

User Guide

XML Server

Release 5.0



Contact Center Express

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For the most current versions of documentation, go to the Avaya Support Web site: <http://support.avaya.com>.

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Preface

This following few pages provides information that will help you use this document.

Related Documents

- Standard ECMA - 323 June 2001. *XML Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III*.
- Standard ECMA - 269 4th Edition - June 2000. *Services for Computer Supported Telecommunications Applications (CSTA) Phase III*. Include document: *List of Corrected Errata for ECMA-269*
- Standard ECMA - 285 2nd Edition - June 2000. *Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III*.

For these documents, refer to *Ecma's website* <http://www.ecma.ch>.

Other Related Documents

For information on how to develop client applications using XML Client, refer to the HTML Help file named CCE Developer Reference.chm in the directory: C:\Program Files\Avaya\Contact Center Express\Developer.

For more information on how XML Server uses License Director for licensing, refer to the *License Director User Guide*.

CHAPTER 1

Introduction

In This Chapter

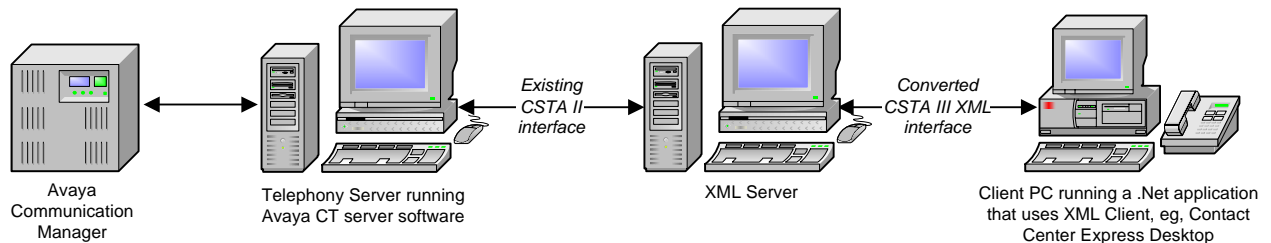
What is the XML Service?7

What is the XML Service?

The eXtensible Markup Language (XML) has quickly become the standard for information exchange between disparate devices. This mechanism has been chosen by the European Computer Manufacturers Association (ECMA) as a standard for interfacing computer telephony.

The XML Service consists of the XML Server, which converts the existing CSTA II interface of Avaya Computer Telephony software to CSTA III XML, and XML Client, which allows developers to build CTI applications in .Net.

This CSTA XML-over-TCP interface complies with ecma-269, ecma-285 and ecma-323 (specifically as described in Annex G of the Standard ECMA - 323 June 2001, *XML Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III.*)



XML Server

XML Server is a Windows service that starts with the operating system. On start up, it retrieves all configuration data from its local configuration file.

Each XML client that connects to the XML Server opens a corresponding link to a Telephony Server. This connection opens using a single user name and password provided in the configuration data. The supplied user name/password combination enables access to all appropriate Avaya Communication Manager devices via the security database.

XML Server supports connections to multiple Telephony Servers.

XML Client

Distributed as part of the Developer toolkit, XML Client provides a CSTA III XML interface that allows developers to build Windows-based CTI applications in Microsoft Visual .Net or Visual C#.

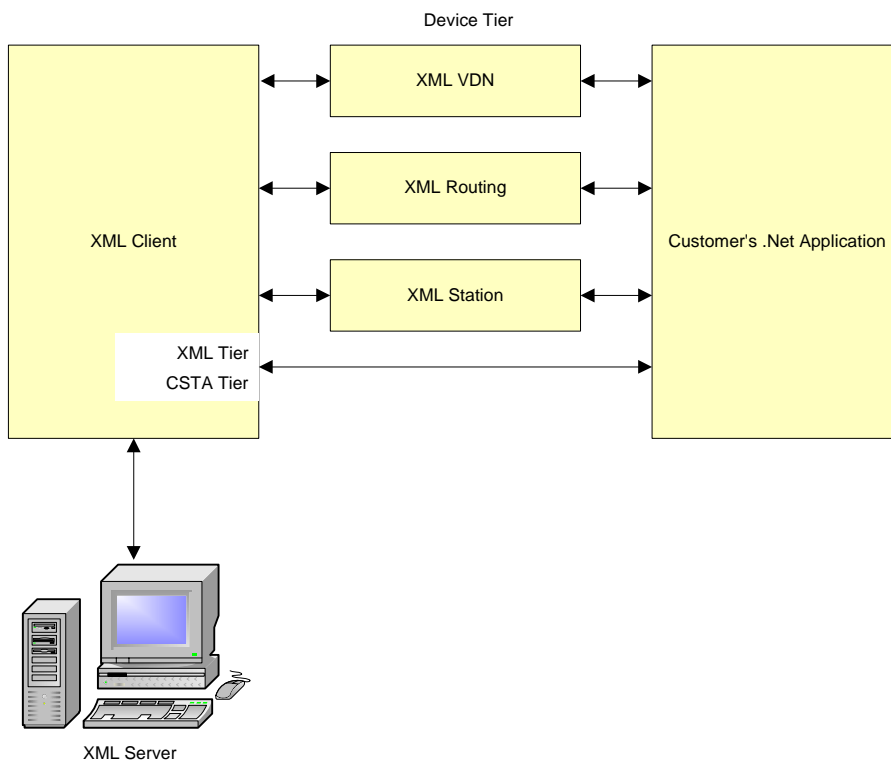
XML Client encompasses four developer components: XML Client, XML Station, XML Routing and XML VDN.

XML Client is the core component that communicates with the XML Server. Representing the base-level XML/CSTA tier, developers can use XML Client's exposed objects to implement telephony operations directly, or they can treat it as a 'data source' when using the higher-level, device-tier components: XML Station, XML Routing and XML VDN.

XML Station binds with XML Client to perform telephony operations on a voice station and manage the calls associated with it. The objects exposed by XML Station preserve the active calls on the voice station and allow users to manipulate calls through a set of methods at the call appearance level.

XML Routing binds with XML Client to perform the telephony operations on a registered VDN and manage the routing of calls associated with it.

XML VDN binds with XML Client to monitor VDNs (vector directory numbers) and receive call events associated those VDNs.



The base XML/CSTA tier includes the methods and events that communicate directly with the XML Server in XML. By working with this tier, more coding is required, but you have the ability to send your own customized XML requests to the server.

The device tier, on the other hand, does not deliver that level of control but offers more functionality with less coding. A set of methods at the call appearance level make it easy to control active calls.

For information on the methods and events exposed by XML Client (ASXMLClient.dll), refer to the HTML Help file named CCE Developer Reference.chm in the directory: C:\Program Files\Avaya\Contact Center Express\Developer.

Support for Non-Windows Clients

Many operating systems, such as Linux, Solaris or Unixware, have strong native support for XML document handling or readily available additional modules. If desired, you can develop your own XML client control to communicate with XML Server and run on one of these operating systems.

Licensing

To use XML Server, you need to buy one (or upgrade your existing) CCE Voice license key with enough run-time licenses to cover the number of client applications that will connect to the XML Server.

License keys are added to License Director (a central repository for all Contact Center Express licenses) using Contact Center Express Control Panel.

For information on how to add a license key to License Director, refer to the *Application Management Service User Guide*.

Licensing Error Messages

On starting XML Server, an error message will display if:

- The license has not been set up using the Application Management Service.
- The license is a trial-only license and has already expired.
- The number of run-time licenses requested exceeds the total number of licenses purchased.
- The server running License Director or License Director itself is not available.

For more information on how XML Server interacts with License Director, refer to the *License Director User Guide*.

Error Logging

XML Server logs error information relating to its own operation to a series of log files.

A new log file is created for each day of the week. The name of the error log file clearly identifies the application and the day of the week, for example, AXMLSMon.log.

Once a log file reaches the size limit specified in its configuration, it is archived and a new file is created. (Note: The archive only stores one log file. If the second error log reaches the specified maximum size, it overrides the previously archived log file.)

The types of errors logged by the error log are determined by the logging level retrieved from the application's configuration data. Levels of error logging are:

- **0.** No error logging takes place.
- **1.** Logs fatal, major, minor and trace information.
- **2** Logs fatal, major and minor errors.
- **4.** Logs fatal and major errors.
- **8.** Logs fatal errors only.

Each file records the selected logging level as well as the date, time, location and description of every error that occurs.

Error log files are automatically saved into the application's current working folder (the same folder as the application executable).

Diagnostic Testing Error Logging

There is one other error log level, which enables you to create log files that don't override each other every time the maximum log file size limit is reached. This logging level is designed for diagnostic purposes only and can be achieved by adding 128 to one of the logging level values mentioned above. For example, if you specify **Error Log Level=129**, new error log files will be continuously created for this application that contain fatal, major, minor and trace information.

Each new file has a unique name based on the date (year, month and day) and time (in hours, minutes and seconds) it was created. For example: 20061116155404ASMediaDirector.log.

Warning: To prevent a multitude of log files affecting your available disk space, this error logging level should only be used for short periods of time while carrying out diagnostic testing.

CHAPTER 2

System Requirements

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Installation Requirements

The specifications listed here are the minimum recommended. As far as is known and unless otherwise stated, Contact Center Express and its components should be compatible with all higher specification hardware configurations and software versions than those listed in the following section:

Desktop

For Contact Center Express Desktop, Contact Center Express Reporting, Contact Center Express Control Panel:

- **Hardware:**
 - 1.6 GHz Pentium
 - 512MB of RAM-50MB of free hard disk space
 - DVD drive
 - Graphics card capable of supporting 1024 x 768 resolution monitor
 - Mouse or other Windows-compatible pointing device
 - TCP/IP LAN connection
- **Software:**
 - Windows 7 - Home, Premium, Professional, Ultimate, and Enterprise
 - Windows Vista - Business and Enterprise
 - Windows XP Professional 32-bit - SP2, SP3
 - Citrix Presentation Server 4.5 or Windows Terminal Services 32-bit
 - Microsoft Internet Explorer 7.0
 - Microsoft .Net Framework 3.5 SP1

Servers

- **Hardware:**
 - A 2.4 GHz Pentium with 2GB RAM.
- **Software:**
 - Windows 2003 Server (Enterprise and Standard) 32-bit
 - Windows 2008 Server (Enterprise and Standard) 32-bit and 64-bit
 - Microsoft Internet Explorer 6.0 SP1
 - Microsoft .Net Framework 3.5 SP1
 - Application Enablement Services (AE Services) client software release 4.2.1, 5.2 and 6.1

Core Server

- **Dedicated server for:**
 - License Director
 - XML Server
 - Configuration Server
 - Application Management Director
 - Media Director-Media Stores and Gateways
 - Call Routing Server
 - Virtual Agent
 - Task Director
- **For Email only POP3/SMTP supported:**
 - Microsoft Exchange Server 6.5, 2003, 2007

Interaction Data Service Server

Dedicated Server for Interaction Data Service - excluding Microsoft Internet Explorer which is not required.

Database Server

- **Dedicated server for:**
 - Interaction Data Server (ActiveInteractionData)
 - Configuration Server (ACS)
 - ASMSControl Database
 - ASMSData and ASContact Databases may be installed either on Microsoft SQL Server 2005 or 2008 Standard, Enterprise, and Express with Advance Services

Developers

- **Developing applications on or with:**
 - Windows 7 - Home, Premium, Professional, Ultimate, and Enterprise
 - Windows XP Professional 32-bit SP2, SP3 with Microsoft Visual Studio 2005 and 2008
 - Windows 2003 Server 32-bit - Standard and Enterprise
 - Windows 2008 Server 32-bit and 64-bit - Standard and Enterprise
 - Microsoft Internet Explorer 6.0 SP1
 - Microsoft .Net Framework 3.5 SP1
 - Application Enablement Services (AE Services) client software release 4.2.1, 5.2, and 6.1

Installation

The configuration and monitoring of this Contact Center Express service is accomplished by the Application Management Service installation of which is a necessary pre-requisite for the configuration and setup of Virtual Agent. For detailed information on how to install Application Management Service refer to the about the *Contact Center Express Installation Guide.pdf*.

One component of this service is the Contact Center Express Control Panel, a user interface that allows you to add and change configuration and operation information about currently monitored servers. For detailed information on how to configure this service, refer to the about the *Contact Center Express Control Panel User Guide.pdf*.

Install Application

For instructions on how to install this application, refer to the Contact Center Express Installation Guide.pdf.

The *Contact Center Express Installation Guide* is on the Contact Center Express DVD (Overview and Miscellaneous folder) or can be downloaded from the **Avaya Support Web site**: <http://support.avaya.com>.

CHAPTER 3

Administration

In This Chapter

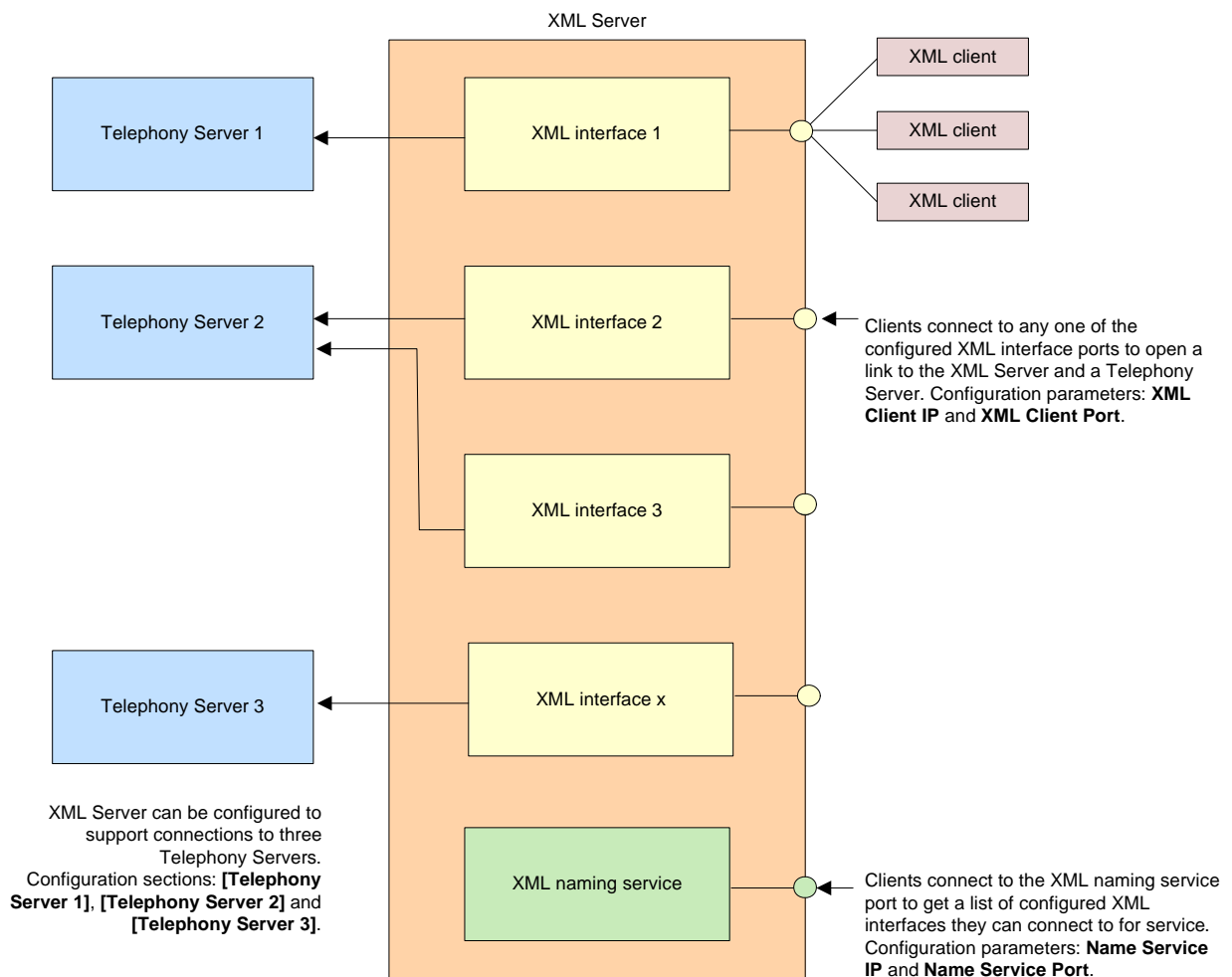
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Configuration Overview

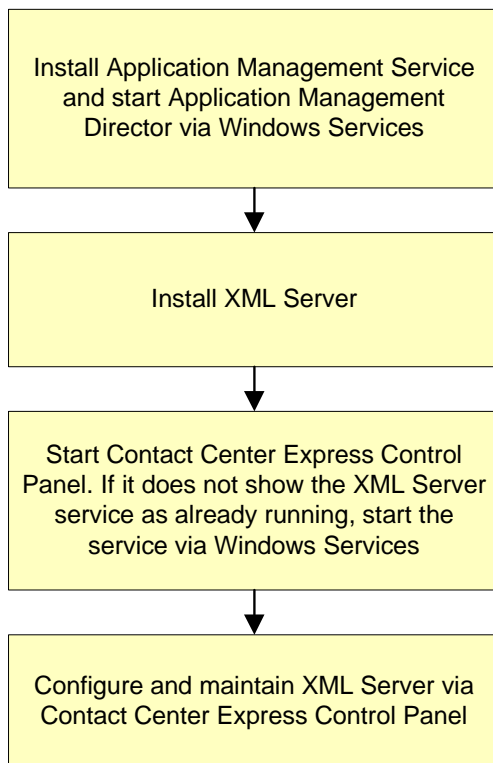
On startup, XML Server extracts all the information it needs to run via the configuration file, AXMLServer.ini.

This file must include the:

- the IP address and port number of the XML naming service clients connect to for a list of currently configured XML interfaces
- the IP address(es) and port numbers of the XML interfaces responsible for converting the existing CSTA II interface of Avaya Computer Telephony software to CSTA III XML and vice versa
- the name(s) of the Telephony Servers available for service.



The following flowchart outlines the series of steps you need to take to implement and administer Contact Center Express XML Server.

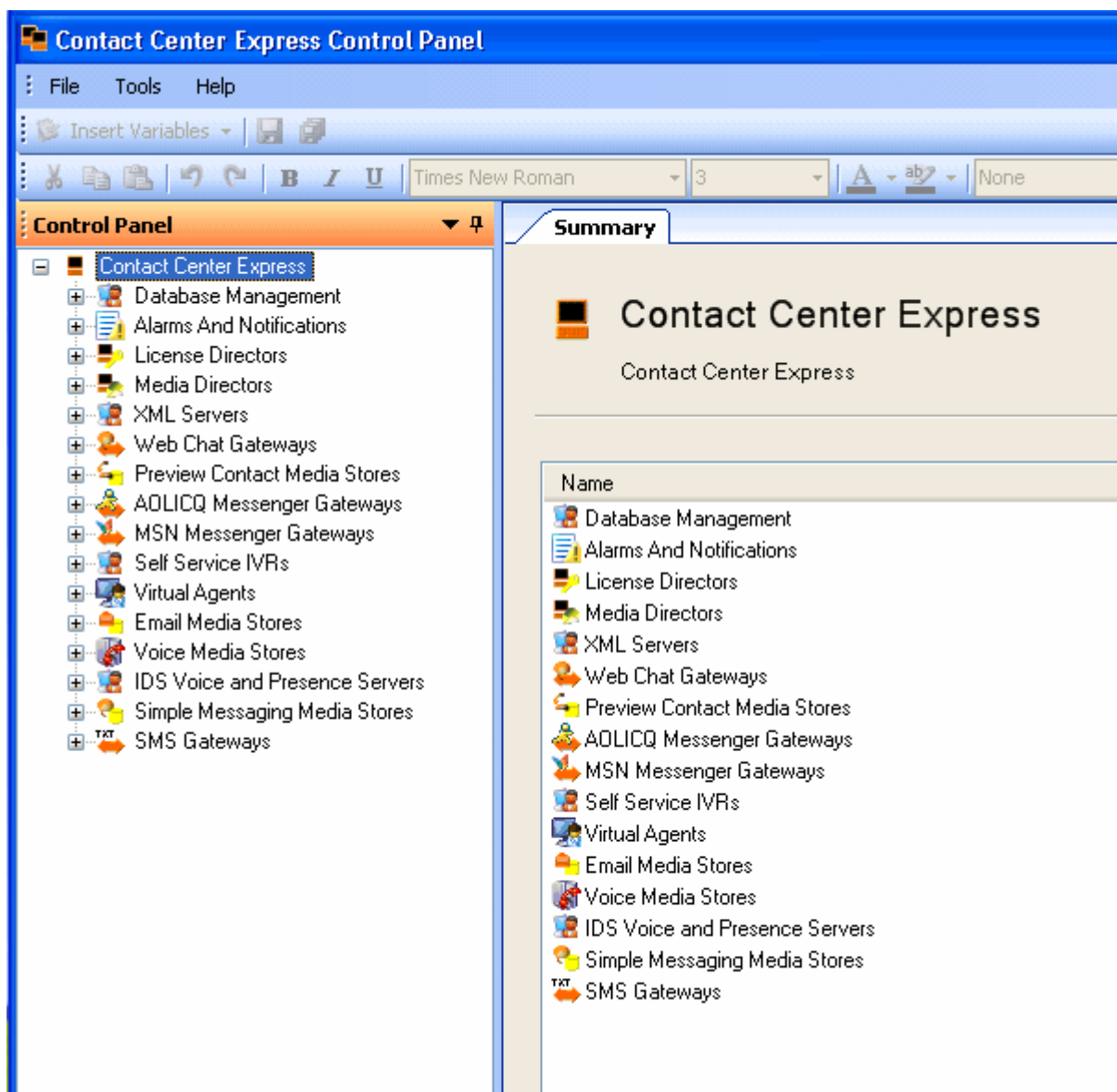


Start / Configure / Monitor Service

The configuration and monitoring of this Contact Center Express service is accomplished by the Application Management Service.

One component of this service is the Contact Center Express Control Panel, a user interface that allows you to add and change configuration and operation information about currently monitored servers.

For detailed information on how to configure this service, refer to the about the *Contact Center Express Control Panel User Guide.pdf*.



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