



**NORTEL**

Contact Center Offsite Agent

# Installation and Commissioning Guide

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# Contents

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<b>Contact Center Offsite Agent Product Overview</b>	<b>7</b>
The CCOA packaged application	7
Agent operation	8
Agent features	8
Technical overview	9
<b>CCOA Planning and Engineering</b>	<b>11</b>
CCOA component overview	11
CCOA server requirements	12
CS1000 requirements	14
CS1000 small systems	14
CS1000 large systems	15
SIP trunk requirements	15
Contact Center requirements	15
TDM-SIP gateway	16
CCOA offsite VPN connection	17
CCOA PC client requirements	17
CCOA offsite telephone requirements	18
CCOA outbound trunking	18
Capacity	19
Summary of software requirements	19
Summary of hardware requirements	21
Summary of licensing requirements	22
Scalability	22
Redundancy and Resiliency	23
Failure of the Contact Center servers	23
Failure of the CCOA server	23
Failure of the TDM-SIP Gateway	24
Failure of the outbound SIP trunk or the PSTN connection	24
Redundancy	24
<b>CCOA installation overview</b>	<b>25</b>
<b>Installing the CCOA server software</b>	<b>29</b>
Installing the CCOA 2.0 server software	31
Applying the latest patches from the DVD	32
Uninstalling the CCOA 2.0 server software	33
<b>Configuring the CS1000 for CCOA</b>	<b>35</b>
Preparing the CS1000 SIP trunk for CCOA outbound calls	38
Preparing the switch for the Lineside pack installation	40
Installing the Lineside E1 pack	41

Installing the T1 Lineside pack	42
Configuring a CCOA terminal on the CS1000	43
Copying CCOA terminals	45
<b>Configuring the Audiocodes TDM-SIP gateway for CCOA</b>	<b>47</b>
Performing initial configuration of the Mediant 2000 gateway	50
Configuring Voice Detect	51
Applying the latest Channel Associated Signalling (CAS) file	53
Set the trunk parameters for E1	54
Set the trunk parameters for T1	55
Set the codecs for communication with the CCOA server	56
Configuring the trunk group settings	57
Creating the trunk groups	58
Configuring the inbound route	60
Configuring the outbound route	61
<b>Configuring the Contact Center for CCOA</b>	<b>63</b>
Configuring CCT 6.0 for CCOA	65
Configuring CCT 7.0 for CCOA	66
Acquiring the CCOA terminals on CCMS	69
<b>Configuring the CCOA server</b>	<b>71</b>
Preparing the administration Client	73
Configuring the CCOA licensing	74
Configuring the CCOA global system settings	76
Configuring the TDM-SIP gateway entries	78
Configuring the SIP Outbound trunk	80
Configuring an agent for CCOA and testing an end to end call	82
<b>CCOA reference</b>	<b>85</b>
Ports required for offsite CCAD	85
<b>Terminology</b>	<b>87</b>
Automatic Call Distribution (ACD)	87
Communication Control Toolkit (CCT)	87
Contact Center Agent Desktop (CCAD)	87
Contact Center Manager Server (CCMS)	87
Contact Center Offsite Agent (CCOA) packaged application	87
Contact Center Offsite Agent (CCOA) solution	88
CCOA terminal	88
Call Processor Pentium Mobile (CPPM) pack	88
Computer Telephony Integration (CTI)	88
Communication Server 1000	88
E1	88
Interactive Communications Portal (ICP)	88
Interactive Voice Response (IVR)	88

Media Application Server (MAS) 89  
Mediant 2000 89  
Nortel Server Subnet (NSS) 89  
Offsite agent 89  
On Demand mode 89  
Permanent Connection mode 89  
Span 89  
Session Initiation Protocol (SIP) 90  
T1 90  
Time-Division Multiplex (TDM) 90  
TDM-SIP gateway 90  
Virtual Private Network (VPN) 90



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# Contact Center Offsite Agent Product Overview

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This section provides an overview of the Contact Center Offsite Agent (CCOA) packaged application. It explains the customer requirements addressed by CCOA, the different potential configurations, and some deployment considerations.

## Navigation

- [The CCOA packaged application \(page 7\)](#)
- [Agent operation \(page 8\)](#)
- [Agent features \(page 8\)](#)
- [Technical overview \(page 9\)](#)

## The CCOA packaged application

Contact Center Offsite Agent (CCOA) is a software application that extends a traditional 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, CCOA extends contact center calls to the agent's telephone (home telephone or mobile), without an agent needing any 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 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 call center using a smart client application on their home PC or their laptop. They receive skillset calls on PSTN home or mobile phones.

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

The CCOA 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 no longer needs to provide voice-quality data streams.

### Agent operation

To use CCOA, an agent accesses the corporate network, usually through a VPN, and connects to a server hosting Contact Center Agent Desktop (CCAD). This allows them to launch the CCAD client and specify that they are an offsite agent. CCAD will then prompt the agent to select or enter the telephone number where they can receive calls. This number can be any number that is directly diallable from the contact center switch. The agent can then log in to the contact center.

The CCOA server now 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 CCAD 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 CCAD functionality available to the offsite agent is consistent with the onsite agent experience.

### Agent features

Offsite agents using CCOA through CCAD 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 CCAD)
- Agent status and destination telephone number (through CCAD)
- On Demand calling
- Permanent Connection calling
- Emergency key
- Call supervisor
- Outbound calls through the CS1000

## Technical overview

CCOA integrates easily into existing Communication Server 1000 (CS1000) - based contact centers by extending line side ACD capability to any directly-dialable telephone number. To deploy CCOA on the contact center, the following Nortel products are required:

- CS1000
- Contact Center Manager Server (CCMS)
- Communication Control Toolkit (CCT)
- A SIP/TDM gateway
- CCAD
- CCOA

The CS1000 and CCMS are installed and configured in the normal way for a contact center. The CCOA 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 CCAD application. A TDM-SIP gateway is required to bridge calls between the lineside TDM ports on the CS1000 and the CCOA server, which uses a SIP-based architecture. The CCAD client on the offsite agents' desktops uses CCT to provide call control on the CS1000 lines.

## 10 Contact Center Offsite Agent Product Overview

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Contact Center Offsite Agent  
Installation and Commissioning Guide  
NN44400-330 01.01 Standard  
2.0 9 March 2010

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# CCOA Planning and Engineering

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This chapter describes the planning and engineering considerations for a Contact Center Offsite Agent solution. It provides an overview of the CCOA solution and details how to plan each of the elements of the solution.

## Navigation

- [CCOA component overview \(page 11\)](#)
- [CCOA server requirements \(page 12\)](#)
- [CS1000 requirements \(page 14\)](#)
- [Contact Center requirements \(page 15\)](#)
- [TDM-SIP gateway \(page 16\)](#)
- [CCOA offsite VPN connection \(page 17\)](#)
- [CCOA offsite telephone requirements \(page 18\)](#)
- [CCOA outbound trunking \(page 18\)](#)
- [Capacity \(page 19\)](#)
- [Summary of software requirements \(page 19\)](#)
- [Summary of hardware requirements \(page 21\)](#)
- [Summary of licensing requirements \(page 22\)](#)
- [Scalability \(page 22\)](#)
- [Redundancy and Resiliency \(page 23\)](#)

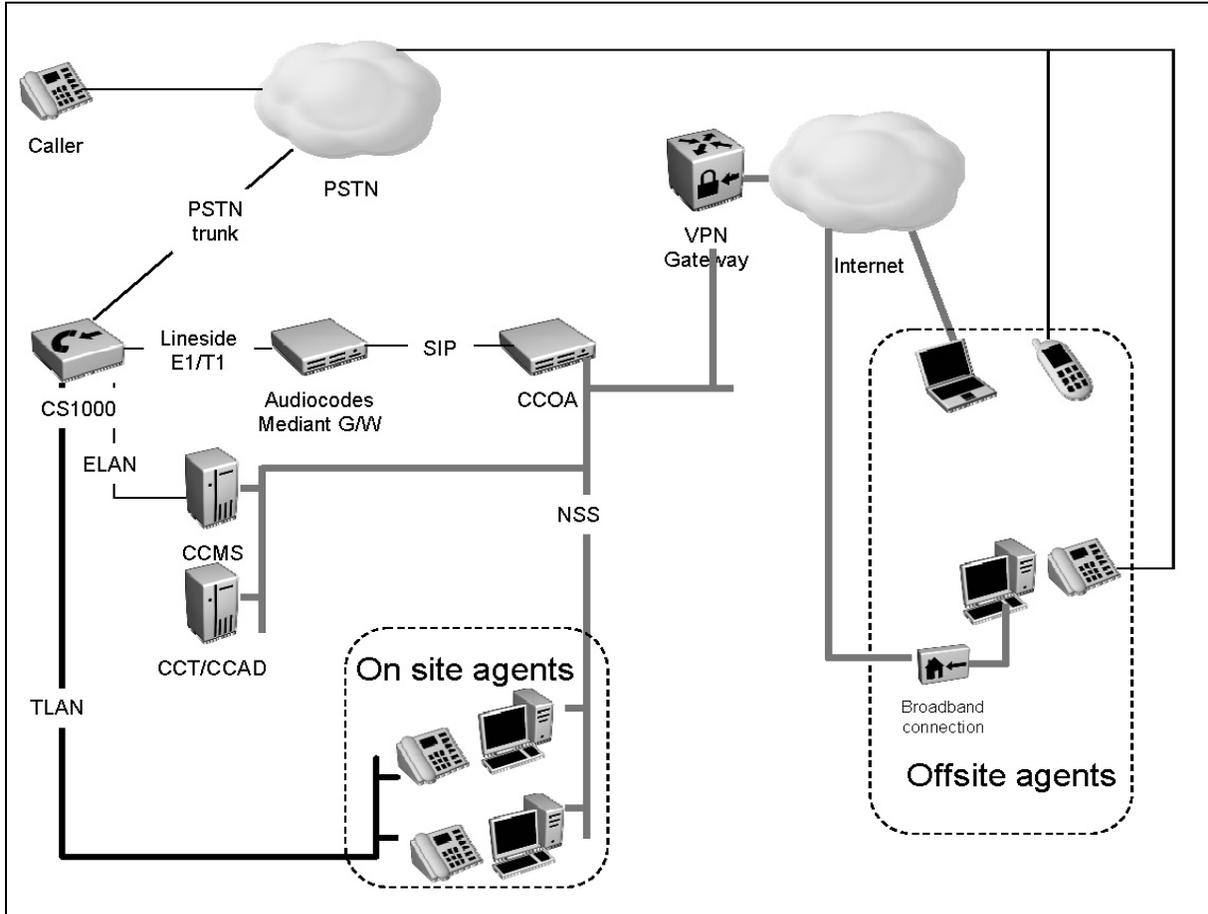
## CCOA component overview

CCOA extends existing CS1000-based contact centers to allow agents to work at offsite locations, while receiving the same experience as an agent working onsite. To deploy CCOA on the contact center requires a CCOA server and a TDM-SIP gateway along with certain core Nortel products:

- a CS1000 switch with Lineside E1/T1 and SIP trunk capability
- a CCMS server (and associated CCMA capability)
- a CCT server

- CCOA, installed on a Contact Center Multi Media (CCMM) server, co-resident on the CCT or CCMA server, or on a coresident CCMS/CCMA/CCT server, depending on the customer's contact center configuration

Figure 1 CCOA solution overview with CCAD installed on the CCT server



## CCOA server requirements

The CCOA packaged application re-uses many of the components of the Integrated Communications Portal (ICP) software. ICP in turn operates on the Media Application Server (MAS) platform. However, the CCOA packaged application installer automatically completes the full install of ICP on the server. The ICP Element Manager tool, also included in the CCOA install, provides management and administration functions for CCOA.

There is no requirement to order or configure an ICP: it is completely bundled in the CCOA order codes and the CCOA installation.

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

CCOA supports customer-supplied servers that meet the ICP PVI requirements. The CCOA install will automatically run the ICP PVI checker, which will stop the installation if the server is not at the correct specification. The CCOA server requirements are:

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

For more information on the required server specifications, see *Nortel MAS and ICP Planning and Engineering* (NN44471-200).

The CCOA packaged application supports the same operating systems as ICP, namely:

- Microsoft Windows 2003 Server, Standard or Enterprise, 32-bit
- Microsoft Windows 2003 Server R2 (Service Pack 1 or higher), 32-bit

CCOA 2.0 does not support Microsoft Windows 2008 Server.

CCOA 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 will see double the number of agent licenses configured.

## CS1000 requirements

To install and commission a CCOA solution you must have a CS1000 switch deployed in your contact center. CCOA supports CS1000 software releases 4.5, 5.0, 5.5, and 6.0. The following additional components are required for CCOA:

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

To provide for call routing to offsite agents, CCOA 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. CCOA 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 CS1000 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 CS1000 small system or large system.

## CS1000 small systems

Where the contact center switch is a small system CS1000, each lineside card requires an IP Media Gateway (IPMG) for housing. Each lineside pack consumes two slots in the IPMG. Additional considerations for adding lineside cards 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 CS1000 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 should be provided using the MGC DECT Clock Reference Cable (NTDW67AAE5). Where the distance between the CS1000 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 CCOA:

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

### CS1000 large systems

Where the contact center switch is a large system CS1000, 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 should be reviewed. Sufficient Digit Tone Receiving (DTR) must be configured per IPE shelf to allow 14 seconds of DTR usage per call according to CS1000 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 CCOA:

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

### SIP trunk requirements

CCOA requires the capability to make an outbound call through the CS1000 to forward each contact center call it receives to the correct offsite agent. This requires a SIP trunk between the CCOA server and the CS1000, with a channel for each offsite agent supported. In addition The CS1000 must have sufficient inbound PSTN ports for incoming calls from customers.

Depending on the configuration of the CS1000, 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.

CCOA connects to the CS1000 using underlying ICP components. Full information on configuring the SIP trunk to the CS1000 is available in *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

### Contact Center requirements

To deploy CCOA you will require a functional Nortel contact center in place, including CCMS, CCMA, CCT, and CCAD. CCOA supports Contact Center R6.0 and R7.0. CCOA does not support Contact Center Express or OCS Contact Center. You should review the following additional considerations:

- CCAD provides the desktop client for CCOA
- CCT provides call control for CCAD

Offsite agents use CCAD to provide call control for their contact center calls. Each offsite agent will require 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 will not be able to import the offsite agent workstation in the normal manner. For each CCOA terminal, the administrator will create a manual mapping to a 'virtual' workstation name that corresponds to the terminal's Position ID (POSID). When CCOA has assigned 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 should carefully consider the implications of this for offsite agents. Nortel recommends that the customer engages their Distributor or Nortel's Professional Services Organization to review such applications.

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

### **TDM-SIP gateway**

CCOA operates on a telephony architecture that is SIP-only. In order to enable communication between the CCOA server and the CS1000, you must install a TDM-SIP gateway. CCOA R2.0 supports only the Audiocodes Mediant 2000 gateway.

For CCOA, 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, CCOA supports 200 offsite agents, so if using E1 you require the use of just 7 spans. It is possible to configure the spans across multiple 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 as Nortel parts 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 Nortel will have the Answer Supervision license, but if purchasing elsewhere, or if using an existing gateway, then you must order this license from Audiocodes.

## CCOA offsite VPN connection

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

The VPN connection must allow direct connection to the Nortel Server Subnet (NSS), (the subnet where the CCT server and CCOA server are located). The VPN gateway should 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 CCAD client and CCT server are tolerant of long delays in notification delivery, and will not time out for delays in excess of 10 seconds. However, having the CCAD significantly out of synchronization with the telephone might cause usability problems for agents. This is probably not as important for agents working in Permanent mode, who will hear a tone to alert them to an incoming call and might tolerate a delay in CCAD updating the call status and information. For agents working in On Demand mode, however, if the delay is significant then they will not be able to tell whether a call ringing on their telephone is a contact center or personal call. If the round trip time on the link is greater than 500ms then Nortel recommends that you take steps to improve the link.

## CCOA PC client requirements

The CCOA Solution uses Contact Center Agent Desktop (CCAD) to provide the desktop application for offsite agent call control. CCAD supports the following Microsoft desktop operating systems:

- Windows XP Professional SP2
- Windows Vista Business Edition SP1

CCOA agent desktops have a dependency on the Microsoft .NET framework, as follows:

- CCAD 6.0 requires .NET 1.1, and will not work with later .NET versions
- CCAD 7.0 requires .NET 3.5 or later

CCAD requires the following (or better) physical PC specifications:

- Intel Pentium III 733MHz CPU
- 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 Nortel Server Subnet (subnet where CCT server and Offsite Agent server are located)

### CCOA offsite telephone requirements

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

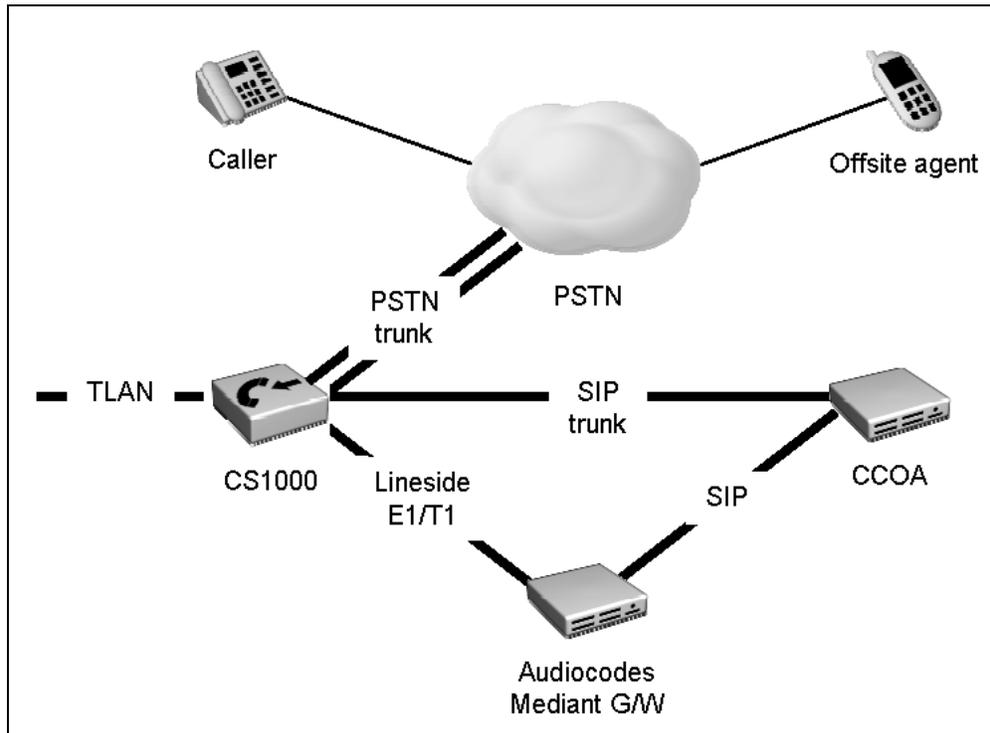
An important consideration is that the offsite agent might have personal telephone services such as an answering machine or call waiting. The agent's call presentation class should be configured to prevent a contact center call reaching such services. Nortel recommends the use of a call presentation class with **Return to Queue after n seconds** set to less than the time required to activate the phone service.

### CCOA outbound trunking

To allow for calls from CCOA out to the offsite agents, CCOA uses a SIP trunk directly routed to the CS1000. This requires a Signaling Server (SS) and Network Routing Service (NRS) to be provisioned on the CS1000. The CS1000 will need 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 CS1000, 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* (NN43021-220) and *Communication Server 1000E Planning and Engineering* (NN43041-220).

Figure 2 CCOA outbound SIP trunk through CS1000



### Capacity

CCOA R2.0 supports 200 offsite agents. CCOA R2.0 does not impact the normal Contact Center R6.0 or R7.0 agent or call capacities.

### Summary of software requirements

The software requirements for CCOA are summarized in the following table.

Table 1 Contact Center Offsite Agent summary of software requirements

Product	Supported Version	Additional information
CCMS	R6.0	Includes CCMA versions supported on CCMS 6.0 The latest patch levels must be installed as specified in the Contact Center DTR.
	R7.0	Includes CCMA versions supported on CCMS 6.0 The latest patch levels must be installed as specified in the Contact Center DTR.

(1 of 3)

**Table 1 Contact Center Offsite Agent summary of software requirements**

<b>Product</b>	<b>Supported Version</b>	<b>Additional information</b>
CCT	R6.0	The latest patch levels must be installed as specified in the Contact Center DTR.
	R7.0	The latest patch levels must be installed as specified in the Contact Center DTR.
CCAD	R6.0	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.
	R7.0	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.
CS1000	R4.5	Appropriate packages for Contact Center must be applied.
	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.
NCR	6.0 and 6.01	Only TDM lineside and trunkside recording supported.  The latest patch levels must be installed as specified in the Call Recording DTR.
(2 of 3)		

**Table 1 Contact Center Offsite Agent summary of software requirements**

Product	Supported Version	Additional information
	6.5 and 6.5.1	Only TDM lineside and trunkside recording supported.  The latest patch levels must be installed as specified in the Call Recording DTR.
	7.0	Only TDM lineside and trunkside recording supported.  The latest patch levels must be installed as specified in the Call Recording DTR.
(3 of 3)		

## Summary of hardware requirements

The hardware requirements for CCOA are summarized in the following table.

**Table 2 Contact Center Offsite Agent summary of hardware requirements**

Solution Component	Per No. Agents	Hardware Required	Additional information
CS1000	30 agents  24 agents	E1 Lineside Pack NT5D34ACE5/ NT5D33  Lineside Pack T1 NT5D14AD/ NT5D11AE	
CCOA	200 agents	Windows-capable Server (should be on the Microsoft Hardware Compatibility List for Windows Server 2003.)	See <a href="#">CCOA server requirements (page 12)</a>
TDM-SIP Gateway	up to 200 agents	Audiocodes Mediant 2000	8 spans of T1 or 7 spans of E1 supported. It is possible to provision these spans across multiple gateways if these exist in the network and have spare capacity to support the spans.  The gateway is available with 1, 2, 4, or 8 spans.

## Summary of licensing requirements

Each offsite agent with a reserved CCOA terminal uses licenses on the CS1000, CCMS, CCT, and CCOA. On the CS1000 they use one System TN, one Analogue Telephone, one ACD, and one AST license. They also require a CCMS agent license and a CCT device license. On the CCOA server they use one Offsite Agent increment.

In addition CCOA requires Answer Supervision licenses on the Audiocodes gateway.

**Table 3 Contact Center Offsite Agent summary of hardware requirements**

Solution Component	Per No. Agents	License Required	Additional information
CS1000	1 agent	1 System TN ISM license 1 Analogue Telephone ISM license 1 AST ISM license 1 ACD ISM license	Each CCOA 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.
CCMS	1 agent	1 agent license	
CCT	1 agent	1 device license	
CCOA	Per install (up to 200 agents)	1 Contact Center Offsite Agent Base Package	NT6W14GA (EMEA/AsiaPac) or NT9S14GA (North America)
	1 agent	1 Contact Center Offsite Agent 1 Agent Increment	NT6W21PA (EMEA/AsiaPac) or NT9S21PA (North America)
TDM-SIP Gateway	Per install	Answer Supervision	The Answer Supervision license is included on gateways purchased directly from Nortel.

## Scalability

CCOA R2.0 supports one CCOA server for each CCMS node in the contact center. That is, a single CCMS can support one CCOA server. If further CCOA ports are needed, then it is necessary to install a second CCMS and network it with the first.

Each CCOA server supports 200 ports, equivalent to 8 T1 spans or 7 E1 spans. These spans can connect to the CCOA server through more than one TDM-SIP gateway.

## Redundancy and Resiliency

The CCOA solution does not implement redundancy or resiliency features, other than those inherent in the solution's component parts. The impact on the offsite agent will vary depending on the part of the solution that experiences a failure.

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

### Failure of the Contact Center servers

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

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

### Recovery of the Contact Center servers

When the contact center recovers, agents might have to re-connect their CCAD application. CCAD R6.0 clients will require a restart, but CCAD R7.0 clients will attempt to re-synchronize automatically.

### Failure of the CCOA server

Where a failure occurs on the CCOA server, CCMS will direct skillset calls to offsite agents, but CCOA will not be able to forward these calls. When the call is not answered, the call presentation class should return the call to the queue and make the agent Not Ready. This will ensure that no further calls are directed to that agent.

CCAD will detect that the agent is no longer connected to the CCOA server, and will notify the agent that they need to re-connect with the CCOA server.

### Recovery of the CCOA server

Agents will need to re-connect to the CCOA server once it becomes operational again.

### **Failure of the TDM-SIP Gateway**

Where a failure occurs on the SIP-TDM gateway, CCMS will continue to direct skillset calls to the CCOA terminals, but CCOA will not be able to forward these calls. When the call is not answered, the call presentation class should return the call to the queue and make the agent Not Ready. This will ensure that no further calls are directed to that agent.

### **TDM-SIP Gateway recovery**

The other elements in the CCOA solution remain connected and in-sync during a gateway failure. Agents will see calls presented on their CCAD client, but no physical calls will be presented to their telephone. Once the gateway becomes established, agents will 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 will still route calls to the CCOA terminal. This will result in the offsite agent receiving call notifications on the CCAD client, but the voice call will not come through to the offsite telephone. Because the voice call will not be answered, the Return to Queue presentation class will redirect the call to the contact center and make the agent Not Ready.

### **Outbound SIP trunk or PSTN connection recovery**

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

### **Redundancy**

CCOA R2.0 does not support redundancy in the TDM-SIP Gateway or the CCOA server. Other components in the CCOA solution provide various levels of redundancy.

---

## CCOA installation overview

---

This chapter provides you with an overview of the steps needed to install and commission CCOA. The subsequent chapters expand the detail on these steps.

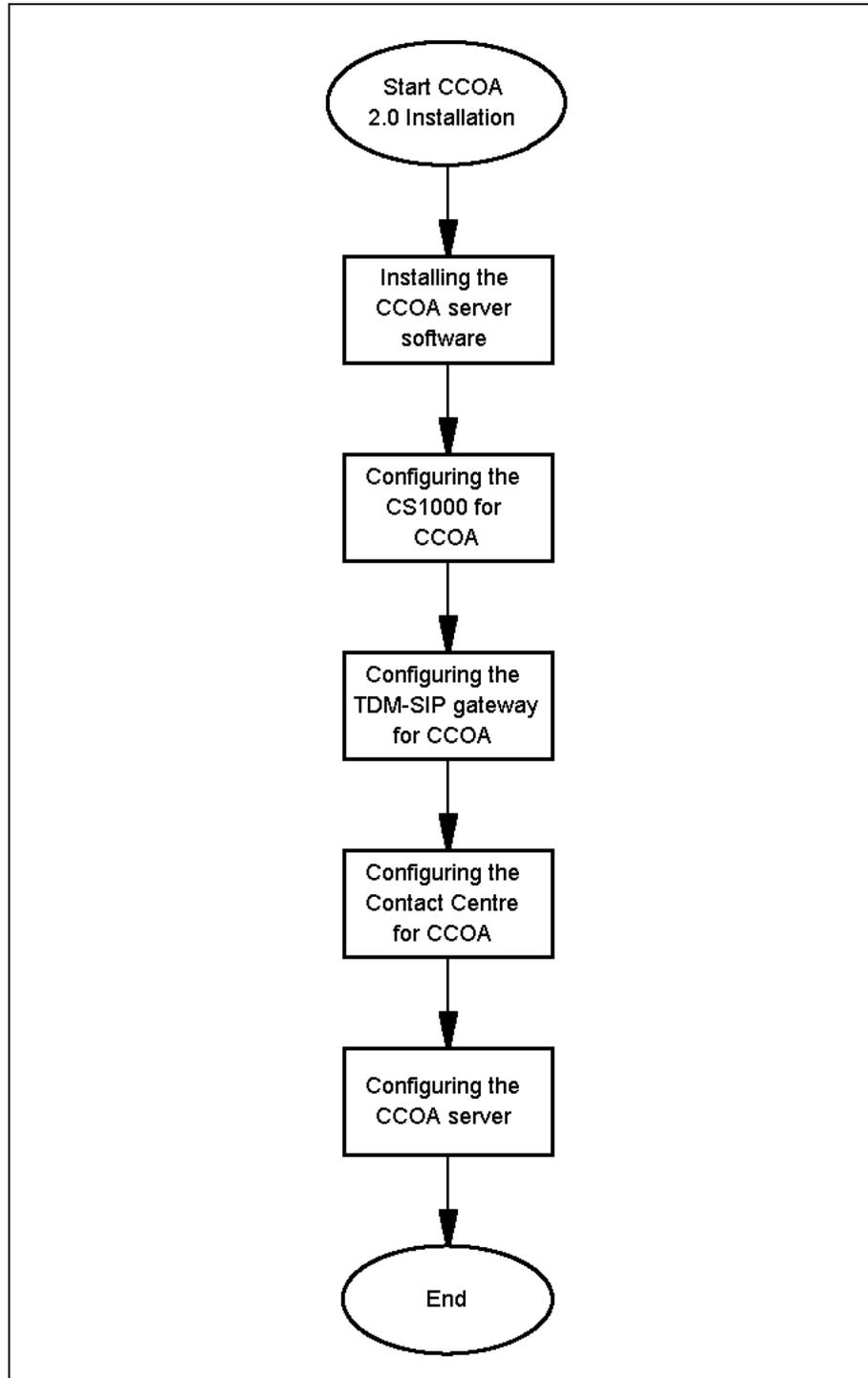
### Prerequisites

- CS1000 is installed, commissioned, and configured for a working Contact Center
- Contact Center suite 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
- the Mediant 2000 TDM-SIP gateway is physically installed and commissioned, to the point where it has an assigned IP address and is available via a browser session for configuration
- the CCOA 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 CCOA installation

This workflow shows the high-level steps you need to carry out to install and commission CCOA. To link to any task go to [Navigation \(page 27\)](#)

Figure 3 CCOA installation and commissioning tasks



## Navigation

- [Installing the CCOA server software \(page 29\)](#)
- [Configuring the CS1000 for CCOA \(page 35\)](#)
- [Configuring the Audiocodes TDM-SIP gateway for CCOA \(page 47\)](#)
- [Configuring the Contact Center for CCOA \(page 63\)](#)
- [Configuring the CCOA server \(page 71\)](#)



---

## Installing the CCOA server software

---

This chapter describes the taskflows that you follow to successfully install the CCOA server software. You install CCOA server software components on the CCOA server.

CCOA R2.0 does not support a direct upgrade from CCOA R1.0. Where you want to migrate from CCOA R1.0, you can manually back up your database and restore it on your CCOA R2.0 system.

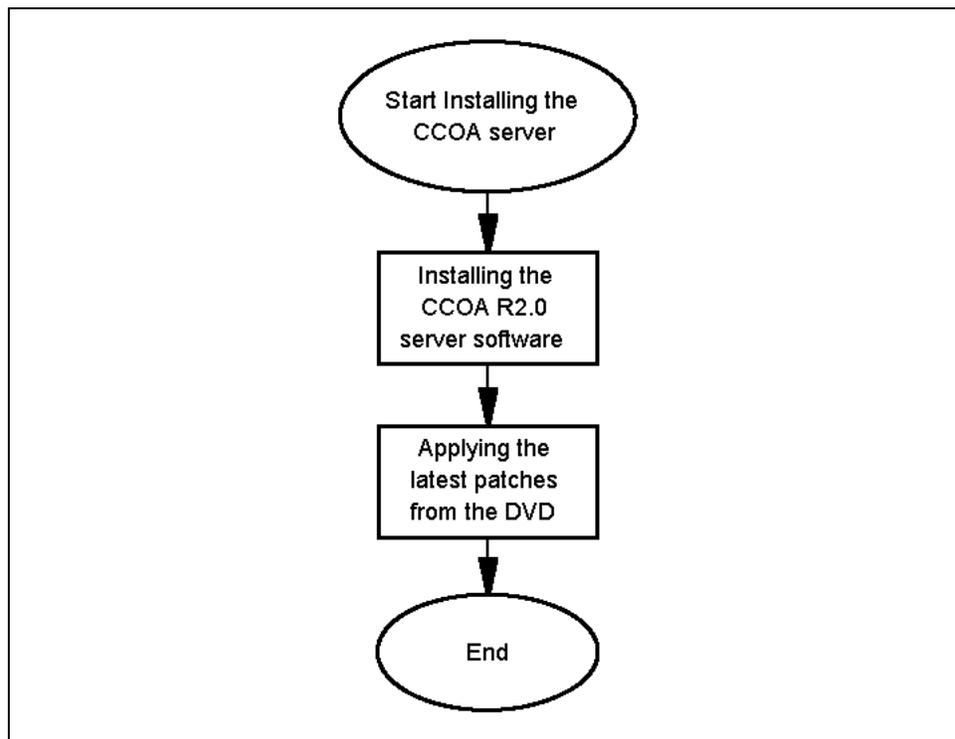
### Prerequisites

- Install the server hardware. This server must meet the PVI specification.
- Install the Operating System on the CCOA server.
- Download the latest CCOA documentation from the support portal [support.nortel.com](http://support.nortel.com).
- Install and commission the server hosting CCAD with the base CCAD software.

### CCOA server installation steps

This workflow shows the high-level steps you need to carry out to install and commission CCOA. To link to any task go to [Navigation \(page 30\)](#)

**Figure 4** Installing the CCOA server software



**Navigation**

- [Installing the CCOA 2.0 server software \(page 31\)](#)
- [Applying the latest patches from the DVD \(page 32\)](#)
- [Uninstalling the CCOA 2.0 server software \(page 33\)](#)

## Installing the CCOA 2.0 server software

This procedure explains the steps you take to install the CCOA 2.0 server software.

### Prerequisites

- You have logged on to the CCOA server with Administrator privileges.
- You have reviewed the CCOA R2.0 README file.

---

**Attention:** CCOA uses the underlying architecture of ICP. As a result of this you will see references to ICP during the installation.

---



---

**Attention:** As part of the CCOA installation, you need to restart your CCOA server.

---

### Procedure steps

Step	Action
1	Insert the Contact Center Offsite Agent DVD into the DVD ROM drive of your server.
2	Insert the Contact Center DVD into the DVD ROM drive of your server. The installer displays the <b>Nortel Contact Center Offsite Agent - Welcome</b> screen.
3	Click <b>View README</b> to display the README file to check for important instructions.
4	Click <b>Next</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - License Agreement</b> screen.
5	Select the <b>I accept the terms of the License Agreement</b> checkbox, and click <b>Next</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - PVI Checker</b> screen, and performs the System Readiness check.
6	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.
7	Click <b>Next</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - Summary</b> screen.
8	Click <b>Install....</b> The installer displays the <b>Nortel Contact Center Offsite Agent - Install Progress</b> screen.
9	When the install is complete, the installer displays the <b>Nortel Contact Center Offsite Agent - Finish</b> screen. Click <b>Finish</b> .
10	Click <b>Yes</b> to reboot the server.

---

--End--

---

## Applying the latest patches from the DVD

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

### Prerequisites

- You have installed CCOA.

### Procedure steps

---

Step	Action
1	Insert the CCOA DVD in the CCOA server DVD drive.
2	Browse the DVD to the patch folder <b>\\Supplementary Software</b> .
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.

---

--End--

---

---

## Uninstalling the CCOA 2.0 server software

This procedure explains the steps you take to uninstall the CCOA 2.0 server software.

### Prerequisites

- You have logged on to the CCOA server with Administrator privileges.

---

**Attention:** CCOA uses the underlying architecture of ICP. As a result of this you will see references to ICP during the uninstallation.

---

---

**Attention:** As part of the uninstall, you need to restart your CCOA server.

---

### Procedure steps

---

Step	Action
1	On the server desktop, select <b>Start&gt;Programs&gt;Nortel&gt;Uninstaller</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - Welcome</b> screen.
2	Click <b>Next</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - Maintenance</b> screen.
3	Select the <b>Remove</b> radio button and Click <b>Next</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - Summary</b> screen, listing Interactive Communications Portal and Contact Center Offsite Agent.
4	Click <b>Remove</b> . The installer displays the <b>Nortel Contact Center Offsite Agent - Uninstall Progress</b> screen.
5	When the uninstall has finished, the installer displays the <b>Nortel Contact Center Offsite Agent -Finish</b> screen. Click <b>Finish</b> .

---

--End--

---



---

## Configuring the CS1000 for CCOA

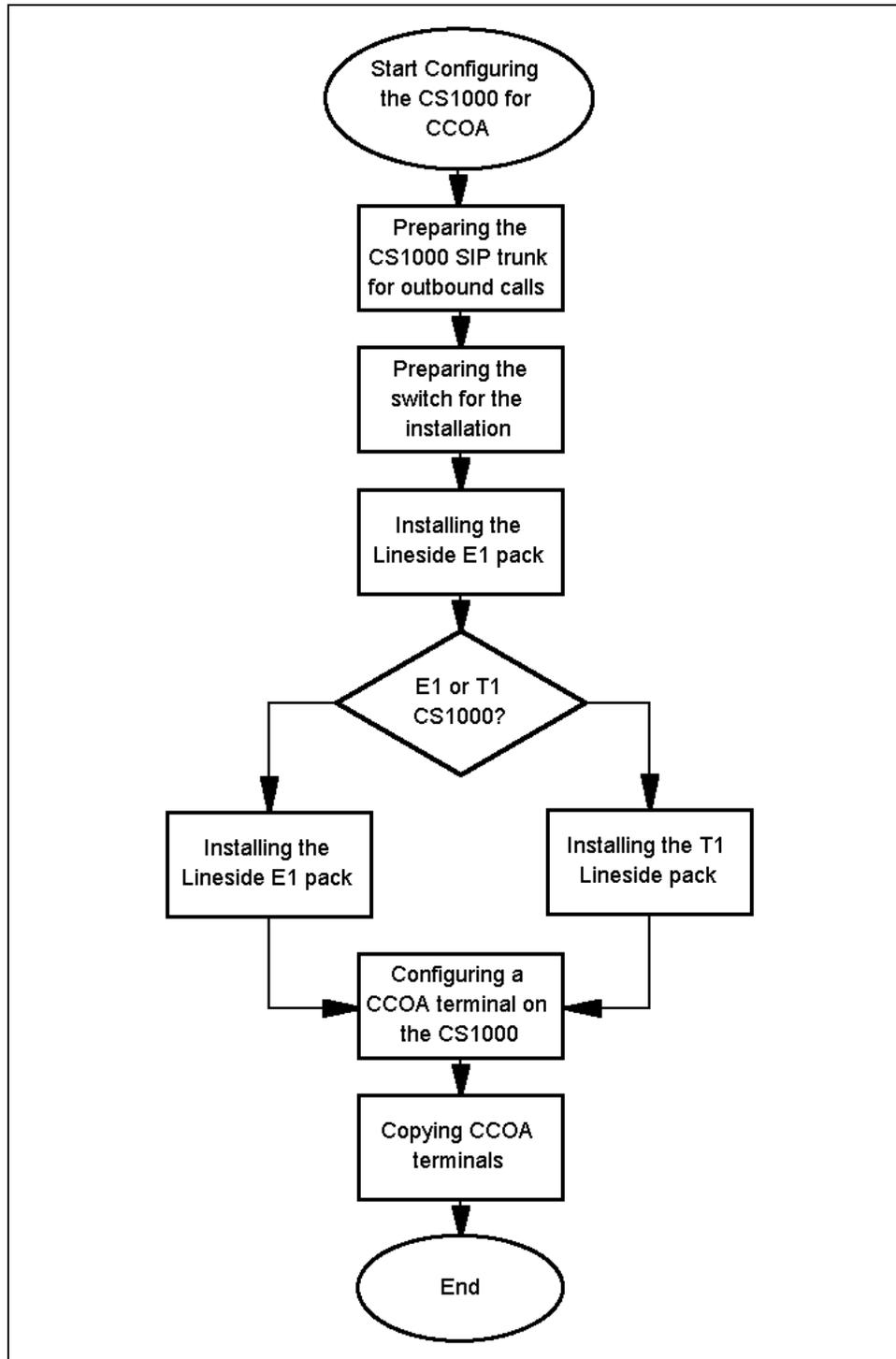
---

This chapter details the procedures to configure the CS1000 contact center PBX for CCOA. This includes setting up the SIP trunk for outbound calls, installing the E1/T1 lineside packs, and entering the CCOA terminals.

### **CS1000 configuration task flow**

The following diagram outlines the taskflow for configuring the CS1000 for CCOA:

Figure 5 Configuring the CS1000 for CCOA



### **Taskflow Navigation**

- [Preparing the CS1000 SIP trunk for CCOA outbound calls \(page 38\)](#)
- [Preparing the switch for the Lineside pack installation \(page 40\)](#)
- [Installing the Lineside E1 pack \(page 41\)](#)
- [Installing the T1 Lineside pack \(page 42\)](#)
- [Configuring a CCOA terminal on the CS1000 \(page 43\)](#)
- [Copying CCOA terminals \(page 45\)](#)

## Preparing the CS1000 SIP trunk for CCOA outbound calls

This procedure outlines the high-level steps required to configure the CS1000 SIP trunk to support CCOA 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.nortel.com/support](http://www.nortel.com/support).

### Prerequisites

- You are familiar with IP Telephony, especially SIP trunking, on the CS1000.
- You have assembled all hardware needed to add your choice of SIP implementation to your particular CS1000 installation.
- You have engineered the CS1000 system so it is capable of supporting SIP, in particular DSP hardware resources to support TDM/IP transcoding. Incoming PSTN calls will require one DSP per call. CCOA terminals will 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).
- You have obtained suitable licenses and packages for SIP trunking.
- You know the user ID and password to log on to the switch administration terminal.
- You are familiar with switch Change and Diagnostics overlays.

### Procedure steps

---

Step	Action
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 CCOA outbound trunk to match your network (i.e. CDP or UDP).

---

- 9 Disconnect from the Call Server.
- 10 Provision your CS1000 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 CS100 Node endpoint and routing information.

---

**--End--**

---

## Preparing the switch for the Lineside pack installation

This procedure outlines the high-level steps required to prepare the CS1000 for CCOA 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).

### Prerequisites

- You have reviewed the information in *Communication Server 1000 Circuit Card Reference* (NN43001-311).
- You have assembled all equipment needed to add your choice of Lineside pack and SIP implementation to your particular CS1000 installation.
- You are familiar with CS1000 planning, engineering, and hardware installation, and licensing.
- You have planned, installed, and commissioned appropriate PSTN trunk channels and DSP resources (if applicable) to support the addition of the offsite agents.
- You have planned and ordered appropriate licensing for the additional TN, ACD, and AST requirements

### Procedure steps

Step	Action
1	Update your CS1000 licensing with the TN, ACD, and AST licenses required.
2	Arrange the clocking requirements (if any) for the Lineside pack. This might not be required, might use a cable, or might use a 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 CS1000 to support the additional TNs.
5	Ensure you have sufficient Digit Tone Receiving (DTR) on each CS1000 shelf that contains a Lineside packs for CCOA use.
6	Install the additional hardware (if required) to support your SIP trunks .

---

--End--

---

## Installing the Lineside E1 pack

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

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

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

### Prerequisites

- You are familiar with CS1000 switch hardware and its installation.
- You have reviewed *Nortel Communication Server 1000 Circuit Card Reference* (NN43001-311).

---

**Attention:** The dip switch settings described in this procedure will work for most installations. If you are using the MMI feature you might need to change some dip switches to match your configuration.

---

### Procedure steps

Step	Action
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.

---

--End--

---

## Installing the T1 Lineside pack

This procedure details setting the T1 Lineside pack dip switches so that the pack will operate 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.

### Prerequisites

- You are familiar with CS1000 switch hardware and its installation.
- You have reviewed *Nortel Communication Server 1000 Circuit Card Reference* (NN43001-311).

---

**Attention:** The dip switch settings described in this procedure will work for most installations. If you are using the MMI feature you might need to change some dip switches to match your configuration.

---

### Procedure steps

---

Step	Action
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.

---

--End--

---

## Configuring a CCOA terminal on the CS1000

This procedure describes how to set up the terminals that CCOA will use to interface to the CS1000 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 CCOA terminals on the Contact Center Manager Server. For more information, see [Acquiring the CCOA terminals on CCMS \(page 69\)](#).

### Prerequisites

- You know the user ID and password to log on to the switch administration terminal.
- You are familiar with switch Change and Diagnostics overlays.
- You have provisioned sufficient TN, ACD, and AST licenses for the terminal you are adding.

### Procedure steps

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

--End--

### 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	l s c u	Terminal Number
DES	Name	Enter a name for the terminal.
CUST	0-99	Customer number
DN	xxxx	Where xxxx=the DN of this terminal.

Prompt	Response	Descriptions
AST	YES	You must configure AST to allow CCOA 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 at least set the following:  AGTA XFA C6A LDTD  Nortel also recommends that you set UNR.
PRI	1-4	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 CCOA terminals

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

You must acquire the CCOA terminals on the Contact Center Manager Server. For more information, see [Acquiring the CCOA terminals on CCMS \(page 69\)](#).

## Prerequisites

- You know the user ID and password to log on to the switch administration terminal.
- You are familiar with switch Change and Diagnostics overlays.
- You have provisioned sufficient AST licenses for the terminals you are adding.

---

**Attention:** The CS1000 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 for the AST and AACD prompt.

---

## Procedure steps

Step	Action
1	Connect to the Call Server.
2	Enter <b>LD 10</b> .
3	Enter the appropriate values. For prompts not listed, press <b>Enter</b> to accept the default. This will configure 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, enter four asterisks (****) and press <b>Enter</b> .

---

--End--

---

### Variable definitions

Prompt	Response	Descriptions
REQ	CPY x	Copy terminals. x=number of terminals you want to create by copying the original terminal.
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 Autos 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 terminal.
POS	yyyy	xxxx = the first POSID for the range of new terminal.

---

## Configuring the Audiocodes TDM-SIP gateway for CCOA

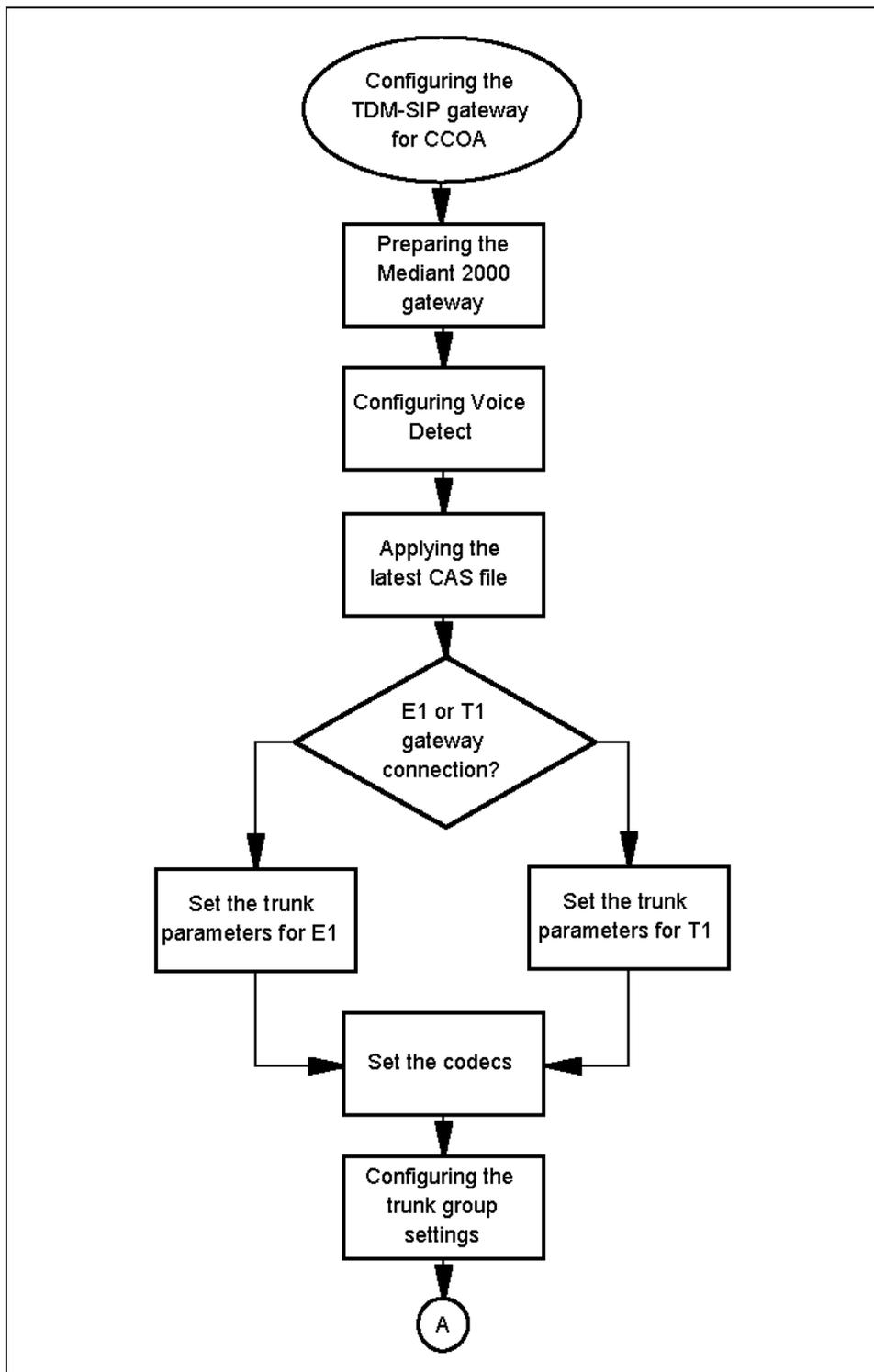
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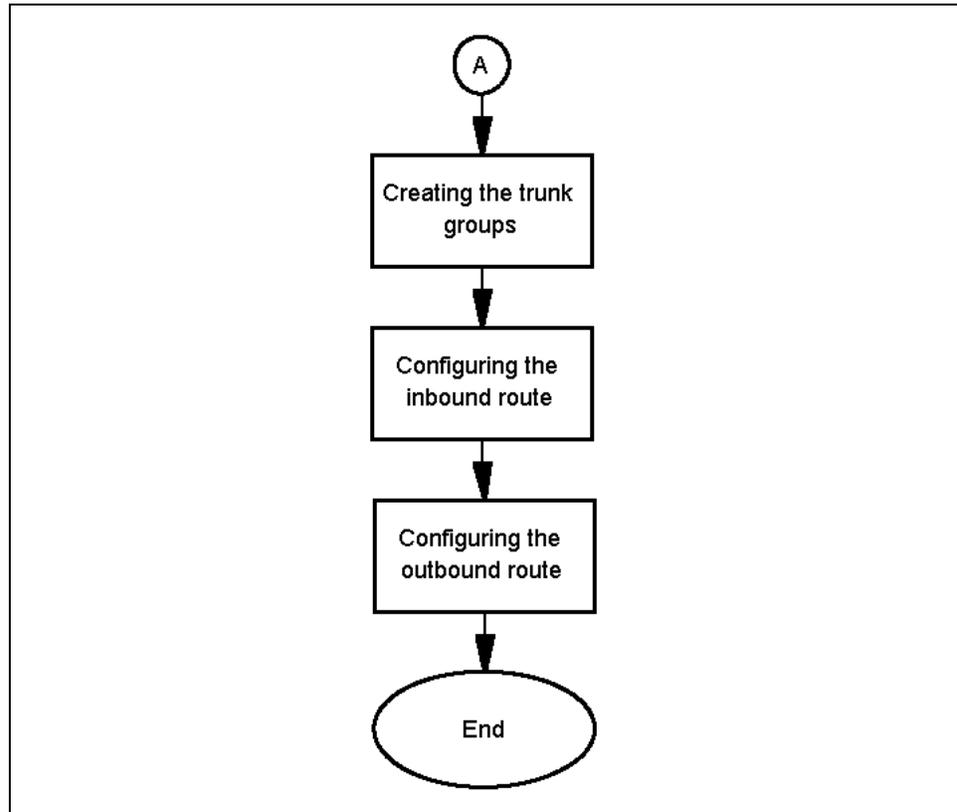
This chapter details the procedures to configure the Audiocodes Mediant 2000 TDM-SIP gateway for CCOA. These include wiring the gateway to the CS1000 E1/T1 Lineside spans, setting the E1/T1 parameters, and creating the call routes.

### **TDM-SIP gateway configuration task flow**

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

Figure 6 Configuring the TDM-SIP gateway for CCOA





### Taskflow Navigation

- [Performing initial configuration of the Mediant 2000 gateway \(page 50\)](#)
- [Configuring Voice Detect \(page 51\)](#)
- [Applying the latest Channel Associated Signalling \(CAS\) file \(page 53\)](#)
- [Set the trunk parameters for E1 \(page 54\)](#)
- [Set the trunk parameters for T1 \(page 55\)](#)
- [Set the codecs for communication with the CCOA server \(page 56\)](#)
- [Configuring the trunk group settings \(page 57\)](#)
- [Creating the trunk groups \(page 58\)](#)
- [Configuring the inbound route \(page 60\)](#)
- [Configuring the outbound route \(page 61\)](#)

## Performing initial configuration of the Mediant 2000 gateway

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

### Prerequisites

- You have selected a valid IP address for the Mediant 2000 gateway.
- You have unpacked and cabled the gateway according to the documentation supplied with the gateway.
- You have reviewed the documentation supplied with the Audiocodes gateway.
- You have ordered and received an Answer Supervision license for the gateway. If you ordered the gateway from Nortel, then it will already have this license.
- locate the latest TDM Gateway configuration files on MPL, using Product = Interactive Communications Portal (ICP), Platform = TDM Gateway, Release = Any Release

### Procedure steps

---

Step	Action
1	Connect the gateway to a local network hub or connect to a PC / laptop 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's IP address to be in the same subnet.
4	Power up the gateway.
5	In a browser window on your PC, enter <b>http://10.1.10.10</b> . A login screen appears.
6	In the <b>User Name</b> field type <b>Admin</b> .
7	In the <b>Password</b> field type <b>Admin</b> .
8	Click <b>OK</b> . 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 <b>Software Upgrade Wizard</b> .

---

--End--

---

## Configuring Voice Detect

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

### Procedure steps

Step	Action
1	Use your web browser to login in to the Audiocodes Mediant 2000 with administrator privileges.
2	Select <b>Management</b> .
3	Expand <b>Software Update</b> .
4	Select <b>Software Update Key</b> .
5	Check that <b>PatternDetector</b> and <b>IpmDetector</b> are in the DSP Voice features list. If these items are not in the license details, then contact your supplier (Audiocodes or Nortel) to obtain these licenses for the system.
6	Select <b>Configuration File</b> .
7	Click <b>Save INI File</b> . The
8	Click <b>Save</b> . 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 <b>IpProfile</b> , and delete this whole section. The <b>IpProfile</b> section is bounded by the tags [ <b>IpProfile</b> ] and [ \bIpProfile ].
13	Scroll to the end of the INI file.
14	on the last line, type <b>EnableDSPIPMDetectors = 1</b> .
15	On the next line, type <b>ENABLEVOICEDETECTION = 1</b> .
16	Save and close the file BOARD.ini.
17	Return to the Mediant 2000 gateway administrator in your web browser.
18	Select <b>Management</b> .
19	Expand <b>Software Update</b> .
20	Select <b>Configuration File</b> .
21	Click <b>Browse</b> .
22	Browse to the location where you edited the BOARD.ini file and select it.
23	Click <b>Open</b> .

## 52 Configuring the Audiocodes TDM-SIP gateway for CCOA

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- 24 Click **Load INI File**.
- 25 Click **OK**.
- 26 The Mediant 2000 gateway resets and returns you to the home page.

---

--End--

---

## Applying the latest Channel Associated Signalling (CAS) file

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

### Prerequisites

- Download the latest CAS .zip file from the Meridian patch Library (MPL) and store it on the PC from which you browse to the Audiocodes Mediant 2000 management interface.

### Procedure steps

---

Step	Action
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 <b>Management</b> .
4	Expand <b>Software Update</b> .
5	Select <b>Load Auxiliary Files</b> .
6	Click the Browse button beside the <b>CAS file</b> field.
7	Browse to the location where you expanded the zip files and from there select <b>Protocols\CAS Files\LoopStart_FXO\1ring-500msFlash</b> .
8	Click <b>Open</b> .
9	Click <b>Load File</b> . The gateway loads the CAS file.

---

--End--

---

## Set the trunk parameters for E1

This procedure describes how to set the trunk parameters on the Audiocodes Mediant 2000 for an E1 connection to the CS1000 E1 Lineside pack.

### Prerequisites

- Commission the Mediant 2000 gateway.

### Procedure steps

---

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

---

--End--

---

## Set the trunk parameters for T1

This procedure describes how to set the trunk parameters on the Audiocodes Mediant 2000 for an E1 connection to the CS1000 E1 Lineside pack.

### Prerequisites

- Commission the Mediant 2000 gateway.

### Procedure steps

---

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

---

--End--

---

## Set the codecs for communication with the CCOA server

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

### Procedure steps

---

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

---

--End--

---

## Configuring the trunk group settings

This procedure describes how to create trunk groups for the E1/T1 spans connected to the CS1000.

### Procedure steps

Step	Action
1	Login in to the Audiocodes Mediant 2000 with administrator privileges.
2	Select <b>Configuration</b> .
3	Select <b>Full</b> .
4	Expand <b>Protocol Configuration</b> .
5	Expand <b>Trunk IP Group</b> .
6	Select <b>Trunk Group Settings</b> .
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 <b>Submit</b> .

--End--

### Variable definitions Trunk Group Settings

Variable	Value
Trunk Group ID	A numeric value 1-6 characters long to identify the trunk group
Channel Select Mode	Select <b>Cyclic Ascending</b> for the inbound trunk group or <b>By Source Phone Number</b> 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

This procedure describes how to associate trunk group settings with the E1/T1 spans to create the inbound and outbound trunk groups.

### Procedure steps

Step	Action
1	Login in to the Audiocodes Mediant 2000 with administrator privileges.
2	Select <b>Configuration</b> .
3	Select <b>Full</b> .
4	Expand <b>Protocol Configuration</b> .
5	Expand <b>Trunk IP Group</b> .
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 <b>Submit</b> .

--End--

### Variable definitions Trunk Group Table

Variable	Value
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 <b>1-X</b> , where X is maximum number of channels in this trunk group. On E1 systems, for 15 or less channels enter <b>1-X</b> , where X is maximum number of channels in this trunk group. If you are configuring more than 15 channels, or multiple trunks, enter <b>1-Y</b> , 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	Leave this field blank.

<b>Variable</b>	<b>Value</b>
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

This procedure describes how to create an inbound route for all calls passing from the CS1000 to the CCOA server (and subsequently to the offsite agents).

### Procedure steps

---

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

---

--End--

---

### Variable definitions Tel to IP Routing

Variable	Value
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 CCOA server.
Dest. IP Group ID	Leave this field blank.

## Configuring the outbound route

This procedure describes how create an entry to route calls originated by offsite agents from the CCOA server to the CS1000.

### Procedure steps

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

--End--

### Variable definitions IP To Trunk Group Routing Table

Variable	Value
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.
Source IPGroup ID	Enter -1.



---

# Configuring the Contact Center for CCOA

---

This chapter details the procedures to configure the Contact Center to work with Contact Center Offsite Agent (CCOA). The only contact center component that requires unique configuration is CCT. CCOA resources and operations are seamless to CCMS and CCMA.

For onsite agents, CCT associates each terminal (i.e. a telephone) with a workstation using the workstation's 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.

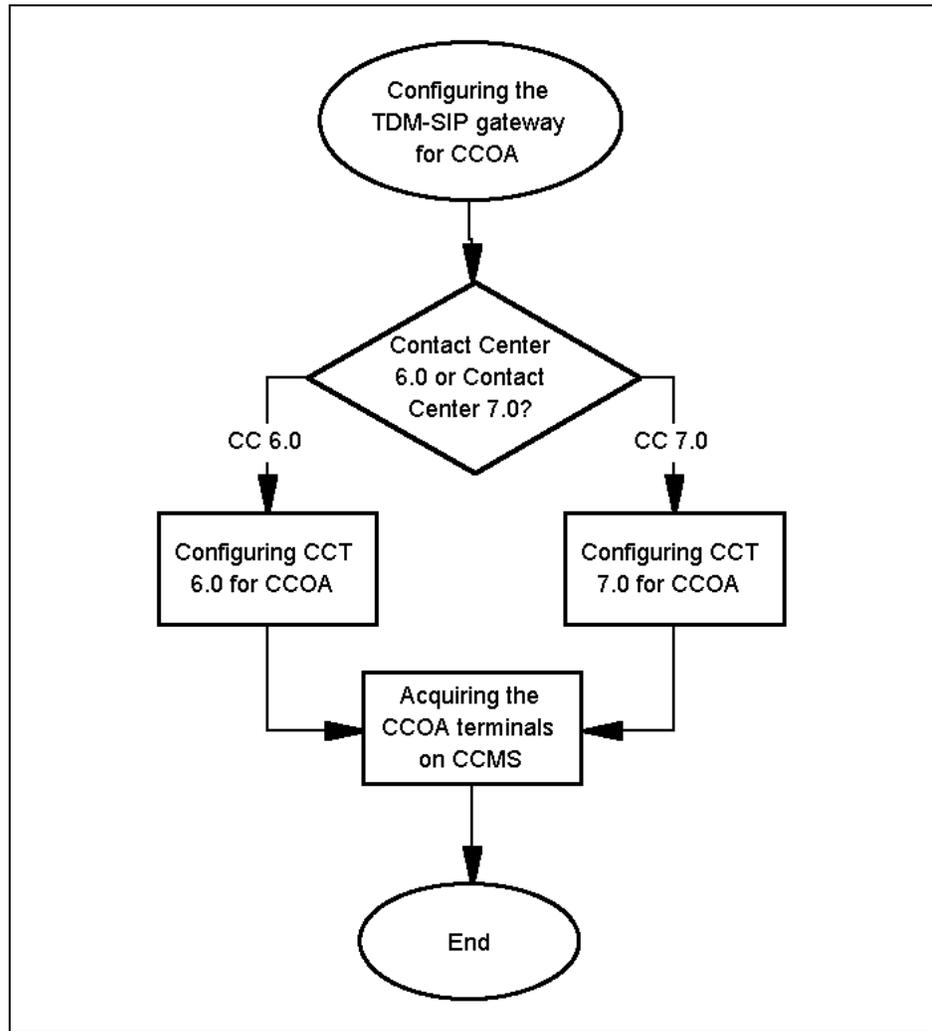
For offsite agents it may not be possible to associate the offsite workstation with the terminal that CCOA uses to connect the agent with the contact center. Depending on the type of VPN connection used, the offsite workstation may or may not be recognized in the corporate Windows domain.

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

## CCT configuration

The following diagram shows the taskflow for configuring the Contact Center to work with CCOA.

Figure 7 Configuring Contact Center for CCOA



### Taskflow Navigation

- [Configuring CCT 6.0 for CCOA \(page 65\)](#)
- [Configuring CCT 7.0 for CCOA \(page 66\)](#)
- [Acquiring the CCOA terminals on CCMS \(page 69\)](#)

## Configuring CCT 6.0 for CCOA

This procedure details the steps needed to manually configure terminal-workstation mappings to allow CCT to work with CCOA offsite workstations.

### Prerequisites

- You are familiar with CCT 6.0 administration tasks, especially mapping terminals to workstations.
- You have created the agents on your Windows domain or on the local server and imported them into CCT.
- You have created the terminals on the CS1000 and imported them into CCT.
- You have read *Communication Control Toolkit Installation and Maintenance Guide (297-2183-923)*.

### Procedure steps

---

Step	Action
1	On the NCCT 6.0 Console, click Workstations.
2	Right-click Workstations in the right pane of the console and choose <b>New&gt;New Workstation</b> .
3	In the Workstation Name box, type the POSID of the CCOA terminal.
4	Click <b>OK</b> . The New Workstation Properties box closes.
5	Repeat this procedure for each terminal in the CCOA resource pool.

---

--End--

---

## Configuring CCT 7.0 for CCOA

CCT7.0 allows a bulk import of resources into the Communication Control Toolkit database from a file that has delimited data format. You can use this feature to import the CCOA terminals' POSIDs as workstations, and to import the terminal-workstation mappings for the CCOA terminals.

### Prerequisites

- You are familiar with CCT 7.0 administration tasks, especially mapping terminals to workstations.
- You have created the terminals on the CS1000 and imported them into CCT.
- You have read *Nortel Contact Center Server Administration* (NN44400-610).
- You have used the Import/Export tool to create blank workstation and terminal mapping delimited data files, and you have populated these files with the CCOA terminal and POSID information.

### Procedure steps

---

Step	Action
1	On the Communication Control Toolkit server, click <b>Start, All Programs, Nortel, Contact Center, Communication Control Toolkit, CCT Console</b> .
2	In the <b>CCT 7.0 Console</b> window, expand <b>NCCT Admin</b> .
3	Click <b>Import/Export Tools</b> .
4	In the right pane of the NCCT 7.0 Console window, double-click <b>Import Configuration</b> .
5	On the <b>Import Configuration Properties</b> dialog box, click <b>Import</b> .
6	In the <b>Open</b> box, navigate to the file that contains the workstation names (i.e. the POSIDs of the CCOA terminals).
7	Click <b>Open</b> .
8	When the import is complete, click <b>OK</b> .
9	On the <b>Import Configuration Properties</b> dialog box, click <b>Import</b> .
10	In the <b>Open</b> box, navigate to the file that contains the terminal mappings.
11	Click <b>Open</b> .
12	When the import is complete, click <b>OK</b> .
13	Click <b>OK</b> to close the <b>Import Configuration Properties</b> dialog box.

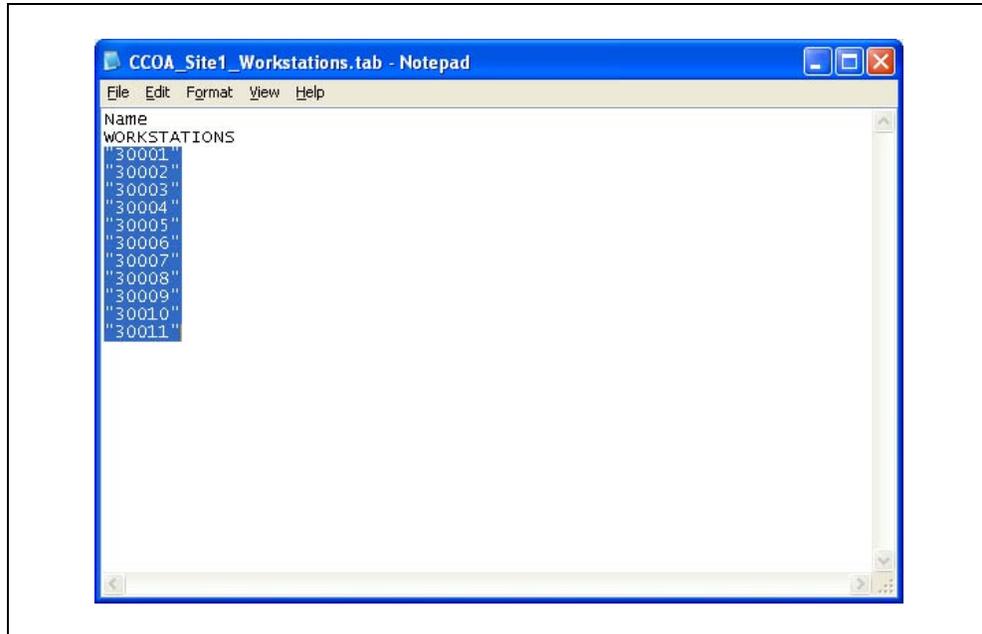
---

--End--

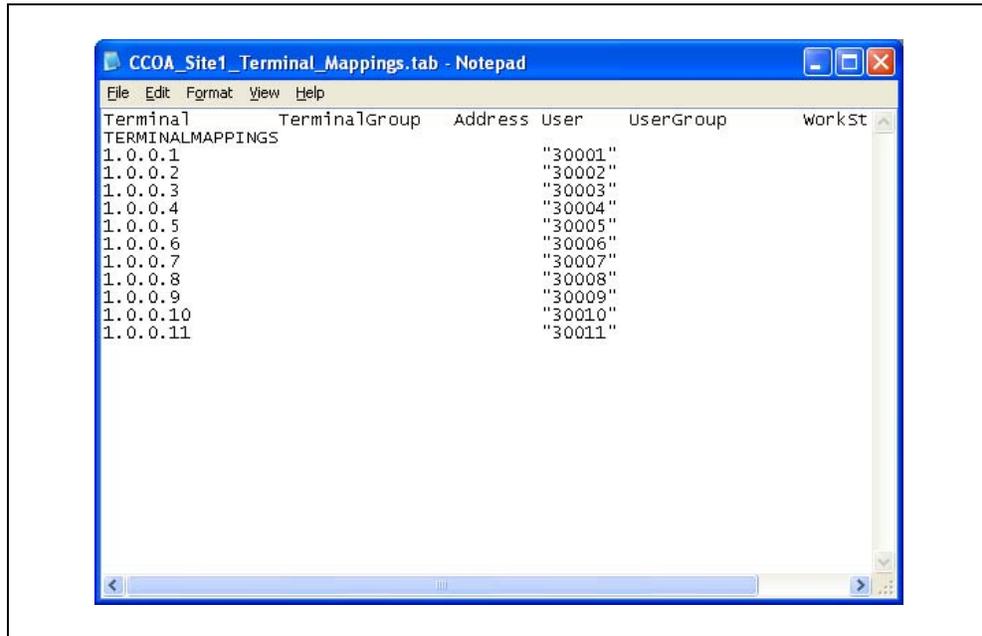
---

**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 8 Sample text file for importing CCOA workstation names**

**Figure 9 Sample text file for importing CCOA terminal mappings**



## Acquiring the CCOA terminals on CCMS

Configure and acquire each CCOA terminal so that remote agents can log on to CCMS through CCAD.

You cannot modify a saved phoneset or voice port. You can delete a saved phoneset or voice port and you can add a new phoneset or voice port. For example, you cannot change a voice port to a phoneset (and vice versa). Instead, you must delete the voice port and add a new phoneset (or vice versa).

### Prerequisites

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

### Procedure steps

Step	Action
1	In the left pane, double-click the CCMS server to which you want to add the CCOA terminal.
2	Select the <b>Phonsets and Voice Ports</b> folder.
3	In the right pane, in the <b>Name</b> box, type the name of the CCOA terminal as you want it to appear in reports.
4	From the <b>Type</b> list, select <b>Not Voice Port</b> .
5	In the <b>Address</b> box, type the address of the phoneset or the voice port on the telephony server.

**Attention:** You must delete the leading zeros or the TN acquire will fail.

- |   |  |
|---|--|
| 6 | Click any other row of the table to add the phoneset or the voice port.<br><i>Not Acquired appears in the Status column.</i> |
| 7 | Select the <b>Acquired</b> check box.  |
| 8 | Click any other row in the table to acquire or deacquire the phoneset or voice port.   |
| 9 | Click <b>Refresh Status</b> to view the current status.  |

--End--

## Variable definitions

Variable	Value
Name box	The name assigned to the phoneset or voice port.  Valid values: 30-character maximum (no special characters)
Type box	The terminal type.  For CCOA terminals you must select <b>Not Voice Port</b> , because CCOA will use 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 phone set. If the Type is Error, then the submitted port address does not exist on the server.  <b>Attention:</b> 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 CCOA terminal on the telephony server.  Valid values: Loop, Shelf, Card, Unit (for example, 4-0-0-1)
Channel box	Not required for CCOA terminals.
IVR Name box	Not required for CCOA terminals.
Acquired check box	Select the Acquired check box to acquire the CCOA terminal. Clear the Acquired check box to deacquire the CCOA 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 CCOA 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 the CCOA server

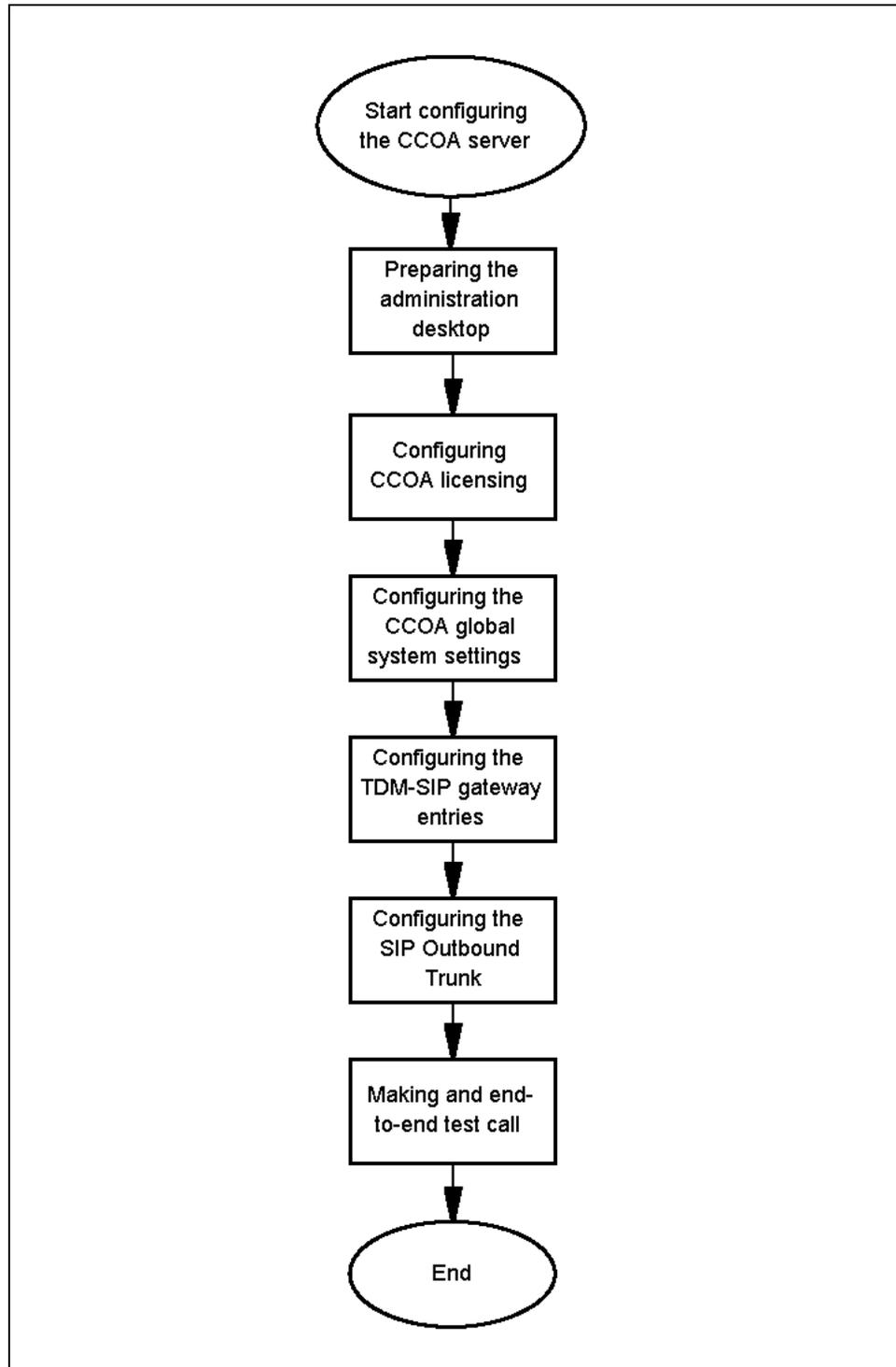
---

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

### **CCOA server configuration tasks**

The following diagram outlines the taskflow for configuring the CCOA server:

Figure 10 Configuring the CCOA server



### Taskflow Navigation

- [Preparing the administration Client \(page 73\)](#)
- [Configuring the CCOA licensing \(page 74\)](#)
- [Configuring the CCOA global system settings \(page 76\)](#)
- [Configuring the TDM-SIP gateway entries \(page 78\)](#)
- [Configuring the SIP Outbound trunk \(page 80\)](#)
- [Configuring an agent for CCOA and testing an end to end call \(page 82\)](#)

## Preparing the administration Client

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

The CCOA 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 CCOA management page will attempt to automatically download and install the Silverlight plugin from the Microsoft website. If Microsoft Silverlight is already installed on your administration desktop, then this will not occur.

### Prerequisites

- You have provisioned a desktop computer for managing CCOA. This computer has network access to the CCOA server.
- You have administrator privileges on the CCOA Element Manager.

---

**Attention:** If the desktop computer does not have direct access to the Internet, you will not be able to follow this procedure. In this case you will need to download the Silverlight Plugin and install it on the desktop, by following the instructions on [www.microsoft.com](http://www.microsoft.com).

---

### Procedure steps

---

Step	Action
1	Connect to the Element Manager with administrator privileges.
2	Expand <b>Applications</b> .
3	Expand <b>Packaged Applications</b> .

---

- 4 Expand **Contact Center Offsite Agent**.
- 5 Select **System Configuration**. Element Manager displays the **Install Microsoft Silverlight** icon.
- 6 Click **Install Microsoft Silverlight**.
- 7 Follow the installation instructions to complete the Silverlight installation.

---

--End--

---

## Configuring the CCOA licensing

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

The keycode license sheet that comes with the CCOA 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 CCOA license. The Label contains the System Serial number and URN, which you should attach to the server for future reference, such as expanding your offsite agent licenses.

### Prerequisites

- You have reviewed the planning and engineering chapter to determine the correct licensing level for your contact center.
- You have ordered the software and received the keycode license sheet from Nortel.
- You have generated and retrieved your license keycode from the KRS website.
- You have administrator privileges on the CCOA Element Manager.

### Procedure steps

---

Step	Action
1	Access the CCOA Element Manager with Administrator privileges.
2	Expand <b>Licensing</b> .
3	Select <b>General Settings</b> .

---

- 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 CCOA Element Manager.

---

--End--

---

## Configuring the CCOA global system settings

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

### Prerequisites

- You have administrator access to the CCOA Element Manager.

### Procedure steps

Step	Action
1	Connect to the Element Manager with administrator privileges.
2	Expand <b>Applications</b> .
3	Expand <b>Packaged Applications</b> .
4	Expand <b>Contact Center Offsite Agent</b> .
5	Select <b>System Configuration</b> .
6	Select the version of the contact center from the <b>Contact Center Version</b> drop-down list.
7	Enter the IP address of the CCMA server in the <b>CCMA Server IP Address</b> field.
8	Enter the IP address of the CCMS server in the <b>CCMS Server IP Address</b> field
9	Click <b>Save</b> .
10	Enter a Caller ID in the <b>CCOA Caller ID</b> field.
11	Enter your SIP domain name in the <b>Default SIP Domain</b> field.
12	Enter a context in the <b>Phone Context</b> field.
13	Click <b>Save</b> .

--End--

### Variable definitions

Variable	Description
Contact Center Version	You must select the release of the Nortel Contact Center that CCOA connects to.
CCMA Server IP Address	Enter the IP address of the CCMA server.
CCMS Server IP Address	Enter the IP address of the CCMS server.

Variable	Description
CCOA Caller ID	The number you enter here will appear on the offsite agent's display when they get a contact center call from CCOA.
Default SIP Domain	Enter the name of the SIP domain that supports your CS1000 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

This procedure details the steps to configure the CCOA entries for the TDM-SIP gateway (or gateways) that provide its connection to the CS1000.

### Prerequisites

- You have administrator access to the CCOA Element Manager.

---

**Attention:** 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.

---

### Procedure steps

---

Step	Action
1	Connect to the Element Manager with administrator privileges.
2	Expand <b>Applications</b> .
3	Expand <b>Packaged Applications</b> .
4	Expand <b>Contact Center Offsite Agent</b> .
5	Select <b>Media Gateway Management</b> . The <b>Add a TDM Gateway</b> window appears.
6	Click <b>Create New Media Gateway</b> . The <b>Add Media Gateway</b> dialog appears.
7	Enter the IP address of the TDM-SIP gateway in the <b>Gateway IP Address</b> field.
8	Enter the CCOA resource ID of the first channel on the gateway in the <b>Start Pos ID</b> field.
9	Enter the number of channels available on the gateway in the <b>Num. of Entries</b> field.
10	Click <b>OK</b> . The Media Gateway Management screen reappears, with the new gateway listed.
11	Repeat this procedure for each gateway you need to add.

---

--End--

---

---

**Variable definitions**

<b>Variable</b>	<b>Description</b>
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 <b>Proxy &amp; Registration</b> settings.
Start Pos ID	Enter the Position ID of the first CCOA terminal configured on the gateway.
Num. of Entries	Enter the number of CCOA terminals configured on the gateway.

## Configuring the SIP Outbound trunk

This procedure details the steps to configure the CCOA entries for the TDM-SIP gateway (or gateways) that provide its connection to the CS1000.

### Prerequisites

- You have administrator access to the CCOA Element Manager.

---

**Attention:** 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.

---

### Procedure steps

---

Step	Action
1	Connect to the Element Manager with administrator privileges.
2	Expand <b>System Configuration</b> .
3	Expand <b>Signalling Protocols</b> .
4	Expand <b>SIP</b> .
5	Select <b>Domains and Accounts</b> . The <b>SIP Domains and Accounts</b> window appears.
6	Under <b>Domains</b> , click <b>Add</b> . The <b>Add SIP Domains</b> window appears.
7	Type the name of your CS1000 SIP trunk domain in the <b>Name</b> field and click <b>Save</b> .
8	Expand <b>Nodes and Routes</b> . The <b>SIP Nodes and Routes</b> window appears.
9	Under <b>Trusted Nodes</b> , click <b>Add</b> . The <b>Add SIP Trusted Node</b> window appears.
10	Enter the IP address of the CS1000 NRS in the <b>Host or Server Address</b> field.
11	Click <b>Save</b> . The application returns you to the <b>SIP Nodes and Routes</b> window.
12	Under <b>Routes</b> , click <b>Add</b> . The <b>Add SIP Route</b> screen appears.
13	From the <b>Domain</b> drop-down list, select the CS1000 SIP trunk domain.
14	From the <b>Trusted Node</b> drop-down list, select the IP address of the CS1000 NRS.
15	Modify the other parameters, if required, to match your CS1000 SIP configuration.
16	Click <b>Save</b> . The <b>Add SIP Trusted Node</b> window reappears, with the new route listed.

---

---

17 Repeat this procedure for each gateway you need to add.

---

--End--

---

## Variable definitions

Variable	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 CS1000 SIP trunk NRS.
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 CS1000 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 CS1000 SIP trunk domain, either TCP, TLS, or UDP. The default value is UDP.
Remote port	The remote port from which the route will accept 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.

## Configuring an agent for CCOA and testing an end to end call

This procedure outlines the high level steps required to configure an agent for CCOA. 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, *Contact Center Offsite Agent Administration and Maintenance* (NN44400-617). Nortel recommends that you configure and test a single agent before completing all the configuration for your CCOA solution.

### Prerequisites

- You have completed all installation and commissioning procedures in this guide.
- You have ensured that your contact center is operational.

### Procedure steps

---

Step	Action
1	Create a contact center Call Presentation Class of type Return to Queue.
2	Select a contact center agent who will work offsite, or create a new agent.
3	Apply the Return to Queue call presentation class to the agent.
4	If you plan to segregate offsite agents into different skillsets from onsite agents, create an skillset for offsite agents and assign the agent to this skillset.
5	Import the Windows user for the offsite agent into CCT (if you are using local accounts on the CCT server you might need to create the user account first).
6	Associate the offsite agent's Windows user with the CCOA terminals.
7	In the Element Manager for the CCOA server, access Agent Management and search for the agent.
8	Add the agent to CCOA.
9	Add the agent's offsite telephone number and configure their connection mode.
10	Install the CCAD client on the agent's offsite PC or laptop. (This step could be performed in a simulated offsite environment, such as a test lab). See <i>Contact Center Offsite Agent User Guide</i> (NN44400-120).
11	Configure the CCAD client for CCOA.
12	Login the agent on the offsite PC and place a test call to their offsite skillset.
13	Check that CCOA routes the test call to the agent, that the agent is able to answer the call, and that CCAD displays the correct progression of call status and information.

---

**--End--**

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## CCOA reference

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

### Ports required for offsite CCAD

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

**Table 4 Contact Center Multimedia ports**

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



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# Terminology

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**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.

**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 Agent Desktop (CCAD)**

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.

**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 Offsite Agent (CCOA) packaged application**

The CCOA server software that provides the core functionality in a CCOA solution.

### **Contact Center Offsite Agent (CCOA) solution**

The collection of products (including CS1000, CCMS, CCT, CCOA Packaged Application, Mediant 2000) that when installed and configured allow agents to work from a remote location with the same features they would have access to if they were based in the contact center customer premises.

### **CCOA terminal**

A generic term that refers to the CS1000 terminals that CCOA 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 will import and control these terminals, and CCMS will recognize these as the offsite agents' phonesets.

### **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.

### **Computer Telephony Integration (CTI)**

An application that enables a computer to control telephone calls.

### **Communication Server 1000**

A Private Branch Exchange (PBX).

### **E1**

E1 is a European digital transmission format used on Primary Rate Interface (PRI) connections.

### **Interactive Communications Portal (ICP)**

A software-based Interactive Voice Response (IVR) system to develop communication applications. The ICP has a Media Application Server (MAS)-based platform and uses the SIP and media processing capabilities of MAS. The ICP is Internet Protocol (IP)-enabled and uses Web Services and industry standards.

CCOA uses many of the components of ICP, so the hardware requirements for a CCOA server and the administration tools for managing CCOA are equivalent to those for ICP.

### **Interactive Voice Response (IVR)**

An application that allows telephone callers to interact with a host computer using prerecorded messages and prompts.

**Media Application Server (MAS)**

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 Media Application 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 CCOA ultimately uses some of the MAS architecture, the details of this are largely hidden from administrators.

**Mediant 2000**

A TDM-SIP gateway, manufactured by Audiocodes and shipped by Nortel as NT2210xx.

**Nortel Server Subnet (NSS)**

The subnet to which the contact center servers, such as Contact Center Manager Server, Network Control Center, Contact Center Manager Administration, Contact Center Multimedia, and Contact Center Offsite Agent are connected.

**Offsite agent**

A contact center agent who works at a location physically removed from the contact center customer premises.

**On Demand mode**

A connection mode where each contact center call destined for an offsite agent results in a unique call from the contact center switch to the offsite agent's remote phoneset.

With On Demand Calling the agent is able to take other calls on their remote phoneset when they are not busy 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 phoneset when the offsite agent connects to CCOA. 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 phoneset 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.



Contact Center Offsite Agent

## Installation and Commissioning Guide

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