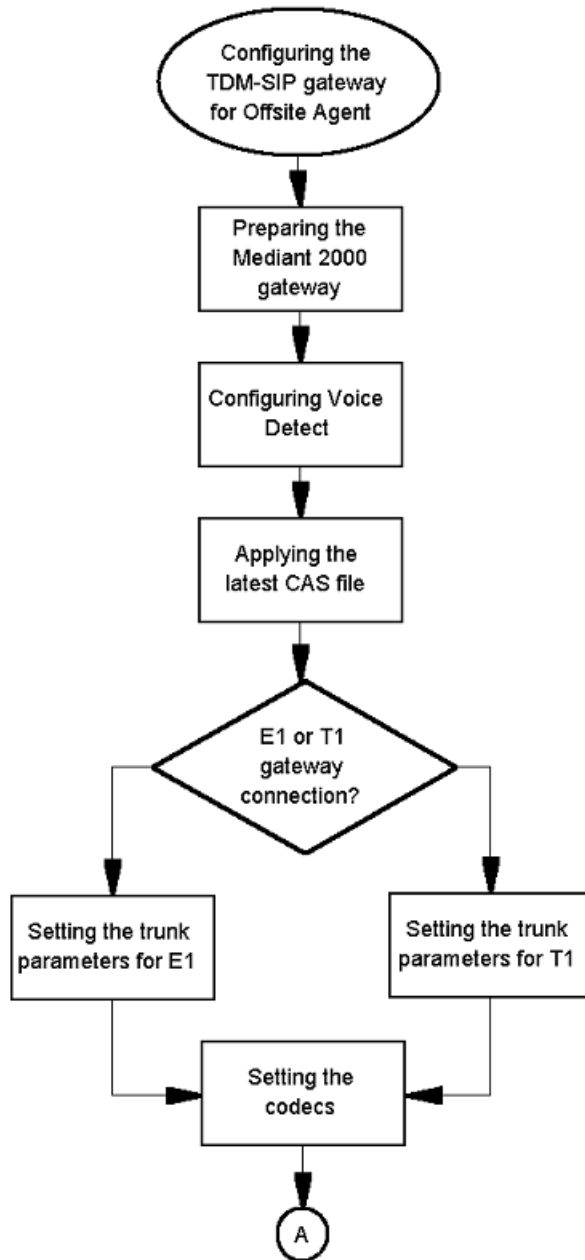
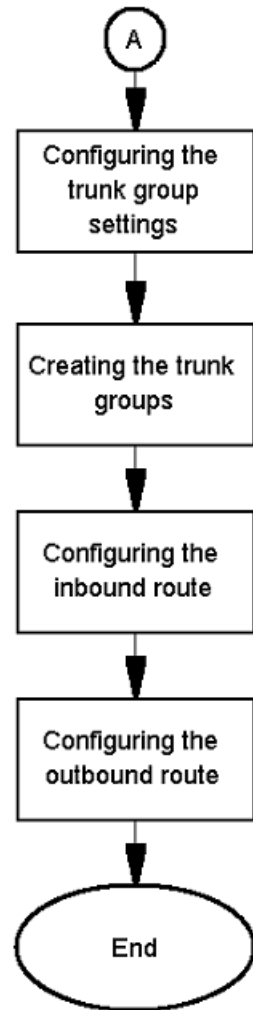


Figure 8: Configuring the TDM-SIP gateway for Offsite Agent



Taskflow Navigation

- [Performing initial configuration of the Mediant 2000 gateway](#) on page 54
- [Configuring Voice Detect](#) on page 55
- [Applying the latest Channel Associated Signalling \(CAS\) file](#) on page 56
- [Set the trunk parameters for E1](#) on page 57
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- [Set the codecs for communication with the Offsite Agent server](#) on page 58
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- [Creating the trunk groups](#) on page 60

- [Configuring the inbound route](#) on page 62
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Performing initial configuration of the Mediant 2000 gateway

Before you begin

- Select a valid IP address for the Mediant 2000 gateway.
- Unpack and cable the gateway according to the documentation supplied with the gateway.
- Review the documentation supplied with the Audiocodes gateway.
- Order and receive an Answer Supervision license for the gateway. If you ordered the gateway from Avaya, then it already has this license.
- Locate the latest Offsite Agent TDM Gateway configuration files on www.avaya.com/support.

About this task

This procedure outlines how to set the IP address of the Mediant 2000 gateway for operation within your network.

Procedure

1. Connect the gateway to a local network hub or connect to a laptop/PC with a cross-over network cable.
2. The default IP address of the Gateway is 10.1.10.10.
3. Manually configure your laptop/PC IP address to be in the same subnet.
4. Power up the gateway.
5. In a browser window on your PC, enter <http://10.1.10.10>.
A login screen appears.
6. In the **User Name** field type Admin.
7. In the **Password** field type Admin.
8. Click **OK**.
The Audiocodes gateway web interface appears, and you can continue with the gateway configuration.
9. Change the default IP address of the gateway according to the Audiocodes documentation.
10. Apply the Answer Supervision license, if necessary.

11. Update the gateway to the latest firmware using the Audiocodes **Software Upgrade Wizard**.
-

Configuring Voice Detect

About this task

This procedure describes how to configure Voice Detect on the Mediant 2000 gateway.

Procedure

1. Use your web browser to login in to the Audiocodes Mediant 2000 with administrator privileges.
2. Select **Management**.
3. Expand **Software Update**.
4. Select **Software Update Key**.
5. Check that **Ipmdetector** is in the DSP Voice features list.
If **Ipmdetector** is not in the license details, then contact your supplier (Audiocodes or Avaya) to obtain this license for the system.
6. Select **Configuration File**.
7. Click **Save INI File**.
8. Click **Save**.
Leave the web browser open on this administrator page.
9. Browse to a location on your desktop computer in which you want to save the .INI file, and click **Save**.
10. On your desktop computer, browse to the location where you saved the BOARD . ini file.
11. Open BOARD . ini with a text editor, such as Microsoft Notepad.
12. Search for the section **IpProfile**, and delete this whole section.
The **IpProfile** section is bounded by the tags **[IpProfile]** and **[/IpProfile]**.
13. Scroll to the end of the INI file.
14. On the last line, type `EnabledDSPIPMDetectors = 1`.
15. On the next line, type `ENABLEVOICEDETECTION = 1`.
16. Save and close the BOARD . ini file.
17. Return to the Mediant 2000 gateway administrator in your web browser.

18. Select **Management**.
 19. Expand **Software Update**.
 20. Select **Configuration File**.
 21. Click **Browse**.
 22. Browse to the location where you edited the BOARD .ini file and select it.
 23. Click **Open**.
 24. Click **Load INI File**.
 25. Click **OK**.
- The Mediant 2000 gateway resets and returns you to the home page.
-

Applying the latest Channel Associated Signalling (CAS) file

Before you begin

- Download the latest CAS.zip file from the Offsite Agent page on www.avaya.com/support and store it on the PC from which you browse to the Audiocodes Mediant 2000 management interface.

About this task

This procedure describes how to apply the latest Channel Associated Signalling (CAS) file.

Procedure

1. Expand the CAS .zip file on your local hard disk.
2. Use your web browser to login in to the Audiocodes Mediant 2000 with administrator privileges.
3. Select **Management**.
4. Expand **Software Update**.
5. Select **Load Auxiliary Files**.
6. Click the **Browse** button beside the **CAS file** field.
7. Browse to the location where you expanded the zip files and from there select Protocols\CAS Files\LoopStart_FX0\1ring-500msFlash.
8. Click **Open**.
9. Click **Load File**.

The gateway loads the CAS file.

Set the trunk parameters for E1

Before you begin

- Commission the Mediant 2000 gateway.

About this task

This procedure describes how to set the trunk parameters on the Audiocodes Mediant 2000 for an E1 connection to the CS 1000 Lineside E1 pack.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
 2. Select **Configuration**.
 3. Select **Full**.
 4. Expand **PSTN Settings**.
 5. Select **Trunk Settings**.
 6. Click the span that you want to configure.
 7. Select **E1 CAS** from the **Protocol type** drop-down list.
 8. Select **Recovered** from the **Clock Master** drop-down list.
 9. Select **E1 Framing MFF CRC4 EXT** from the **Framing Method** drop-down list.
 10. Select the latest downloaded CAS file from the **CAS Table** drop-down list.
 11. Set **PSTN Alert Timeout** to -1.
 12. Leave all other fields at the default values.
 13. Click **Submit**.
-

Set the trunk parameters for T1

Before you begin

- Commission the Mediant 2000 gateway.

About this task

This procedure describes how to set the trunk parameters on the Audiocodes Mediant 2000 for a T1 connection to the CS 1000 T1 Lineside pack.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
2. Select **Configuration**.
3. Select **Full**.
4. Expand **PSTN Settings**.
5. Select **Trunk Settings**.
6. Click the span that you want to configure.
7. Select **T1 CAS** from the **Protocol Type** drop-down list.
8. Select **Recovered** from the **Clock Master** drop-down list.
9. Select **T1 Framing ESF CRC6** from the **Framing Method** drop-down list.
10. Select the latest downloaded CAS file from the **CAS Table** drop-down list.
11. Set **PSTN Alert Timeout** to -1.
12. Leave all other fields at the default values.
13. Click **Submit**.
The span indicator changes to green and the **Trunk Configuration State** changes to **Active**.

Set the codecs for communication with the Offsite Agent server

About this task

This procedure describes how to set the Mediant 2000 codecs to match the codecs used by the Offsite Agent server.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
 2. Select **Configuration**.
 3. Select **Full**.
 4. Expand **Protocol Configuration**.
 5. Expand **Protocol Definition**.
 6. Select **Coders**.
 7. In the first row, select **G.711 A-law** from the **Coder Name** drop-down list.
The remaining fields in the row automatically take the default values.
 8. In the second row, select **G.711 U-law** from the **Coder Name** drop-down list.
The remaining fields in the row automatically take the default values.
 9. Click **Submit**.
-

Configuring the trunk group settings

About this task

This procedure describes how to create trunk groups for the E1/T1 spans connected to the CS 1000.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
 2. Select **Configuration**.
 3. Select **Full**.
 4. Expand **Protocol Configuration**.
 5. Expand **Trunk IP Group**.
 6. Select **Trunk Group Settings**.
 7. Create a new inbound Trunk Group using the settings described in the Variables table.
 8. Create a new outbound Trunk Group using the settings described in the Variables table.
 9. Click **Submit**.
-

Variable definitions Trunk Group Settings

Name	Description
Trunk Group ID	A numeric value 1-6 characters long to identify the trunk group.
Channel Select Mode	Select Cyclic Ascending for the inbound trunk group or By Source Phone Number for the outbound trunk group.
Registration Mode	Select Per Gateway for both trunk groups.
Serving IP Group ID	Leave this field blank.
Gateway Name	You can optionally enter a gateway name.
Contact User	Leave this field blank.

Creating the trunk groups

Before you begin

Important:

This procedure assumes that the Position IDs for each span are in sequence. If they are not, repeat this procedure for each set of Position IDs that are in sequence, assigning enough channels for them.

About this task

This procedure describes how to associate trunk group settings with the E1/T1 spans to create the inbound and outbound trunk groups. You assign a sequence of Position IDs to each span.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
2. Select **Configuration**.
3. Select **Full**.
4. Expand **Protocol Configuration**.
5. Expand **Trunk IP Group**.
6. Create a new inbound Trunk Group using the settings described in the Variables table.

7. Create a new outbound Trunk Group using the settings described in the Variables table.
 8. Click **Submit**.
-

Variable definitions Trunk Group Table

Name	Description
From Trunk	A numeric value that determines the first physical span to be included in the trunk group.
To Trunk	A numeric value that determines the last physical span to be included in the trunk group.
Channels	Specifies the range of channels in the trunk group. On T1 systems, enter 1-X , where X is maximum number of channels in this trunk group. On E1 systems, for 15 or less channels enter 1-X , where X is maximum number of channels in this trunk group. If you are configuring more than 15 channels, or multiple trunks, enter 1-Y , where Y is the maximum number of channels, plus one for each trunk in this trunk group that uses more than 15 channels.
Phone Number	The first of the position IDs that the ports in this trunk group service. All the position IDs for this trunk group must be in sequence.
Trunk Group ID	A valid trunk group ID. Enter the value for the inbound or outbound trunk group created previously.
IP Profile ID	Enter 1.

Configuring the inbound route

About this task

This procedure describes how to create an inbound route for all calls passing from the CS 1000 to the Offsite Agent server (and subsequently to the offsite agents).

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
 2. Select **Configuration**.
 3. Select **Full**.
 4. Expand **Protocol Configuration**.
 5. Expand **Routing Tables**.
 6. Select **Tel to IP Routing**.
 7. Select **Route calls before manipulation** from the **Tel to IP Routing Mode** drop-down list.
 8. Create a new inbound route using the settings described in the Variables table.
 9. Click **Submit**.
-

Variable definitions Tel to IP Routing

Name	Description
Src. Trunk Group ID	Leave this blank.
Dest. Phone Prefix	Enter '*' to represent incoming calls for any destination.
Source Phone Prefix	Enter '*' to represent incoming calls from any source.
Dest. IP Address	Enter the IP address of the Offsite Agent server.
Dest. IP Group ID	Leave this field blank.

Configuring the outbound route

About this task

This procedure describes how to create an entry to route calls originated by offsite agents from the Offsite Agent server to the CS 1000.

Procedure

1. Login in to the Audiocodes Mediant 2000 with administrator privileges.
 2. Select **Configuration**.
 3. Select **Full**.
 4. Expand **Protocol Configuration**.
 5. Expand **Routing Tables**.
 6. Expand **IP to Trunk Group Routing**.
 7. Select **Route calls before manipulation** from the **IP to Tel Routing Mode** drop-down list.
 8. Create a new inbound route using the settings described in the Variables table.
 9. Click **Submit**.
-

Variable definitions IP To Trunk Group Routing Table

Name	Description
Dest. Host Prefix	Leave this blank.
Source Host Prefix	Leave this blank.
Dest. Phone Prefix	Enter '*' to represent outgoing calls to any destination.
Source Phone Prefix	Enter '*' to represent outgoing calls from any source.
Source IP Address	Enter '*' to represent incoming calls from any IP source.
Trunk Group ID	Enter the ID of the outbound trunk group created previously.
IP Profile ID	Enter 1.

Configure the Audiocodes TDM-SIP gateway for Offsite Agent

Name	Description
Source IPGroup ID	Enter -1.

Chapter 9: Configure the Offsite Agent server

This chapter details the procedures you must carry out to configure the Offsite Agent server.

Offsite Agent server configuration tasks

About this task

The following diagram outlines the taskflow for configuring the Offsite Agent server:

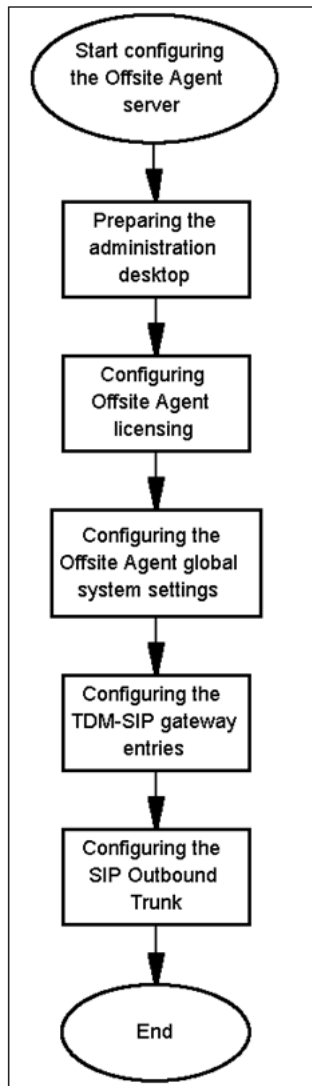


Figure 9: Taskflow of Configuring the Offsite Agent server

Taskflow Navigation

- [Preparing the administration client](#) on page 67
- [Configuring the Offsite Agent licensing](#) on page 68
- [Configuring the Offsite Agent global system settings](#) on page 69
- [Configuring the TDM-SIP gateway entries](#) on page 70
- [Configuring the SIP Outbound trunk](#) on page 71

Preparing the administration client

Before you begin

- Provision a desktop computer for managing Offsite Agent. This computer has network access to the Offsite Agent server.
- Have administrator privileges on the Offsite Agent Element Manager.

Important:

If the desktop computer does not have direct access to the Internet, you are not able to follow this procedure. In this case you need to download the Silverlight Plugin and install it on the desktop, by following the instructions on www.microsoft.com.

About this task

This procedure details how to prepare your desktop for the administration of Offsite Agent.

The Offsite Agent application management pages in Element Manager rely on Microsoft's Silverlight Web Browser Plugin. The Silverlight Plugin is delivered by Microsoft and is available from Microsoft's website. When loaded for the first time, any Offsite Agent management page attempts to automatically download and install the Silverlight plugin from the Microsoft website. If Microsoft Silverlight is already installed on your administration desktop, then this does not occur.

Procedure

1. Connect to the Element Manager with administrator privileges.
 2. Expand **Applications**.
 3. Expand **Packaged Applications**.
 4. Expand **Avaya Aura Offsite Agent**.
 5. Select **Media Gateway Management**.
Element Manager displays the **Install Microsoft Silverlight** icon.
 6. Click **Install Microsoft Silverlight**.
 7. Follow the installation instructions to complete the Silverlight installation.
-

Configuring the Offsite Agent licensing

Before you begin

- Review the planning and engineering chapter to determine the correct licensing level for your contact center.
- Order the software and receive the keycode license sheet from Avaya.
- Generate and retrieve your license keycode from the KRS website.
- Have administrator privileges on the Offsite Agent Element Manager.

About this task

This procedure details how to configure the Offsite Agent licensing. You must apply your Offsite Agent license file to enable the Offsite Agent server.

The keycode license sheet that comes with the Offsite Agent software provides a list of the features you ordered, the Serial Number (Site ID), the Unique Reference Number (URN), the KRS web link, and a label. You use the Unique Reference Number (URN) to locate the order on the KRS website. You enter the server MAC address to generate and retrieve your Offsite Agent license. The Label contains the System Serial number and URN, which you attach to the server for future reference, such as expanding your offsite agent licenses.

Procedure

1. Access the Offsite Agent Element Manager with Administrator privileges.
 2. Expand **Licensing**.
 3. Select **General Settings**.
 4. On the General Settings screen, select **Server Licensing**.
 5. Copy the keycode retrieved from KRS and paste it into the **Replace License Keys** field.
 6. Click **Validate**.
 7. Click **Save**.
 8. Exit the Offsite Agent Element Manager.
-

Configuring the Offsite Agent global system settings

Before you begin

- Have administrator access to the Offsite Agent Element Manager.

Important:

If you change either of the CCMA Username and CCMA Password fields, you must restart the Offsite Agent server.

About this task

This procedure details how to configure the global system settings on the Offsite Agent server. These include the details of the Contact Center and the SIP call settings.

Procedure

1. Connect to the Element Manager with administrator privileges.
 2. Expand **Applications**.
 3. Expand **Packaged Applications**.
 4. Expand **Avaya Aura Offsite Agent**.
 5. Select **System Configuration**.
 6. Enter a Caller ID in the **AAOA Caller ID** field.
 7. Set the Permanent Connection parameters for your contact center in the **Force Call Answer (Permanent Agents)** and **Max Activate Answer Wait Time (s)** fields.
 8. Enter your SIP domain name in the **Default SIP Domain** field.
 9. Enter a context in the **Phone Context** field.
 10. Click **Save**.
-

Variable definitions

Name	Description
AAOA Caller ID	The number you enter here appears on the offsite agent's display when they get a contact center call from Offsite Agent.

Name	Description
Force Call Answer (Permanent Agents)	Select to force answer calls routed to offsite agents who are using Permanent Connection mode.
Max Activate Answer Wait Time (s)	Enter the maximum amount of time in seconds that the Offsite Agent server waits for an offsite agent to answer the call from Offsite Agent when the agent logs on in Permanent Connection mode.
SIP Domain for Outgoing Calls	Enter the name of the SIP domain that supports your CS 1000 SIP trunk.
Phone Context	Enter the phone context. This is a URI that relates to the dialplan of your SIP domain. It is equivalent to a UDP or CDP prefix.

Configuring the TDM-SIP gateway entries

Before you begin

- Have administrator access to the Offsite Agent Element Manager.

Important:

This procedure assumes that the Position IDs are in sequence. If they are not, repeat this procedure for each set of Position IDs that are in sequence.

About this task

This procedure details the steps to configure the Offsite Agent entries for the TDM-SIP gateway (or gateways) that provide its connection to the CS 1000.

Procedure

1. Connect to the Element Manager with administrator privileges.
2. Expand **Applications**.
3. Expand **Packaged Applications**.
4. Expand **Avaya Aura Offsite Agent**.
5. Select **Media Gateway Management**.
The Add a TDM Gateway window appears.
6. Click **Create New Media Gateway**.
The Add Media Gateway dialog appears.
7. Enter the IP address of the TDM-SIP gateway in the **Gateway IP Address** field.

8. Enter the Offsite Agent resource ID of the first channel on the gateway in the **Start Pos ID** field.
 9. Enter the number of channels available on the gateway in the **Num. of Entries** field.
 10. Click **OK**.
The Media Gateway Management screen reappears, with the new gateway listed.
 11. Repeat this procedure for each gateway you need to add.
-

Variable definitions

Name	Description
Gateway IP Address	Enter the IP address of the TDM-SIP gateway.
Gateway Name	You can optionally enter a gateway name: if you choose to do so this must match the name configured on the Mediant 2000 gateway in the Proxy & Registration settings.
Start Pos ID	Enter the Position ID of the first Offsite Agent terminal configured on the gateway.
Num. of Entries	Enter the number of Offsite Agent terminals configured on the gateway.

Configuring the SIP Outbound trunk

Before you begin

- Have administrator access to the Offsite Agent Element Manager.

About this task

This procedure details the steps to configure the Offsite Agent entries for the SIP trunk that provides the channels for the outbound calls to offsite agents.

Procedure

1. Connect to the Element Manager with administrator privileges.
2. Expand **System Configuration**.

3. Expand **Signalling Protocols**.
 4. Expand **SIP**.
 5. Select **Domains and Accounts**.
The SIP Domains and Accounts window appears.
 6. Under **Domains**, click **Add**.
The Add SIP Domains window appears.
 7. Type the name of your CS 1000 SIP trunk domain in the **Name** field and click **Save**.
 8. Expand **Nodes and Routes**.
The SIP Nodes and Routes window appears.
 9. Under **Trusted Nodes**, click **Add**.
The Add SIP Trusted Node window appears.
 10. Enter the IP address of the CS 1000 NRS in the **Host or Server Address** field.
 11. Click **Save**.
The application returns you to the SIP Nodes and Routes window.
 12. Under Routes, click **Add**.
The Add SIP Route screen appears.
 13. From the **Domain** drop-down list, select the CS 1000 SIP trunk domain.
 14. From the **Trusted Node** drop-down list, select the IP address of the CS 1000 NRS.
 15. Modify the other parameters, if required, to match your CS 1000 SIP configuration.
 16. Click **Save**.
The Add SIP Trusted Node window reappears, with the new route listed.
 17. Repeat this procedure for each gateway you need to add.
-

Variable definitions

Name	Description
Name box (SIP Domains window)	The new SIP domain name that you are adding to the Domains list.
Host or Server Address (Add SIP Trusted Node window)	The hostname or server (IP) address of the added SIP trusted node. Set this to the address of the CS 1000 SIP trunk NRS.

Name	Description
Enabled check box	Select to enable or disable a SIP route. The default value is Enabled.
Domain drop-down menu	The domain to which you are adding the route. Select the CS 1000 SIP trunk domain that you entered on the Add SIP Domains window.
Trusted Node drop-down menu	Select the node that you want to add to the route.
Transport drop-down menu	Select the appropriate SIP transport option for your CS 1000 SIP trunk domain, either TCP, TLS, or UDP. The default value is UDP. If using a CS 1000 NRS, UDP must be selected as the SIP Transport option.
Remote port	The remote port from which the route accepts SIP requests. The default value is 5060.
Priority box	The priority value for the route. Range is from 0 to 65535 with the lowest value being the highest priority. Default value is 0.
Weight box	Weighted values are in the range of 0 to 65535. The default is 10.
Proxy check box	Select to assign a proxy role to this route. The default value is active.
Register check box	Select to assign a register role to this route. The default value is inactive.

Chapter 10: Configure Contact Center for Offsite Agent

This chapter details the procedures to configure Contact Center to work with Avaya Aura® Offsite Agent (AAOA). Both Communication Control Toolkit (CCT) and Contact Center Multimedia (CCMM) require unique configuration for AAOA. Offsite Agent resources and operations are seamless to Contact Center Manager Server (CCMS) and Contact Center Manager Administration (CCMA).

For onsite agents, CCT associates each terminal (i.e. a telephone) with a workstation using the workstation Windows domain name. When an agent logs on to a particular workstation, CCT links their Windows user ID with the phone associated with that workstation.

For offsite agents it may not be possible to associate the offsite workstation with the terminal that Offsite Agent uses to connect the agent with the contact center. Depending on the type of VPN connection used, the offsite workstation may or may not be recognized in the corporate Windows domain.

For this reason, Offsite Agent terminals use their POSIDs in place of the workstation name for their CCT configuration. The Offsite Agent server tracks this mapping and forwards CCT messaging between the CCT server and the offsite workstations.

On the CCMM server you need to configure Agent Desktop settings for Offsite Agent.

Contact Center configuration

About this task

The following diagram shows the taskflow for configuring Contact Center to work with Offsite Agent:

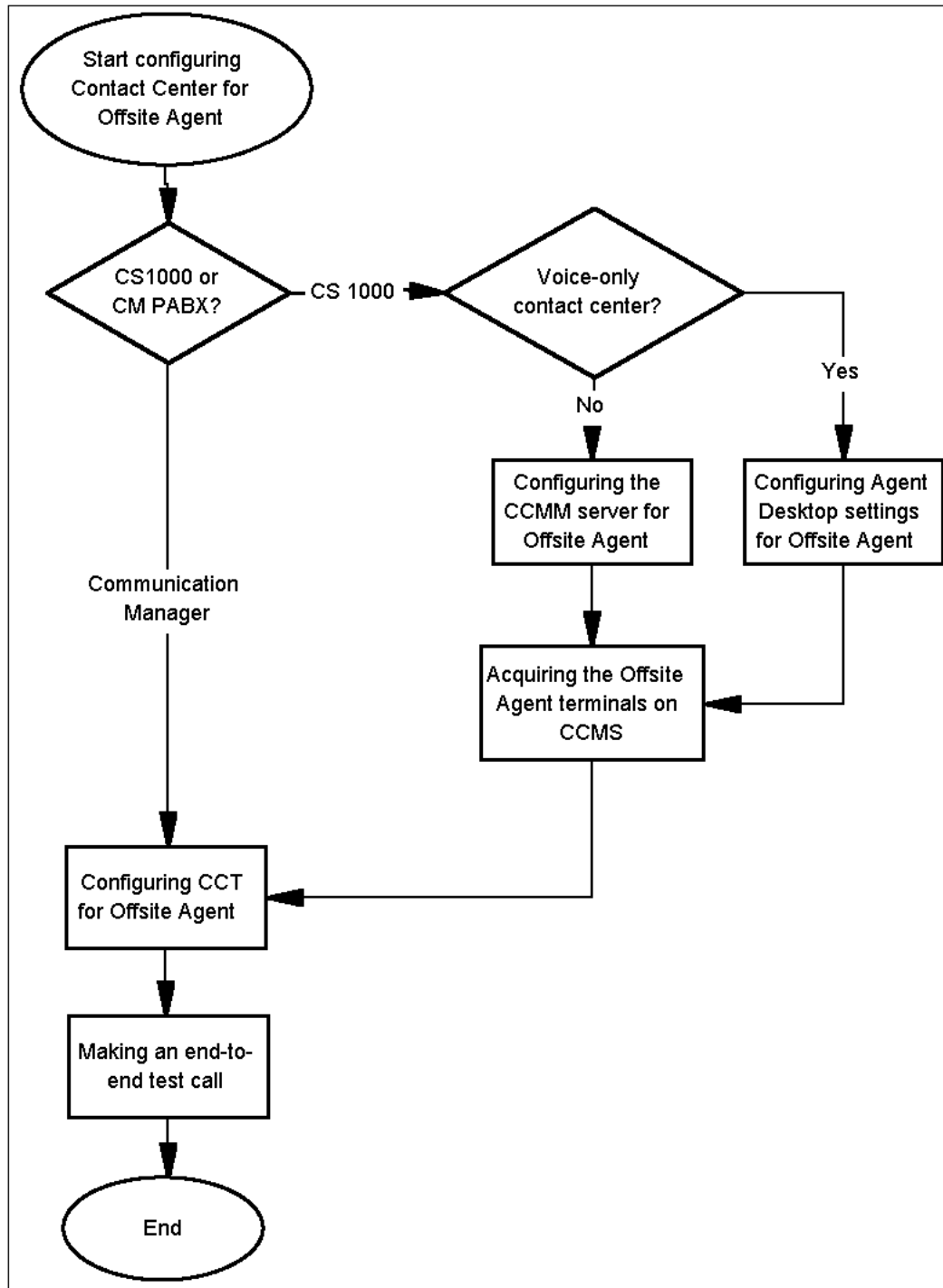


Figure 10: Taskflow of Configuring Contact Center for Offsite Agent

Taskflow Navigation

- [Configuring the Agent Desktop settings on a voice-only contact center](#) on page 77
- [Configuring the CCMM server for Offsite Agent](#) on page 78
- [Acquiring the Offsite Agent terminals on CCMS](#) on page 79
- [Configuring Communication Control Toolkit for Offsite Agent](#) on page 81
- [Configuring an agent for Offsite Agent and testing an end to end call](#) on page 84

Configuring the Agent Desktop settings on a voice-only contact center

Before you begin

- Know the IP address of the Offsite Agent server.
- Log on to CCMA with Administrator privileges.

About this task

On a voice-only contact center, you modify the offsite agent settings for Agent Desktop using a configuration tool on the CCT server.

Procedure

1. Log on to the active Communication Control Toolkit Server.
 2. Navigate to <Installed Drive>:\Avaya\Contact Center\Multimedia Server\Agent Desktop\.
 3. Double-click CCADConfigurator.exe to start the Agent Desktop Toolbar configuration utility.
 4. On the password message box, type the password.
The default password is “__avaya”.
 5. Click **OK**.
 6. On the **App Settings** tab, in the **CCOAMode** row, in the **Value** column, type “1”.
 7. In the **CCOAServerName** row, in the **Value** column, type the name or IP address of the Offsite Agent server.
 8. Click **Save**.
 9. Click **OK**.
-

Variable definitions

Name	Description
CCOAMode	Type "1" to enable Offsite Agent on the contact center Agent Desktops.
CCOAServerName	Type the name or IP address of the Offsite Agent server.

Configuring the CCMM server for Offsite Agent

Before you begin

- Know the IP address of the Offsite Agent server.
- Log on to CCMA with Administrator privileges.

About this task

Modify the Agent Desktop settings on the CCMM server to specify that this CCMM server supports Offsite Agent and to configure the Offsite Agent server IP address.

Procedure

1. In the Contact Center Manager Administration application, click **Multimedia**.
 2. In the left column, select the Multimedia server on which you want to configure the Agent Desktop settings.
 3. In the left column, click **Agent Desktop Configuration**.
 4. Click **General Settings**.
 5. Click **Advanced**.
 6. Select **Enabled** from the **Offsite Agent** list.
 7. Enter the IP address of the Offsite Agent server in the **Offsite Agent Server** field.
-

Variable definitions

Name	Description
Offsite Agent	Select to enable or disable Offsite Agent for Agent Desktop clients using this CCMM server.
Offsite Agent Server	Enter the IP address of the Offsite Agent server.

Acquiring the Offsite Agent terminals on CCMS

Before you begin

- Configure the terminal on the switch.
- Log on to CCMA.
- Open the Configuration component.

About this task

Configure and acquire each Offsite Agent terminal so that remote agents can log on to CCMS through Agent Desktop.

Note:

You cannot modify a saved phoneset. You can delete a saved phoneset and you can add a new phoneset.

Procedure

1. In the left pane, expand the CCMS server to which you want to add the Offsite Agent terminal.
2. Select the **Phonesets and Voice Ports** folder.
3. In the right pane, in the **Name** box, type the name of the Offsite Agent terminal as you want it to appear in reports.
4. From the **Type** list, select **Not Voice Port**.
5. In the **Address** box, type the address of the phoneset or the voice port on the telephony server.

Important:

You must delete the leading zeros or the TN acquire fails.

6. Click any other row of the table to add the phoneset or the voice port. Not Acquired appears in the **Status** column.
7. Select the **Acquired** check box.
8. Click any other row in the table to acquire the phoneset.
9. Click **Refresh Status** to view the current status.

Variable definitions

Name	Description
Name box	The name assigned to the phoneset. Valid values: 30-character maximum (no special characters)
Type box	The terminal type. For Offsite Agent terminals you must select Not Voice Port, because Offsite Agent uses these terminals to represent actual phonesets that the agent or supervisor logs into. After the system acquires a non-voice port, the value in this box automatically changes to either Agent, Supervisor, or Error, based on the port address you enter for the phoneset. If the Type is Error, then the submitted port address does not exist on the server. ! Important: You cannot change the voice port type after you configure it. To change the voice port type, you must delete the corresponding phoneset and create a new voice port, or delete the voice port and create a new phoneset.
Address box	The address of the Offsite Agent terminal on the telephony server. Valid values: Loop, Shelf, Card, Unit (for example, 4-0-0-1).
Channel box	Not required for Offsite Agent terminals.
IVR Name box	Not required for Offsite Agent terminals.
Acquired check box	Select the Acquired check box to acquire the Offsite Agent terminal. Clear the Acquired

Name	Description
	check box to deacquire the Offsite Agent terminal. After you select or clear the Acquired check box, click Refresh Status to refresh the Status box.
Status box	The status of the acquisition of the Offsite Agent terminal. Valid values: Not Acquired, Acquire Pending, Acquired, Acquire Failed, Deacquire Failed, and Deacquire Pending
Refresh Status button	Refresh the status of the resources that you acquire or deacquire. The current status appears in the Status column.

Configuring Communication Control Toolkit for Offsite Agent

Before you begin

- Understand Communication Control Toolkit Release 6.2 administration tasks, especially mapping terminals to workstations.
- Create the terminals on the CS 1000.
- Review *Avaya Aura® Contact Center Server Administration* (NN44400-610).
- Use the Import/Export tool to create blank workstation and terminal mapping delimited data files, and populate these files with the Offsite Agent terminal and POSID information.

About this task

Communication Control Toolkit (CCT) allows a bulk import of resources into the Communication Control Toolkit database from a file that has an XML delimited data format. You can use this feature to import the Offsite Agent terminals' POSIDs as workstations, and to import the terminal-workstation mappings for the Offsite Agent terminals.

Procedure

1. On the Communication Control Toolkit server, click **Start > All Programs > Avaya > Contact Center > Communication Control Toolkit > CCT Console**.
2. In the CCT Console window, expand **Communication Control Toolkit**.
3. Expand **Bulk Provisioning Tools**.
4. Click **Import/Export Tools**.

5. In the center pane of the Console window, select **Flattened XML** from the **Format** list.
 6. Expand **All Resources** and select the **Terminals** check box.
 7. In the right pane of the Console window, click **Import**.
 8. Browse to the XML file that contains the terminal data, and click **Open**.
 9. When the import is complete, click **OK**.
 10. In the center pane of the Console window, select the **Addresses** and **Workstations** check boxes.
 11. In the right pane of the Console window, click **Import**.
 12. Browse to the XML file that contains the addresses and workstations data, and click **Open**.
 13. When the import is complete, click **OK**.
 14. Access the CCT Administration Tool and create a Terminal Group containing all the Offsite Agent Terminals.
 15. Create a User Group containing all the user ids of the agents who you want to enable to work offsite.
 16. Associate the offsite agents' User Group with the Terminal Group for the Offsite Agent terminals.
-

Procedure job aid

The following images show sample text files for importing bulk resources into the Communication Control Toolkit database. For the terminal mappings file, it is not necessary to have values for the TerminalGroup, Address User, and UserGroup, but you must still insert the extra delimiters to recognize the positioning of these fields.

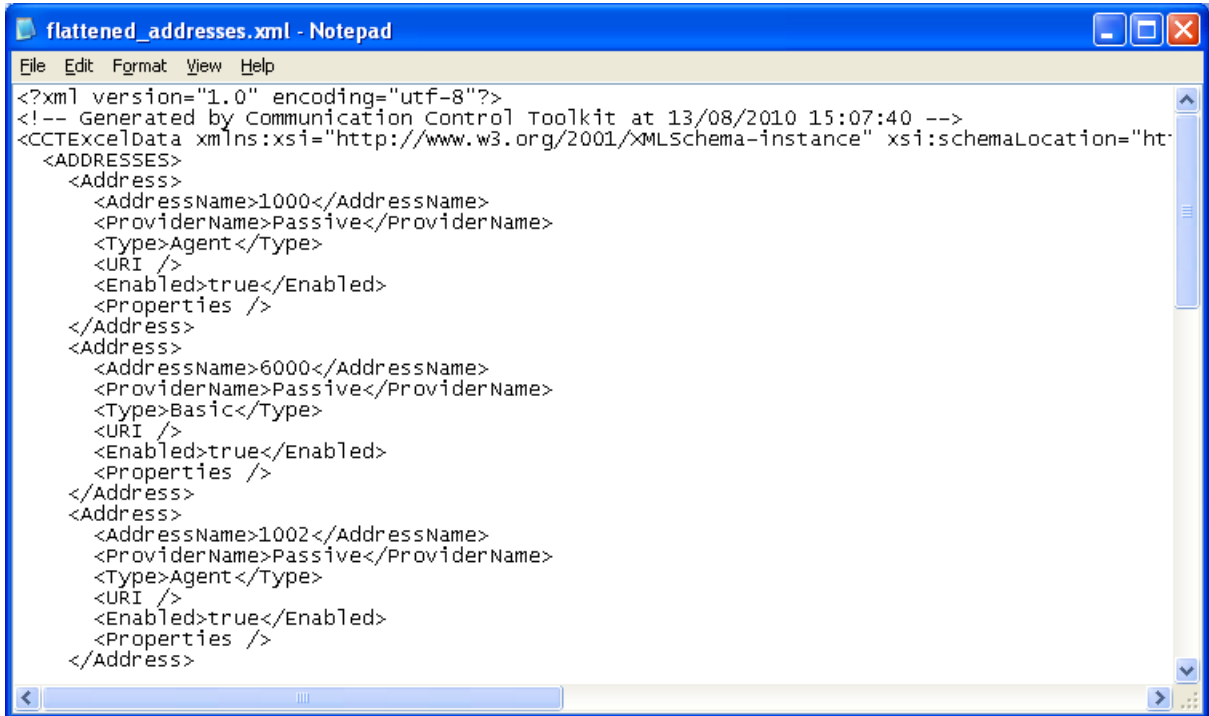


Figure 11: Sample XML file for importing Offsite Agent workstation names

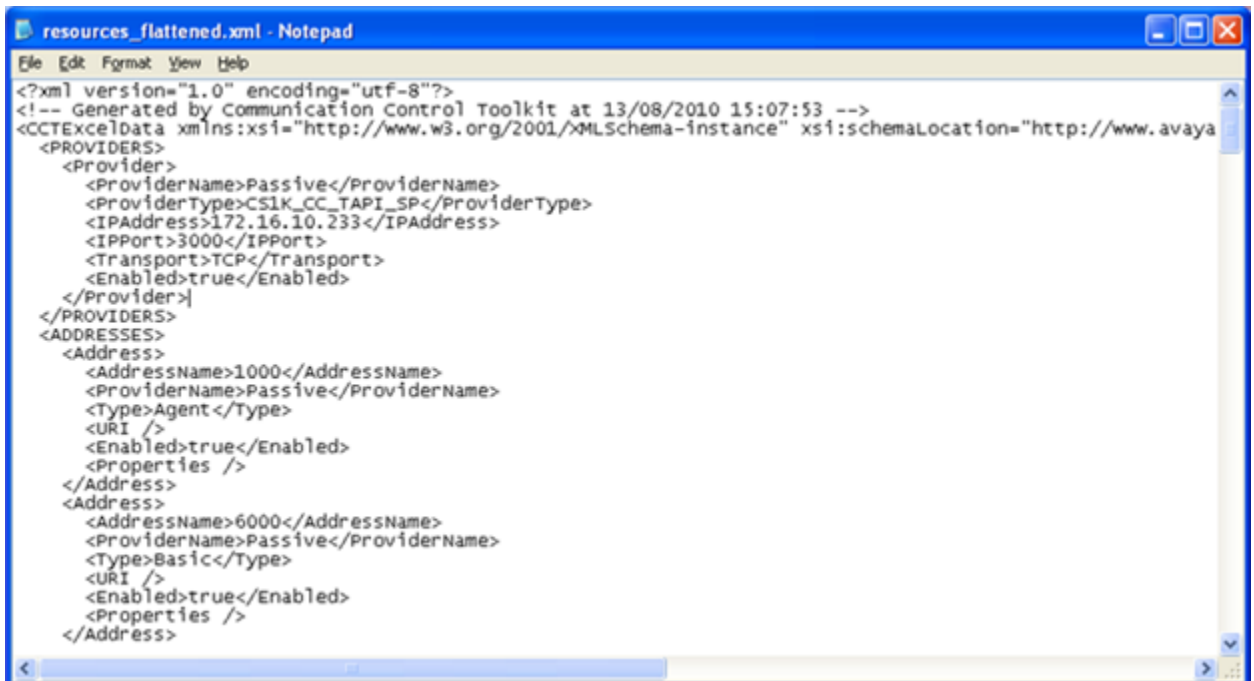


Figure 12: Sample XML file for importing Offsite Agent terminal mappings

Configuring an agent for Offsite Agent and testing an end to end call

Before you begin

- Complete all installation and commissioning procedures in this guide.
- Ensure that your contact center is operational.
- If you are using local accounts on the CCT server, ensure you create the agent's user account.

About this task

This procedure outlines the high-level steps required to configure an agent for Offsite Agent. As these are configuration steps that are used in the day-to-day management of the system, they are fully documented in the administration guide, *Avaya Aura® Offsite Agent Administration and Maintenance* (NN44400-617). Avaya recommends that you configure and test a single agent before completing all the configuration for your Offsite Agent solution.

Procedure

1. Create a contact center Call Presentation Class of type Return to Queue.
2. Select a contact center agent who works offsite, or create a new agent.
3. Apply the Return to Queue call presentation class to the agent.
4. Complete the Offsite Agent settings in CCMA for this agent.
5. If you plan to segregate offsite agents into different skillsets from onsite agents, create a skillset for offsite agents and assign the agent to this skillset.
6. Import the Windows user for the offsite agent into CCT.
7. Associate the offsite agent's Windows user with the Offsite Agent terminals.
8. Add the agent's offsite telephone number and configure their connection mode.
9. Install the Agent Desktop client on the agent's offsite PC or laptop. (This step can be performed in a simulated offsite environment, such as a test lab). See *Avaya Aura® Offsite Agent User Guide* (NN44400-120).
10. Configure the Agent Desktop client for Offsite Agent.
11. Login the agent on the offsite PC and place a test call to their offsite skillset.
12. Check that Offsite Agent routes the test call to the agent, that the agent is able to answer the call, and that Agent Desktop displays the correct progression of call status and information.

Chapter 11: Offsite Agent reference

This chapter contains details of the ports that you need to allow on your external firewall to enable Offsite Agent agents to operate Agent Desktop.

Ports required for an Agent Desktop on an offsite client

The following table lists the ports that must be unblocked on your firewall to allow offsite agents to run Agent Desktop clients connected to the contact center.

Table 4: Contact Center Multimedia ports

Port	Host	Client	Network interface	Functionality
80	Contact Center Manager Server	Any Web services client (Agent Desktop, OCMT, and third-party Web services)	SOAP protocol	Accessing http Web services.
29373	Communication Control Toolkit server	Agent Desktop	Communication Control Toolkit	Remote access from clients to Communication Control Toolkit server (for Agent Desktop application).
20000	Offsite Agent server	Agent Desktop	Offsite Agent Web Services	Agent Desktop offsite specific Web service calls.

Glossary

Automatic Call Distribution (ACD)	A means of automatically distributing an organization's incoming calls among a number of answering positions (ACD agents). Automatic call distribution is useful in operations where callers want a service rather than a specific person. Calls are serviced in the order they arrive and are distributed so that the workload at each answering position is approximately equal.
Avaya Aura® Agent Desktop (AAAD)	An agent tool that contact center agents can use to provide intelligent and personalized customer care. Agents use a personal computer to access the telephony and multimedia functions.
Avaya Aura® Offsite Agent packaged application	The Offsite Agent server software that provides the core functionality in an Offsite Agent solution for a contact center using a CS 1000 PABX.
Avaya Aura® Offsite Agent solution	The collection of products (including CS 1000, CCMS, CCT, Offsite Agent Packaged Application, Mediant 2000) that when installed and configured allow agents to work from a remote location with the same features they have access to if they were based in the contact center customer premises.
Call Processor Pentium Mobile (CPPM) pack	The Call Processor Pentium Mobile (CPPM) pack hosts a high performance server that can serve as both a Call Server or Signaling Server in a CS 1000 small system.
Communication Control Toolkit (CCT)	A client/server application that integrates a telephone on a user's desktop with client- and server-based applications.
Contact Center Manager Server (CCMS)	A client/server contact center solution for varied and changing business requirements. It offers a suite of applications that includes call processing and agent handling, management and reporting, networking, and third-party application interfaces.
Contact Center Subnet (CCS)	The subnet to which the contact center servers, such as Contact Center Manager Server, Network Control Center, Contact Center Manager Administration, Communication Control Toolkit, and Offsite Agent servers connect.
Communication Server 1000	A Private Automated Branch Exchange (PABX).

Computer Telephony Integration (CTI)	An application that enables a computer to control telephone calls.
E1	E1 is a European digital transmission format used on Primary Rate Interface (PRI) connections.
Interactive Voice Response (IVR)	An application that allows telephone callers to interact with a host computer using prerecorded messages and prompts.
Avaya Media Server	A programmable media endpoint in a SIP signaling network that acts as a SIP user agent to accept and control sessions and the IP media (audio and video) services associated with those sessions. The Avaya Media Server delivers programmable, customized, intelligent media services to those sessions using text, voice, and video initially, with extensibility to other media and information types as the applications grow. While Offsite Agent uses much of the Avaya Media Server architecture, the details of this are largely hidden from administrators. The hardware requirements for an Offsite Agent server and the administration tools for managing Offsite Agent are equivalent to those for Avaya Media Server.
Mediant 2000	A TDM-SIP gateway, manufactured by Audiocodes and shipped by Avaya as NT2210xx.
Offsite Agent	A contact center agent who works at a location physically removed from the contact center customer premises.
Offsite Agent terminal	A generic term that refers to the CS 1000 terminals that Offsite Agent uses to proxy the agent login and call control for offsite agents. This is a port on an E1/T1 Lineside card, configured as an ACD 500 set. CCT imports and control these terminals, and CCMS recognizes these as the offsite agents' telephones.
On Demand mode	A connection mode where each contact center call routed to an offsite agent results in a unique call from the contact center PABX to the offsite agent's remote telephone. With On Demand Calling the agent is able to take other calls on their remote telephone when they are not active on a contact center call.
Permanent Connection mode	A connection mode where the contact center switch makes a call to the offsite agent's remote telephone when the offsite agent connects to Offsite Agent. Subsequently, contact center calls destined for that agent are conferenced into this call. This call remains connected until the offsite agent disconnects.

With Permanent Connection the offsite agent cannot take any other call on their remote telephone while they are logged in.

Span

A term used to describe a digital trunk, frequently applied to lineside or internal trunks connected to IVR devices.

Session Initiation Protocol (SIP)

An application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants.

T1

T1 is a North American digital transmission format used on Primary Rate Interface (PRI) connections.

Time-Division Multiplex (TDM)

A method of transmission in which a signal is separated into multiple segments at the transmission source, and then reassembled at the receiving end.

The term generally refers to traditional non-IP based telephony protocols.

TDM-SIP gateway

A server that converts incoming TDM signalling into SIP signalling in order to allow traditional TDM telephony devices to interoperate with SIP-based telephony devices.

Virtual Private Network (VPN)

A private network configured within a public network to take advantage of the economies of scale and management facilities of large networks.

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