

Overview and Planning for Avaya one-X[®] Communicator

August 2010

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Chapter 1: Introduction

About this guide

This guide describes the Avaya one-X Communicator offer and its deployment options. It is written for anyone who is considering purchasing or using this offer.

This guide refers to other Avaya products in the context of how they integrate with Avaya one-X Communicator. You can get detailed information about these products from the Avaya Web site at <u>http://www.avaya.com/support</u>.

Release numbers associated with the products that support Avaya one-X Communicator are available in <u>Enterprise requirements</u> on page 60.

Avaya one-X Communicator overview

Avaya one-X Communicator helps users manage their communications tasks by providing enterprise users with simple, intuitive access to all of their everyday communications tools. Enterprises can offer Avaya one-X Communicator to their users in one of the following ways:

- A standalone client that provides basic telephony functions and native Instant Messaging (SIP protocol mode).
- A Unified Communications client that is integrated with Avaya one-X Portal for 24*7 call logs, integrated with Conferencing Enterprise and Avaya Modular Messaging with the Message Storage Server (MSS), and integrated with Microsoft Office Communicator or IBM Lotus Sametime for instant messaging support, and with Avaya Intelligent Presence Server for presence information.

Avaya one-X Communicator benefits

Avaya one-X Communicator allows users to increase their productivity with tools that:

- · Enhance collaboration with assurance of security
- Improve responsiveness
- · Allow them to work anywhere, yet never miss important calls
- · Allow them to exchange instant messages
- Allow them to know when a contact is available, on a call, busy, or away

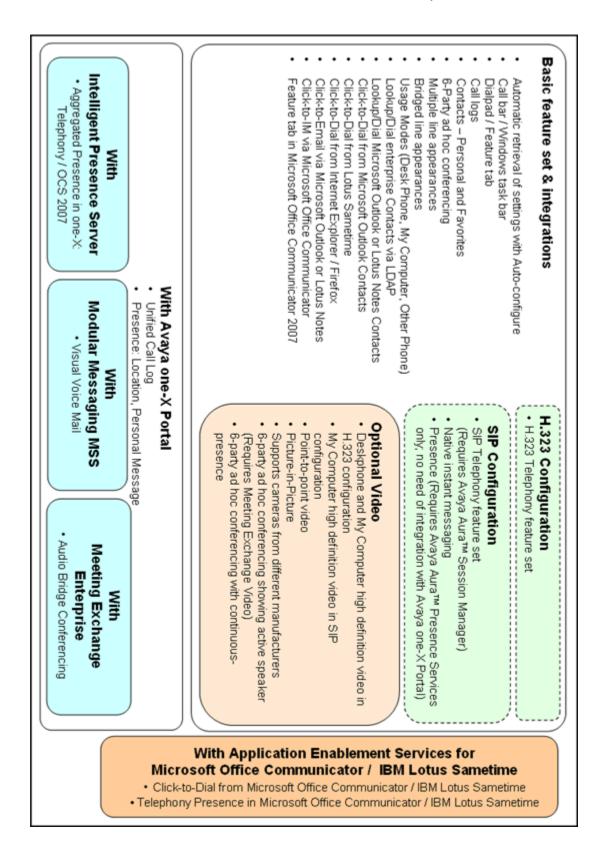
- Make high definition video calls
- · Lower costs for IT and end-user support

Avaya one-X Communicator feature sets

The Avaya one-X Communicator offer is available with the following feature sets. You can select the feature set that meets your company's communication requirements.

- Basic
- · Basic with video
- Unified Communications
- Unified Communications with video

The following diagram illustrates the feature sets and the required integration with other Avaya products. Some functionality also requires integration with additional products.



Key features

Basic features

The Avaya one-X Communicator offer includes the following Basic features:

- Desktop access to all your communication tools from a single, intuitive user interface
- Telephony features similar to Avaya one-X Desktop Edition and Avaya IP Softphone
- Usage modes control
- Multiple levels of security
- · High-definition video calling
- · Viewing and sharing of presence states, in SIP mode
- Scalable Instant messaging capability to send messages without requiring any thirdparty messaging application, in SIP mode
- Groups for associating users with particular phone settings
- · Centralized control and administration
- Click-to-Dial from Microsoft Office Communicator via Avaya Aura[®] Application Enablement Services
- Click-to-Dial from Microsoft Office Communicator or IBM Sametime Connect via native Avaya one-X Communicator integration
- Telephony integration with Microsoft Office Communicator or IBM Sametime Connect
- Desktop video for H.323 softphones for face-to-face communications to streamline decision making and reduce travel expenses
- Click-to-Dial capability from Microsoft Internet Explorer and Mozilla Firefox
- Click-to-Dial capability from Microsoft Outlook Contacts
- Wipe-to-dial (clipboard dialing) capability from any application
- Contact lookup of Microsoft Outlook or IBM Lotus Notes contact from the Avaya one-X
 Communicator user interface
- · Contact management tools that help you find contact information quickly
- Telephone share control that provides telephony functionality from a server to your desktop
- · Enhanced login preferences: Automatic login and Autostart
- Emergency call handling
- Docking and undocking of Dialpad and Bridge Conferencing windows

- Expanded video options: Full screen option, Always on top feature, and Screen Saver and Monitor Power Saving feature
- Customization of the emergency call-handling disclaimer, the Avaya one-X logo, and the title on the Login and Welcome windows

Unified Communications features

Unified Communications features require integration with Avaya one-X Portal. These features include:

- All of the Basic feature set, as described above
- Intelligent presence to determine the best way to reach a colleague quickly
- Visual Voice Mail that allows you to filter and sort voice messages so you can respond to the most important messages quickly
- Visual Audio Bridge Conferencing that is easy to start, join, and manage for improved collaboration and conference call effectiveness
- Communication History logs that help you trace the history of your enterprise calls and voice messages
- Contact management tools that help you find contact information quickly and view the presence information of corporate contacts
- Presence access requests control

Some functionality also requires integration with additional products.

Usage modes

Today's enterprise workers conduct business from many locations. They may be in the office, at a client location, at home, or traveling. When workers log into Avaya one-X Communicator, they can select the usage mode that optimizes the voice endpoints and network connectivity requirements of their current location.

You can select among the following usage modes:

- **Desk Phone**. Use this mode when you are at the office. This mode is configured for shared control through a server. You access audio components from your office phone and visual components from your computer.
- My Computer. Use this mode when you are traveling and need to manage your communication tasks using your computer instead of a phone. This mode is configured for Voice over IP (VOIP).
- Other Phone. Use this mode when you are telecommuting. This mode is configured for toll-quality audio and optimizes audio through another phone. Select this mode to access audio components from your home office phone or from your cell phone.

Supported languages

Avaya one-X Communicator supports the following languages:

- English
- · Chinese, Simplified
- Dutch
- French, International
- German
- Italian
- Japanese
- Korean
- · Portuguese, Brazilian
- Russian
- Spanish, International

😵 Note:

Avaya one-X Communicator Release 6.0 is an English only release. It can be installed on previously documented and supported non-English operating systems but runs only in English. Support for additional languages will be subsequently released in a Service Pack. Supported non-English operating systems include: Simplified Chinese, Dutch, Parisian French, German, Italian, Japanese, Korean, Brazilian Portuguese, Latin American Spanish, and Russian.

Security

Avaya one-X Communicator provides you with options for a secure implementation.

Secure connections through firewalls

Avaya one-X Communicator supports connection through a third-party, external, VOIPaware firewall. Avaya has successfully tested Avaya one-X Communicator with several external firewalls and VPN.

User authentication through the enterprise directory

Avaya one-X Communicator integrates with the existing enterprise directory. Avaya one-X Communicator uses the Active Directory, LDAP, or the Novell eDirectory user records for authentication and authorization.

However, in standalone mode, for login, Avaya one-X Communicator uses the extension and password of the Communication Manager for authentication of the user.

User authentication in standalone mode

In standalone mode, for login, Avaya one-X Communicator uses the extension and password of the Communication Manager for authentication of the user. There is also an option to disable username and password caching.

Secure server connections

With Avaya one-X Portal integration, users can confidently connect to Avaya one-X Communicator because Avaya certificates secure the connection between Avaya one-X Communicator and Avaya one-X Portal through the HTTPS protocol.

For SIP connection

Avaya one-X Communicator establishes all the instant messaging sessions using Transport Layer Security (TLS) thus providing a secure communication channel.

For H.323 connection

Signaling channel encryption is supported for call signaling messages if administered on the call server.

Connections to integrated components through secure ports

You can configure secure ports for integrated components, including:

- Enterprise directory application
- Modular Messaging

Secure Real-time Transport Protocol (SRTP) connections

Avaya one-X Communicator is secured by audio media encryption in both H.323 and SIP modes through SRTP connections. It supports 2 of the 8 available options, 1-srtp-aescm128-hmac80 and 8-srtp-aescm128-hmac32-unenc-unauth. Administrators can select from these options on the ip-codec-set form in Avaya Aura[®] Communication Manager.

SRTP for the Avaya one-X Communicator client

You must enable the SRTP option in the config file if you do not have NONE as an option. You can set the SRTP options by setting the value for **Media Encryption Parameters** in the config.xml file as shown in the following example:

<parameter>

<name>MediaEncryptionParameters</name>

<value>1</value>

<parameter>

The available options for Media Encryption Parameters are:

MediaEncryptionParameters

- eSRTP_CONFIG_AESCM128_HMAC80= 1
- eSRTP_CONFIG_AESCM128_HMAC32= 2

- eSRTP_CONFIG_AESCM128_HMAC80_UNAUTH= 3
- eSRTP_CONFIG_AESCM128_HMAC32_UNAUTH= 4
- eSRTP_CONFIG_AESCM128_HMAC80_UNENC= 5
- eSRTP_CONFIG_AESCM128_HMAC32_UNENC= 6
- eSRTP_CONFIG_AESCM128_HMAC80_UNENC_UNAUTH= 7
- eSRTP_CONFIG_AESCM128_HMAC32_UNENC_UNAUTH = 8
- eSRTP_CONFIG_NONE=9

MediaEncryptionParameters=1,9 -> SRTP with AESCM128_HMAC80 and NONE

😵 Note:

If SRTP settings on the CM is set to 1, you must set MediaEncryptionParameters value to 1 in the config.xml file. If SRTP Settings on the CM is set to 2, you must set MediaEncryptionParameters value to 2 in the config.xml file.

Denial of Service protection

Avaya one-X Communicator is protected against Denial of Service attacks.

Related topics:

<u>Security recommendations for administrators</u> on page 14 Additional security information on page 15

Security recommendations for administrators

Use the following methods to help maintain a secure environment for Avaya one-X Communicator:

- Use role assignments and assign security groups to appropriately restrict access to operations.
- Instruct users not to share their login ID and password. For accountability, each user must have a unique login ID.
- Periodically review and update the list of administered users, their roles, and their permissions.
- Review administration logs on a regular basis to ensure that the system is operating properly.
- Review audit logs on a regular basis to ensure that the system is operating properly.
- Review security logs and alarms on a frequent basis to monitor possible security events.

Additional security information

Additional security information for all Avaya products, including Avaya one-X Communicator and the Avaya components that integrate with it, is available at the <u>Avaya Security Advisories</u> <u>Website</u>. You can find information about the following:

- Avaya Product Security Vulnerability Response Policy
- Avaya Security Vulnerability Classification
- · Security advisories for Avaya products
- · Software patches for security issues
- Reporting a security vulnerability
- · Automatic e-mail notifications of security advisories

You can also find additional information about security practices at the National Security Agency <u>Security Configuration Guides Website</u>.

System architecture

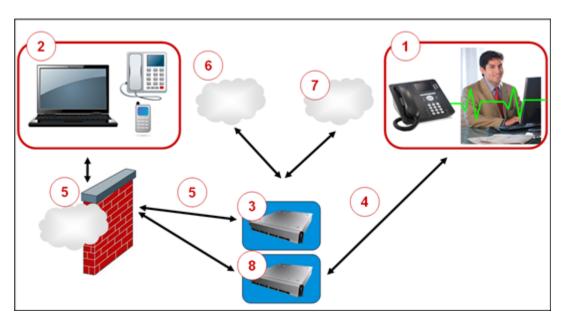
Avaya one-X Communicator uses the following system architecture, software integrations, and software components to provide you with the Basic and Unified Communication feature sets.

Related topics:

<u>H.323 architecture for the Basic feature set</u> on page 15 <u>SIP architecture for the Basic feature set</u> on page 16 H.323 architecture for the Unified Communication feature set on page 17

H.323 architecture for the Basic feature set

The following picture shows the system architecture required for the Basic feature set using the H.323 protocol.



1	Avaya one-X [®] Communicator at office
2	Avaya one-X [®] Communicator while at home/mobile
3	Avaya Aura [™] Communication Manager
4	H.323
5	Network access over a VPN through the Internet
6	PSTN
7	IP
8	Avaya Aura [™] Application Enablement Services for integration with Microsoft Office Communicator and IBM Lotus Sametime Connect (optional)

SIP architecture for the Basic feature set

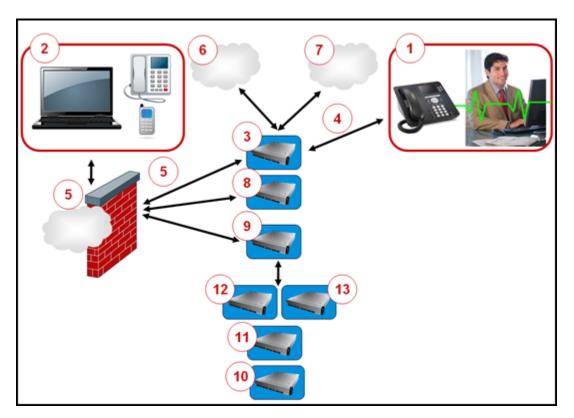
The following picture shows the system architecture required for the Basic feature set using the SIP protocol.

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9	

1	Avaya one-X [®] Communicator at office
2	Avaya one-X [®] Communicator while at home/mobile
3	Avaya Aura [™] Communication Manager
4	SIP
5	Network access over a VPN through the Internet
6	PSTN
7	IP
8	Avaya Aura [™] Session Manager
9	Avaya Aura [™] System Manager
10	Avaya Aura [™] Presence Services

H.323 architecture for the Unified Communication feature set

The following picture shows the system architecture required for the Unified Communication feature set using the H.323 protocol.



1Avaya one-X® Communicator at office2Avaya one-X® Communicator while at home/mobile3Avaya Aura [™] Communication Manager4H.3235Network access over a VPN through the Internet6PSTN7IP8Avaya one-X® Portal9Avaya Aura [™] Application Enablement Services for integration with Microsoft Office Communicator and IBM Lotus Sametime Connect (optional)10Intelligent Presence Server11Active Directory12Message Store with Modular Messaging (optional)13Conferencing with Meeting Exchange Enterprise (optional)		
3 Avaya Aura [™] Communication Manager 4 H.323 5 Network access over a VPN through the Internet 6 PSTN 7 IP 8 Avaya one-X [®] Portal 9 Avaya Aura [™] Application Enablement Services for integration with Microsoft Office Communicator and IBM Lotus Sametime Connect (optional) 10 Intelligent Presence Server 11 Active Directory 12 Message Store with Modular Messaging (optional)	1	Avaya one-X [®] Communicator at office
 H.323 Network access over a VPN through the Internet PSTN IP Avaya one-X[®] Portal Avaya Aura[™] Application Enablement Services for integration with Microsoft Office Communicator and IBM Lotus Sametime Connect (optional) Intelligent Presence Server Active Directory Message Store with Modular Messaging (optional) 	2	Avaya one-X [®] Communicator while at home/mobile
5Network access over a VPN through the Internet6PSTN7IP8Avaya one-X [®] Portal9Avaya Aura [™] Application Enablement Services for integration with Microsoft Office Communicator and IBM Lotus Sametime Connect (optional)10Intelligent Presence Server11Active Directory12Message Store with Modular Messaging (optional)	3	Avaya Aura [™] Communication Manager
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12 Message Store with Modular Messaging (optional)	10	Intelligent Presence Server
······································	11	Active Directory
13 Conferencing with Meeting Exchange Enterprise (optional)	12	Message Store with Modular Messaging (optional)
	13	Conferencing with Meeting Exchange Enterprise (optional)

Product documentation

Additional Avaya one-X Communicator documentation includes:

- Avaya one-X Communicator Quick Setup (for administrators)
- Avaya one-X Communicator Centralized Administration Tool (for administrators)
- Avaya one-X Communicator Getting Started (for end users)
- Avaya one-X Communicator Online Help

You can access these documents, and documents about other Avaya products mentioned in this guide, from the Avaya Web site at <u>http://www.avaya.com/support</u>.

Related topics:

Accessing online Help on page 19

Accessing online Help

Do either of the following:

- Press F1 on any Avaya one-X Communicator screen.
- Click the ? icon.

Introduction

Chapter 2: Integrations between Avaya one-X Communicator and other applications

Software integration overview

Avaya one-X Communicator integrates with many products and services to provide users with a rich set of features. Unless otherwise stated, the product and services described below are optional. Subsequent chapters explain which of them are required for specific Avaya one-X Communicator features. You may want to familiarize yourself with these chapters before you read this one.

Additional information

You can get more information about the products and services discussed in this guide from the following Web sites:

- For Avaya products and services: http://www.avaya.com/support
- For Microsoft products: http://www.microsoft.com
- For IBM products: http://www.ibm.com/

Release numbers associated with the products and services that support Avaya one-X Communicator are available in <u>Enterprise requirements</u> on page 60.

Avaya one-X Portal

Avaya one-X Portal is a browser-based interface to Avaya telephony, messaging, mobility, presence, and conferencing services provided by Avaya Communication Manager, Avaya Modular Messaging, Avaya Conferencing Enterprise, and Intelligent Presence Server

Avaya one-X Portal does not require the installation of any application software on your desktop to deliver its basic functionality.

Supported software

Avaya one-X Portal integrates with the following software to support Avaya one-X Communicator features.

- Avaya Modular Messaging to view and play voice messages
- Avaya Conferencing Enterprise to view and control live audio conferences
- Intelligent Presence Server to publish presence state information
- Microsoft Office Communicator for instant messaging support
- Communication History logs (24*7 call logs)
- Contact management (Microsoft Active Directory, IBM Domino Server, or Novell eDirectory Server for enterprise user information)

Avaya Modular Messaging

Modular Messaging is a powerful IP and standards-based unified messaging platform designed for single or multi-site global enterprises. It offers exceptional scalability and a superior feature package of call answering and voice messaging capabilities. You can access messages any time from a wide array of access devices including telephones, fax machines, or computer graphical user interfaces.

Avaya one-X Portal integrates with the Message Storage Server (MSS) configuration of Modular Messaging. Avaya one-X Portal then makes this information available to Avaya one-X Communicator.

You can use Visual Modular Messaging to perform the following actions from the Avaya one-X Communicator user interface:

- · Listen to voice mail
- · Delete voice mail
- · Call a voice mail
- · Add a number from voice mail to personal contact
- Add a number from voice mail to favorites
- · Mark a voice mail as read or unread
- Send an e-mail
- Launch IM

Avaya Application Enablement Services

Application Enablement Services is a server-based software solution that enables Microsoft Office Communicator and IBM Lotus Sametime to leverage the rich telephony capabilities of Avaya Communication Manager IP Telephony Software.

Enterprises that want to provide the intelligent presence features provided by Avaya one-X Communicator to their end users who use the Microsoft Office Communications Server must integrate the Application Enablement Services platform, Avaya one-X Portal, and the Intelligent Presence Server into their enterprise network. Intelligent Presence Server is optional for enterprises that do not require intelligent presence features but who do want to provide telephony control with IBM Lotus Sametime or Microsoft Office Communications Server.

Supported products

Application Enablement Services supports the following products in an Avaya one-X Communicator configuration:

- Avaya one-X Portal release 5.2
 - Intelligent Presence Server Release 1.0
 - Avaya Modular Messaging, MSS configuration Release 4.0 and 5.2
 - Avaya Meeting Exchange Enterprise Release 4.1 and 5.2
- IBM Lotus Sametime Connect version 8
- Microsoft Office Communications Server 2007 Release 1 and Release 2

For more information about Application Enablement Services, go to the Avaya Web site at <u>http://www.avaya.com/support</u>.

- For feature information, go to the Resource Library and select Find Documentation and Technical Information by Product Name.
- For server information, including server capacities, server-to-application ratios, supported Avaya product versions and more, search on "PSN #2082U."

Software integration

To provide you with the Unified Communication feature set, Avaya one-X Communicator must integrate with Application Enablement Services and Avaya one-X Portal. Application Enablement Services cannot monitor H.323 and SIP endpoints concurrently. Therefore, Avaya recommends that you deploy the Unified Communication feature set using H.323. Avaya one-X Communicator Release 6.0 does not support the Avaya one-X Portal integration with a SIP endpoint because Avaya one-X Portal does not support SIP endpoints.

Intelligent Presence Server (H.323 mode)

Intelligent Presence Server collects rich presence from Avaya and third party sources and sends it to Avaya one-X Portal. Avaya one-X Portal then makes this information available to Avaya one-X Communicator. When enterprises activate the Avaya one-X Communicator Unified Communication feature set, their employees can reach the people they need more effectively.

Supported products

Intelligent Presence Server works in concert with the following presence-enabling software in an Avaya one-X Communicator configuration:

- Avaya one-X Portal
- Avaya Application Enablement Services
- Microsoft Office Communicator

Avaya Aura Session Manager

Session Manager is a SIP routing and integration tool and the core component within the Avaya Aura[™] Enterprise Edition solution. Session Manager offers a new perspective on enterprise communication where individual locations are no longer managed as separate units within the enterprise.

Session Manager connects Communication Manager as a feature server and both Avaya and enterprise PBX systems within branch offices, third-party PBXs, gateways, service providers, SIP-enabled adjuncts, and SIP telephones.

With Session Manager, messages pass through a secure channel. A Session Manager instance consists of one server supporting up to 25,000 SIP entities. An enterprise network can support up to 3 instances.

System Manager is the application used to manage Session Manager. It runs on a separate server, and only one is required for the entire network, not per instance.

Presence and Instant Messaging (SIP mode)

Viewing presence and sending instant messages in real time are two key features of Avaya one-X Communicator.

Avaya Aura[™] Presence Services sends the presence information over SIP protocol. This information is filtered individually for every user who wants to view other's presence, called

watcher, and also for every user who wants to share presence with others, called watched. Avaya one-X Communicator render the presence information for various watchers. There is support for up to 10,000 users per server with 25 contacts for each server instance.

😵 Note:

The system performance for various functions, such as updating of presence information and handling of calls, might slow down if you add 50 or more contacts.

Users can also exchange messages in real-time without the need of any third-party messaging application. The Unicode option feature sending messages in different languages. Users can also change the format of messages. In addition, users can also exchange messages with those who have installed Avaya one-X Communicator in H.323 mode.

Avaya Conferencing Enterprise Edition

Conferencing Enterprise is an advanced conferencing solution that combines features like reservation-less, scheduled meet-me, and Web conferencing. It enables enterprises to integrate and customize conferencing solutions to complement existing business processes and enhance productivity.

Supported features

Conferencing supports Visual Audio Bridge Conferencing and video for the Avaya one-X Communicator Unified Communication feature set.

Required third-party software products

Avaya one-X Communicator interacts with the following required software products. Release numbers associated with these products are available in <u>Enterprise requirements</u> on page 60.

Microsoft Visual C++ 2005 SP1 Redistributable Package ATL Security Update

To overcome the threat of someone attacking your system with Microsoft Visual C++ 2005 SP1 Redistributable Package, you must run vcredist_x86.exe before you install Avaya one-X Communicator on your computer.

This security update, vcredist_x86.exe, is included with the installer.

Microsoft .NET Framework 3.5 Service Pack 1

The pre-coded solutions that form the Base Class Library in Microsoft .NET Framework 3.5 Service Pack 1 include user interface, data access, database connectivity, cryptography, Web application development, numeric algorithms, and network communications. Avaya one-X Communicator uses this library to integrate with other Microsoft applications. You must install Microsoft .NET Framework 3.5 Service Pack 1 before you install Avaya one-X Communicator on your computer. You can download this software from the Microsoft Web site <u>http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=ab9</u> <u>9342f-5d1a-413d-8319-81da479ab0d7</u>.

Microsoft DirectX

Microsoft DirectX is a collection of application programming interfaces (APIs) for handling tasks related to multimedia, including video, on Microsoft platforms.

Optional third-party software products

Avaya one-X Communicator interacts with the following optional software products.

Release numbers associated with these products are available in <u>Enterprise requirements</u> on page 60.

Directory services

Avaya one-X Communicator uses the following public directories:

- LDAP (Lightweight Directory Access Protocol) provides directory services for TCP/IP networks, including Novell eDirectory
- Microsoft Active Directory provides directory services similar to LDAP in a Windows
 environment

IBM Lotus Sametime Connect

IBM Lotus Sametime Connect provides Instant Messaging in an IBM Domino environment, however this requires Avaya one-X Portal and Application Enablement Services. Users of Avaya one-X Communicator can Click-to-Dial the phone number of a specific contact when the number is listed in the Sametime contact directory, with no servers required.

IBM Lotus Notes

Avaya one-X Communicator users can look up IBM Lotus Notes contacts from the Avaya one-X Communicator user interface.

Microsoft Office Communications Server

The Microsoft Office Communications Server platform supports Microsoft Office Communicator. You must integrate Avaya Application Enablement Services into your enterprise network for Avaya one-X Communicator, the Presence Services, and the Microsoft Office Communications Server to work together.

Microsoft Office Communicator

Microsoft Office Communicator provides Instant Messaging in a Windows environment. When integrated with Avaya one-X Communicator, you can:

- View the telephony presence status of your Microsoft Office Communicator contacts
- Click-to-Dial those contacts
- IM a contact by clicking the IM icon from the Avaya one-X Communicator user interface

You must integrate Avaya Application Enablement Services into your enterprise network for Avaya one-X Communicator and Microsoft Office Communicator to work together.

Microsoft Outlook

Avaya one-X Communicator users can look up Outlook contacts from the Avaya one-X Communicator user interface.

Microsoft Outlook provides e-mail in a Windows environment. Avaya one-X Communicator users can send an Outlook e-mail by clicking on the e-mail icon from the Avaya one-X Communicator user interface.

Microsoft Outlook stores logs of incoming, outgoing, and missed calls. Users can view all the details of contacts making incoming calls.

Microsoft Redistributable Primary Interop Assemblies

If you want to integrate Avaya one-X Communicator with Microsoft Office Outlook 2003 or 2007, you need to download the Microsoft Redistributable Primary Interop Assemblies (PIA) for the appropriate Office product. The PIA contains software components that are not part of the standard Office product.

You must install the appropriate PIA before you install Avaya one-X Communicator on your computer. You can download this software from the Microsoft Web site <u>http://www.microsoft.com</u>.

Web browsers

Avaya one-X Communicator works with the following Web browsers:

- Microsoft Internet Explorer version 6.0, 7.0, and 8.0
- Mozilla Firefox version 2.0 and 3.x

Integrations between Avaya one-X Communicator and other applications

Chapter 3: Basic feature set

Overview of the Basic feature set

Avaya one-X Communicator provides basic communication functions in a standalone configuration. These functions include:

- · Desktop integration with an easy-to-use user interface
- Basic telephony, including ad hoc conferencing
- Contact management
- Click-to-Dial from Internet browsers (Microsoft Internet Explorer and Mozilla Firefox)
- · Wipe-to-dial (clipboard dialing) from an application
- Optional video

😵 Note:

Avaya one-X Communicator supports video with H.323 in My Computer and Desk Phone modes but not in Other Phone mode. It supports video with SIP in My Computer mode but not in Desk Phone and Other Phone modes. There is no support for video with the Citrix Presentation Server.

Software integration

Full implementation of the Basic feature set may require integration with other products.

Avaya Application Enablement Services integrates with Microsoft Office Communications Server and IBM Lotus Sametime Connect to provide Avaya one-X Communicator with telephony control. You can deploy the Basic feature set with or without this functionality. However, if you want this functionality, you must also deploy Application Enablement Services.

Microsoft Outlook and Internet browsers support click-to-dial feature even without Application Enablement Services integration.

If you want to use Avaya one-X Communicatorin SIP mode, you must deploy Session Manager. This is not applicable when users make video calls in SIP mode.

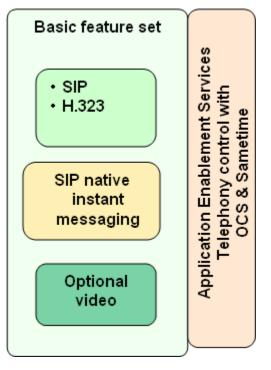
Related topics:

Basic features at a glance on page 30

Basic features at a glance

The Basic Avaya one-X Communicator configuration includes the following components:

- Basic feature set
- Support for H.323 or SIP
- Supported on both 32-bit and 64-bit Windows 2000, Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, and Windows 7
- · Instant Messaging (SIP mode only)
- Optional video
- Application Enablement Services (optional)



For a more detailed view of the above picture, see <u>Avaya one-X Communicator overview</u> on page 7.

Basic feature set

The Basic feature set includes the following features.

Some functionality also requires integration with additional products.

- Call bar / Windows task bar
- Dialpad / Feature tab
- Usage modes (Desk Phone, My Computer, Other Phone)

- High definition video calling
- Presence states, in SIP mode
- · Scalable Instant messaging capability in SIP mode
- · Groups for associating users with particular phone settings
- · 6-party ad hoc conferencing
- Multiple line appearances
- Bridged line appearances
- Lookup/Dial enterprise Contacts via LDAP requires integration with LDAP
- Lookup/Dial Microsoft Outlook or IBM Lotus Notes Contacts
- Click-to-Dial from Microsoft Outlook Contacts requires integration with Microsoft Outlook
- Click-to-Dial from Lotus Sametime
- Click-to-Dial from Microsoft Internet Explorer and Mozilla Firefox
- · Wipe-to-dial (clipboard dialing) from an application
- Click-to-Email via Microsoft Outlook or IBM Lotus Notes requires integration with Avaya one-X Portal
- Click-to-IM via Microsoft Office Communicator requires integration with Application Enablement Services
- 24*7 Call logs requires integration with Avaya one-X Portal
- · Enhanced login preferences: Automatic login and Autostart
- Emergency call handling
- Docking and undocking of Dialpad and Bridge Conferencing windows
- Expanded video options: Full screen option, Always on top feature, and Screen Saver and Monitor Power Saving feature

Deployment options

Deployment options are:

- H.323 Telephony feature set
- SIP Telephony feature set

Optional video

Video features are optional and include:

- SIP high definition video in My Computer mode using Session Manager 6.0 SP1
- H.323 high definition video in My Computer and Desk Phone modes
- · 6-party ad hoc conferencing showing active speaker
 - (Requires Meeting Exchange Enterprise with CIF video resolution)
- · 6-party ad hoc conferencing

(Requires Meeting Exchange Enterprise)

For more information about video features, see <u>Overview of video</u> on page 51.

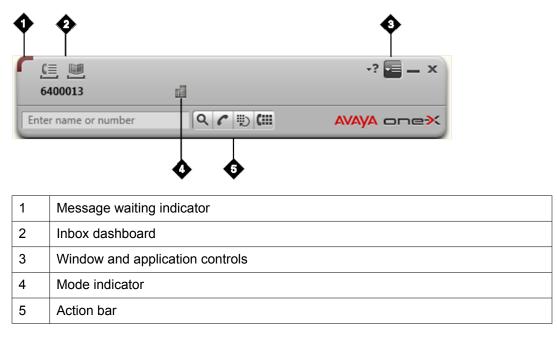
Features with Application Enablement Services (optional)

Basic features that require integration with Application Enablement Services are optional. They include:

- Telephony integration with Microsoft Office Communications Server and IBM Lotus Sametime Connect
- · Feature tab in Microsoft Office Communicator

Basic user interface

An example of the user interface for the Basic feature set follows.



User interface description

The user interface provides easy and intuitive access to Avaya one-X Communicator features.

Message waiting indicator

The Message waiting indicator (MWI) alerts you to new voice mail messages in your inbox. In addition, you can use it to retrieve voice mail messages stored in your inbox.

Inbox dashboard

The inbox dashboard gives you easy access to:

- Call logs
- Contacts

Window and application controls

Window controls allow you to:

- Open online Help. The Help describes how to use the icons in the user interface to perform tasks.
- Open a context-sensitive menu to perform tasks like changing your settings and exiting the program.
- Minimize the interface and place a Avaya one-X Communicator icon in the desktop task bar.
- Minimize the interface and place a Avaya one-X Communicator icon in the system tray.

Mode indicator

The mode indicator displays your active usage mode. Examples of modes are:

- Office
- Home
- Mobile
- Traveling

Action bar

The action bar contains a field for entering names or phone numbers. The buttons in the action bar perform the following tasks with the information you entered:

- · Search the contact results based on the letters or numbers you entered
- Dial the number or name that you entered
- Redial the number or name that you entered
- Display the Dialpad

Telephony

Basic Avaya one-X Communicator telephony features support both the SIP and H.323 protocols. You choose one of these protocols when you install Avaya one-X Communicator.

Feature highlights

The following telephony features are available and may require administration and configuration in Communication Manager:

- Call answer
- Call forwarding
- Send all calls to coverage
- Call hold (automatic and user selected)
- Call resume (user selected only)
- Call transfer (user selected only)
- Call mute (user selected only)
- Automatic call back
- Outgoing calls from the desk top, Dialpad, and personal contact list
- Click-to-Dial from Lotus Sametime
- Click-to-Dial from Microsoft Office Communicator via Application Enablement Services
- Click-to-Dial from Microsoft Outlook Contacts
- Click-to-Dial from any number highlighted in Microsoft Internet Explorer and Mozilla Firefox browsers
- Wipe-to-Dial (clipboard dialing) from an application
- Manage multiple call appearances
- Communication Manager feature buttons (when configured). For example, Extension to Cellular

😵 Note:

The Call Retrieve feature button is for SIP mode only. In H.323 mode, you need to use feature access code (FAC) to retrieve a call or click the active Call Park button.

- Call logs
- Audio Tuning

Conferencing

Avaya one-X Communicator supports Meet-Me conferencing (ad hoc conferences with as many as 6 parties.)

Voice messaging

The Message Waiting Indicator (MWI) is included in the Basic feature.

Call logs

The call log feature:

- Logs incoming, outgoing, and missed calls
- · Logs calls whenever Avaya one-X Communicator is running

Contact management

You can access your enterprise contact (Favorites) and personal contact directories from the Avaya one-X Communicator user interface.

Enterprise contact directories (Favorites)

Avaya one-X Communicator uses Public Directory Client software, which is LDAP compliant, to support the following types of enterprise contact directories. Users cannot make changes to the contents of these directories.

- Active Directory (for Windows)
- LDAP (for IBM Domino or Novell eDirectory)

You select one of these directories when you configure your desktop for Avaya one-X Communicator.

Personal contact directories

After you create your personal contact directory, you can edit it from the Avaya one-X Communicator user interface.

Feature highlights

- Display favorites and personal directories
- Search for a contact in all of your directories at the same time or in each directory separately
- Add, change, and delete personal contacts

- View contact details. You can change this information for a personal contact, but not for a favorite contact.
- · Click-to-Dial the contact from your contact directories
- Single-click on a contact to open your default e-mail client. The e-mail that opens is preaddressed to that contact.
- Double-click on a contact to display more details
- Send an Instant Message from your contact directories. Avaya one-X Communicator launches your default Instant Message client, Microsoft Office Communicator or IBM Lotus Sametime Connect.
- · Create Journal entries (in a Microsoft Outlook environment)

Feature functionality

Functionality for Basic contact management features include:

- You can only establish an Instant Message session with a user who is online.
- If a contact record contains more than one phone number, you select the number you want to dial from a menu.
- You can set the Contacts inbox to display all favorites and personal contacts by default. However, this setting might affect performance.

Software interactions

Software interactions for Basic contact management features include:

- Screen pops are available for personal contact searches only if you have installed and properly configured the Avaya Integrator for Outlook.
- You cannot import contacts into Avaya one-X Communicator. However, Avaya one-X Communicator allows you to search the Outlook or Lotus Notes contact directory and then Click-to-Dial or e-mail the contact.

Avaya Integrator for Outlook

The Avaya Integrator for Outlook integrates Avaya one-X Communicator with Microsoft Outlook. The first time you log into Mircrosoft Outlook after you install this application, the Integrator displays automatically. You can also launch it anytime from the Avaya menu in Microsoft Outlook.

The Integrator allows you to configure Avaya one-X Communicator to:

- Click-to-call from Microsoft Outlook contacts
- · Create journal entries for incoming and outgoing calls
- Set the duration for which Avaya one-X Communicator displays the incoming call alert (up to 15 seconds)
- Enable or disable pop up contact information for incoming calls

- Set the minimum number of digits used to find the best match for the contact name
- · Enable or disable logging by the Avaya Integrator for Outlook
- Set a schedule for automatically indexing your contacts
- · Launch immediate indexing of your contacts

Citrix Presentation Server

The Citrix Presentation Server allows you to connect to applications that are located on central servers.

You need to publish the application that you can connect to these applications remotely, from your home, airport Internet kiosks, softphones, and other devices outside of your corporate network. Applications seem to be installed and running on your desktop computer. However, they are actually running on the Citrix Presentation Server hosted in your corporate environment.

You can access Avaya one-X Communicator, if the Avaya one-X Communicator client application is a published application on the Citrix Presentation Server. For other integrations to work with Avaya one-X Communicator, an IT administrator should publish Microsoft Internet Explorer and Mozilla Firefox applications on the Citrix Presentation Server for using the clickto-dial feature.

The Citrix Presentation Server supports both SIP and H.323 softphones for Avaya one-X Communicator in the following environments:

- Microsoft Windows Server 2003 (64-bit version and 32-bit version)
- Microsoft Windows Server 2008 (64–bit version and 32–bit version)

Avaya one-X Communicator does not support My Computer mode or video when in a Citrix environment.

😵 Note:

Avaya one-X Communicator and IP Softphone is supported to be installed on the same Citrix presentation server. Although video is installed by default, it is not supported on Citrix presentation server.

Products and services required for Basic features

The following tables show which products and services are required for the Basic features.

H.323 protocol

Basic feature	Requirement
H.323 telephony features	Communication Manager Release 5.2 or later
H.323 video (point-to-point)	Communication Manager Release 5.2 or later
H.323 video with ad hoc video conferencing	Communication Manager Release 5.2 or later Avaya Aura [™] Conferencing Video conferencing bridge hardware
Desk Phone (hardware)	Avaya phone series 46xx, 24xx, 64xx, and 96xx (except 9610)
	🐼 Note:
	All 16xx phones configured as 46xx phones on the Communication Manager server are also supported. All phones not listed here are not supported in the Desk Phone mode. For more information about aliasing one telephone model as another, see Using an Alias section in the <i>Administering Avaya</i> <i>Aura Communication Manager</i> guide for Communication Manager.

SIP protocol

Basic feature	Requirement
SIP telephony and video features	Communication Manager Release 6.0 SP1 or later Avaya Aura [™] Session Manager Release 6.0 SP1 or later
SIP native Instant Messaging	Communication Manager Release 6.0 SP1 or later Avaya Aura [™] Session Manager Release 6.0 SP1 or later
Desk Phone (hardware)	Avaya phones series 96xx (except 9610) Note: SIP support in Desk Phone mode requires Avaya one-X desk phone SIP firmware version 2.6 or later

🐼 Note:

Avaya one-X Communicator supports video with H.323 in My Computer and Desk Phone modes but not in Other Phone mode. It supports video with SIP in My Computer mode but

not in Desk Phone and Other Phone modes. There is no support for video with the Citrix Presentation Server.

Product integrations and feature functionality

Basic feature	Requirement
Telephony integration with IBM Lotus Sametime Connect	IBM Lotus Sametime Connect Release 8.0 Application Enablement Services Release 4.2.2 or 5.2 (for call control)
Telephony integration with Microsoft Office Communications Server and Office Communicator	Microsoft Office Communications Server 2007 Release 1 and Release 2 Microsoft Office Communicator 2007 Application Enablement Services Release 4.2 (for call control and click-to-call)
Click-to-Dial from a Web browser	Microsoft Internet Explorer Release 6.0, or 7.0, or 8.0 (with Microsoft Windows 7) Mozilla Firefox Release 2.0, 3.0, or 3.5
Click-to-Dial from IBM Lotus Notes	IBM Lotus Notes Release 7.5.1 and 8.0
Click-to-Dial from IBM Lotus Sametime Connect	IBM Lotus Sametime Connect Release 8.0
Click-to-Dial from Microsoft Office Communicator	Microsoft Office Communicator 2007
Click-to-Dial from Microsoft Outlook	Microsoft Outlook 2003 or 2007
Citrix Presentation Server support (video	Citrix Presentation Server Release 4.5 with:
feature and My Computer log in mode are not supported)	 Microsoft Windows Server 2003 (32–bit version and 64–bit version)
	 Microsoft Windows Server 2008 (32–bit version and 64–bit version)
	Citrix XenApps 4.5

Basic feature set

Chapter 4: Unified Communication feature set

Overview of the Unified Communication feature set

Avaya one-X Communicator offers a rich set of features designed to help you manage all of your communication tasks. These features include:

- Desktop integration with an easy-to-use user interface
- Intelligent Presence
- Visual Audio Bridge Conferencing
- Visual voice mail
- Contact management, including access to LDAP directories within the enterprise
- · Communication History for enterprise calls and messages
- Presence access requests control

😵 Note:

Avaya one-X Communicator supports video with H.323 in My Computer and Desk Phone modes but not in Other Phone mode. It supports video with SIP in My Computer mode but not in Desk Phone and Other Phone modes. There is no support for video with the Citrix Presentation Server.

Software integration

To provide you with the Unified Communication feature set, Avaya one-X Communicator must integrate with Application Enablement Services and Avaya one-X Portal. Application Enablement Services cannot monitor H.323 and SIP endpoints concurrently. Therefore, Avaya recommends that you deploy the Unified Communication feature set using H.323. Avaya one-X Communicator Release 6.0 does not support the Avaya one-X Portal integration with a SIP endpoint because Avaya one-X Portal does not support SIP endpoints.

If you are using a SIP softphone, Avaya one-X Communicator also integrates with Session Manager.

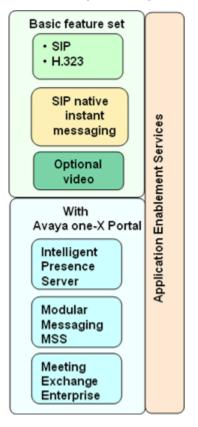
Related topics:

Unified Communication features at a glance on page 42

Unified Communication features at a glance

The Unified Communication feature set includes every thing in the Basic feature set. It also includes functionality based on the following Avaya products:

- Avaya one-X Portal
- Intelligent Presence Server
- · Modular Messaging, MSS configuration
- Meeting Exchange Enterprise



For a more detailed view of the above picture, see <u>Avaya one-X Communicator overview</u> on page 7.

Basic feature set

The Unified Communication feature set includes the functionality of the Basic feature set. For information about the Basic feature set, see <u>Overview of the Basic feature set</u> on page 29.

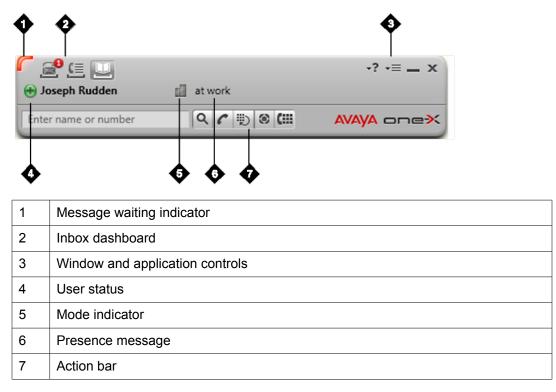
With Avaya one-X Portal

When you deploy the Unified Communication feature set, you receive all of the functionality of the Basic feature set. You also receive the following features:

- Intelligent Presence, see <u>Intelligent Presence</u> on page 45. This feature requires integration with Intelligent Presence Server.
- Visual Audio Bridge Conferencing, see <u>Visual Audio Bridge Conferencing</u> on page 46. This feature requires integration with Avaya Modular Messaging.
- Visual Messaging, see <u>Visual Messaging</u> on page 46. This feature requires integration with Avaya Modular Messaging.
- Contact management, see <u>Contact management</u> on page 47. This feature requires integration with LDAP server.
- Communication History, see Communication History on page 48
- Video presence, see Intelligent Presence on page 45

Unified Communication user interface

An example of the user interface for the Unified Communication feature set follows.



User interface description

Message waiting indicator

The Message waiting indicator (MWI) alerts you to new voice mail messages in your inbox. In addition, you can use it to retrieve voice mail messages stored in your inbox.

Inbox dashboard

The inbox dashboard gives you easy access to:

- Voice mail. The previous picture shows that there is one new message.
- Communication History
- Contacts

Window and application controls

Window controls allow you to:

- Open online Help. The Help describes how to use the icons in the user interface to perform tasks.
- Open a context-sensitive menu to perform tasks like changing your settings and exiting the program.
- Minimize the interface and place a Avaya one-X Communicator icon in the desktop task bar.
- Minimize the interface and place a Avaya one-X Communicator icon in the system tray.

User status

This indicator displays a contact's current status. This status is either automatic or selected by the contact. Examples of user statuses are:

- Available
- Busy
- Unavailable
- Out of office
- Offline

Mode indicator

The mode indicator displays a contact's active usage mode. Examples of modes are:

- Office
- Home
- Mobile
- Traveling

Presence message

The user interface displays your contact's presence message. Examples of presence messages are:

- Away
- On a call
- In a Conference
- Hosting Conference
- · In a meeting
- Out of Office

You can customize the presence message that displays on your contact's user interface by entering a new presence message.

Action bar

The action bar contains a field for entering names or phone numbers. The buttons in the action bar perform the following tasks with the information you entered:

- Search for the text or numbers that you entered
- · Dial the number or name that you entered
- · Redial the number or name that you entered
- Show the conference bridge
- Display the Dialpad

Intelligent Presence

The Avaya one-X Communicator intelligent presence features help you reach coworkers and staff quickly.

Feature highlights

This Unified Communication option includes the following features:

- View a contact's presence via system messages
- · View whether the contact has video enabled
- · View a contact's presence via status messages
- · View a contact's usage mode or set your own mode

Products and services required in a Microsoft environment

The following products and services are required for proper software integration in a Microsoft environment:

- Intelligent Presence Server
- Application Enablement Services
- Avaya one-X Portal
- Microsoft Office Communicator
- Microsoft Office Communications Server

Visual Audio Bridge Conferencing

The optional Avaya one-X Communicator conferencing features can improve collaboration by increasing the effectiveness of conference calls made on the Avaya Conferencing Enterprise solution.

Feature highlights

This Unified Communication option includes the following features:

- Start a conference, mute, drop, and invite new participants
- Initiate lecture mode
- Record a bridged conference
- View Caller ID or name (when name is mapped) in a bridged conference
- · Identify the speaker, noisy lines, and muted participant
- Lock a conference
- Close a conference

Products and services required for Visual Audio Bridge Conferencing

Visual Audio Bridge Conferencing requires access to the following products and services:

- Avaya one-X Portal
- Conferencing Enterprise

Visual Messaging

The Avaya one-X Communicator Visual Messaging features can increase personal productivity by providing visual access and sorting capability to voice messages for users of Modular Messaging with MSS.

Feature highlights

This Unified Communication option includes the following features:

- Message Waiting Indicator (MWI)
- · View your voice mail
- View the status of a message (read, unread)
- · Click-to-play and delete voice messages from your desktop
- · Download and save the voice message
- · View the caller's name (if available) or phone number
- · Add the phone number to personal contacts
- · Add a number to favorites
- Send an e-mail to the caller
- · Send an instant message to the caller

Products and services required for Visual Messaging

Visual Messaging is an optional Unified Communication feature that requires access to the following Avaya products:

- Avaya one-X Portal
- Avaya Modular Messaging with Message Storage Server (MSS)

Contact management

Contact management in the Unified Communications feature set builds on the Basic feature set by adding Avaya one-X Portal functionality.

Personal contact directories

After you create your personal contact directory within Avaya one-X Portal, you can edit it from the Avaya one-X Communicator user interface. However, you cannot view presence information from this directory.

Feature highlights

In addition to the Basic contact management features, the integration with Avaya one-X Portal allows you to display the Presence Access List (PAL) and view presence information for corporate contacts in call logs, visual voice mails, favorites, and messages.

Feature functionality

Functionality for Unified Communication contact management features include:

• You can click on the Instant Message icon for a specific contact to start your default Instant Message client (Microsoft Office Communicator or Lotus Sametime.) You can only establish an Instant Message session with a user who is online and who is using the same

Instant Message client that you are using. For example, Microsoft Office Communicator users cannot send an Instant Message to AOL users, Yahoo users, or MSN users.

- You can click on the e-mail icon to use your default mail client (Microsoft Outlook or IBM Lotus Notes) to compose a new e-mail.
- If a contact record contains more than one phone number, you select the number you want to dial from a menu. The Unified Communication integration with Avaya one-X Portal and the Intelligent Presence Server displays presence information only for the contact's primary number.
- Call records for known contacts display basic presence information and available communication channels.
- You can set the Contacts inbox to display all corporate and personal contacts by default. However, this setting might affect performance.

Software interactions

Software interactions for Unified Communication contact management features include:

- Screen pops are available for personal contact searches only if you have installed and properly configured the Avaya Integrator for Outlook.
- You cannot import contacts into Avaya one-X Communicator. However, Avaya one-X Communicator allows you to search the Outlook or Lotus Notes contact directory and then Click-to-Dial or e-mail or IM the contact.

Communication History

Communication History logs incoming and outgoing calls across the following products:

- Avaya one-X Communicator
- Avaya one-X Portal
- Avaya desk phones

Logs are stored on the Avaya one-X Portal server.

Feature highlights

In addition to the Basic call log features, you can:

- View 24*7 call logs from the user interface. You can view incoming and outgoing call logs for Avaya desk phones that occurred even when Avaya one-X Communicator was not running.
- Sort records by name, time, status, and so on.

Products and services required for Communication History

Communication History requires Avaya one-X Portal.

Products and services required for Unified Communication features

The Unified Communication feature set includes the Basic features. Therefore, the requirements in this section are in addition to those described for the Basic features. All Unified Communication features require integration with Avaya one-X Portal.

Unified Communication features

Unified Communication feature (integrated with Avaya one-X Portal)	Requirement
Call logs and contacts	Avaya one-X Portal Release 5.2
Visual Messaging	Avaya one-X Portal Release 5.2 Modular Messaging with Message Storage Server (MSS) Release 4.0 or 5.2
Visual Audio Bridge Conferencing	Avaya one-X Portal Release 5.2 Conferencing Enterprise Release 4.1 or 5.2
Intelligent Presence	Avaya one-X Portal Release 5.2 Intelligent Presence Server Release 1.0
Telephony and presence integration with Microsoft Office Communications Server and Office Communicator	Avaya one-X Portal Release 5.2 Application Enablement Services Release 4.2.2 or 5.2 Intelligent Presence Server Release 1.0 Microsoft Office Communications Server 2007 Microsoft Office Communicator 2007
Telephony with Microsoft Office Communications Server and Office Communicator	Avaya one-X Portal Release 5.2 Application Enablement Services Release 4.2.2 or 5.2 Microsoft Office Communications Server 2007 Microsoft Office Communicator 2007

Unified Communication feature set

Chapter 5: Video Communication

Overview of video

Video communication using Avaya one-X Communicator is as simple as a phone call. This solution:

- High definition video quality
- Supported on both 32-bit and 64-bit Windows 2000, Windows XP, Windows Vista, and Windows 7
- · Provides both point-to-point and multipoint capability
- Gives users improved collaboration capability for real-time decision making in the office, at home, or on the road

Avaya one-X Communicator has support for SIP protocol in My Computer mode and H.323 protocol in My Computer and Desk Phone modes.

Avaya one-X Communicator uses a single IP network for voice and video applications. This allows businesses to reduce costs, simplify network management, and make video a significant component of enterprise communications.

Avaya one-X Communicator automatically adjusts the video quality based on computer's capabilities.

Video telephony is an optional Avaya one-X Communicator feature and requires the Communication Manager Remote Feature Activation (RFA) license. For information about this license requirement, see <u>Licenses</u> on page 55.

😵 Note:

There is no support for video with the Citrix Presentation Server.

Communication Manager Release 6.0 SP1 supports SIP video and audio shuffling optimization. In addition, it indicates when the called party is a video-enabled endpoint and hence allows video to be added when a called party is transferred or conferenced

Additional video information

For more information about video features, see the Avaya Video Telephony Solution deployment guide which is available on the Avaya Web site at http://www.avaya.com/support.

Video features for Avaya one-X Communicator

Video capability is an optional feature for Avaya one-X Communicator. Avaya one-X Communicator Release 6.0 supports video features with Communication Manager Release 5.2 or later.

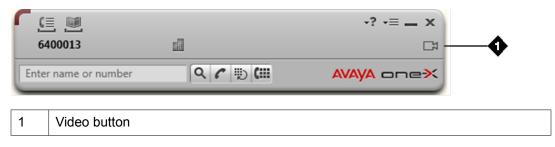
Feature highlights

Video features for Avaya one-X Communicator are:

- Desktop video controls: stop, mute/unmute, display properties and options, and relinquish camera control
- · Video ad hoc conferencing
- · Point-to-point and multipoint video
- Bandwidth management
- Class of service and Differentiated Services Code Point tagging
- · Video window always on top
- Full screen video window
- · Disabling screen saver and saving monitor power

Basic user interface with video

Following is an example of the user interface for the Basic feature with the optional video feature:



Unified Communication user interface with video

Following is an example of the user interface for the Unified Communication feature with the optional video feature:

	seph Rudden	at work		•
Enter	name or number	<u>२</u> ८ छ 🖲	AVAYA onex	
1	Video button			

Products required for video features

Avaya products

Avaya one-X Communicator features differ depending on the Communication Manager release because video is part of Communication Manager.

Web camera

You can use any of the following USB cameras with Avaya one-X Communicator:

HD cameras

Camera	Driver
Creative Live! Cam Socialize HD webcam	1.2.1.0
Microsoft LifeCam Cinema	3.20.240.0
Logitech [®] Webcam C905	13.0.1788.0
Logitech [®] Webcam Pro 9000	12.10.11113.0000

Other cameras

Camera	Driver
Logitech [®] Webcam Pro 5000	12.0.1278.0
Logitech [®] QuickCam Messenger	12.0.1278.0
Creative Live! Cam Notebook Pro	1.2.6.627

Additional product information

You can find additional information about video products from the following resources:

- For video requirements for your computer, go to End user requirements on page 56.
- For information about the supported web cameras, go to the manufacturer's Web site.

Chapter 6: Deployment planning

Deployment overview

You can deploy Avaya one-X Communicator in network environments that support the following telephony protocols:

• H.323

• SIP

Avaya one-X Communicator supports both protocols in the same network for the Basic feature set. However, it only supports H.323 for the Unified Communication feature set.

To deploy the Basic feature set with SIP, you must also deploy Session Manager.

For information about how to configure different Avaya one-X Communicator settings, see *Avaya one-X*[®] *Communicator Centralized Administration Tool* guide on the Avaya Support Web site <u>http://www.avaya.com/support</u>.

Licenses

Avaya controls the use of Avaya one-X Communicator and the optional video telephony feature through licenses. You must purchase licenses for these products in order to use them.

Avaya one-X Communicator in H.323 mode

This deployment option requires a station form on Communication Manager with the Avaya one-X Communicator registration limit in the Communication Manager Remote Feature Activation (RFA) license. The Avaya one-X Communicator registration limit is automatically included in all Communication Manager Release 4.0.4 RFA licenses generated after January 8, 2008 and is automatically included in all Communication Manager Release 5.0 or later RFA licenses. However, customers still need to acquire the right to use Avaya one-X Communicator from Avaya.

Avaya one-X Communicator in SIP Mode

This deployment option requires a station form on Communication Manager and a userid and media extension on Session Manager for each user. It does not require use of the Avaya one-X Communicator registration limit in Communication Manager nor softclient licenses on either Session Manager or Communication Manager.

Video telephony (H.323 and SIP)

Video telephony is an optional Avaya one-X Communicator feature that is controlled in the Communication Manager RFA license.

You only need this license if you are deploying the Avaya one-X Communicator video feature. You need to select the **IP Softphone** and **IP Video Softphone** check boxes while administering H.323 and SIP endpoints. For more information see the Avaya Video Telephony Solution Quick Setup guide, available on the Avaya Web site at <u>http://www.avaya.com/support</u>.

Avaya one-X Communicator supports video with H.323 in My Computer and Desk Phone modes but not in Other Phone mode. It supports video with SIP in My Computer mode but not in Desk Phone and Other Phone modes. There is no support for video with the Citrix Presentation Server.

Each Avaya one-X Communicator station administered on Communication Manager requires one RTU License for the Maximum Video Capable Avaya one-X Communicator Endpoints feature.

These licenses are automatically included in all Communication Manager RFA licenses.

You need to provisin and enable the Communication Manager RFA license.

Other products

Other products which Avaya one-X Communicator may integrate with have separate licensing requirements. Refer to the product documentation for the specific product for additional information.

End user requirements

Following are the hardware, software, and connectivity requirements for an end user:

Computer hardware without video

Computers that are not running the optional video feature must meet these hardware requirements:

- Intel Pentium 1.2 GHz processor (minimum)
- 1 GB RAM. More for Windows Vista and Windows 7 as per Microsoft recommendations
- 1.5 GB free hard disk space (minimum)
- Keyboard
- Mouse or some other compatible pointing device
- Monitor with 1024 x 768 or higher resolution
- Network interface card
- USB headset for My Computer mode

Computer hardware with video

Computers that are running the optional video feature must meet these hardware requirements:

- Intel Pentium 4 2.0 GHz or dual-core processor (minimum)
- 1 GB RAM. More for Windows Vista and Windows 7 as per Microsoft recommendations
- 100 MB dedicated Video RAM
- 1.5 GB free hard disk space (minimum)
- Keyboard
- · Mouse or some other compatible pointing device
- Video Adaptor and Monitor with 1024 x 768 or higher resolution
- Network interface card
- · USB headset for My Computer mode
- Recommended USB camera. See <u>Products required for video features</u> on page 53 on page for a list of Web cameras.

Computer hardware with HD video

Computers that are running the optional HD video feature must meet these hardware requirements:

- Intel Dual Core or Core 2 Duo or Core i3 (minimum)
- 2 GB RAM. More for Windows Vista and Windows 7 as per Microsoft recommendations
- 100 MB dedicated Video RAM. If this is shared with main RAM, main RAM needs to be increased by 100 MB.
- 1.5 GB free hard disk space (minimum)
- Keyboard
- · Mouse or some other compatible pointing device
- Video Adaptor and Monitor with 1024 x 768 or higher resolution
- Network interface card
- USB headset for My Computer mode
- HD camera (up to 720p that supports 30fps video)

Operating system

Computers must have one of the following 32 bit or 64 bit operating systems.

- Microsoft Windows 2000
- Microsoft Windows XP Home or Professional editions with Service Pack 3 or higher
- Microsoft Windows Vista Enterprise or Ultimate or Business Editions with Service Pack 2 or higher
- Microsoft Windows Server 2003

- Microsoft Windows Server 2008
- Microsoft Windows 7 Enterprise or Ultimate or Professional Editions

Required Microsoft products

Avaya one-X Communicator requires the following products. You can download this software from the Microsoft Web site <u>http://www.microsoft.com</u>.

- Microsoft .NET Framework, 3.5 SP1
- Microsoft Visual C++ 2005 SP1 Redistributable Primary Interop Assemblies (PIA), required only when integrating with Microsoft Office 2003 or 2007
- Microsoft DirectX. Computers running
 - Windows XP require Release 9.0c
 - Vista require Release 10
- Windows Media Player Release 10 or higher, required if you are using the H.323 protocol

For more information about these products, see <u>Required third-party software products</u> on page 25.

Web camera

This document has a list of supported web cameras at <u>Products required for video features</u> on page 53.

Telephones

Avaya 24xx, 46xx, 64xx, or 96xx (except 9610) series phone

😵 Note:

- Avaya one-X Communicator supports only 96xx series telephones (except 9610) in SIP mode with Desk phone mode.
- All 16xx phones configured as 46xx phones on the Communication Manager sever are also supported.
- All phones not listed here are not supported in the share control mode.

Headsets

Avaya recommends the following wireless (USB/PC) headsets for use with Avaya one-X Communicator. The list is in no particular order.

Model	Supported region	Headset
700438534	Global, non EMEA	ABT 35 USB Headset NA
700438559	EMEA	ABT 35 USB Headset Euro
700373335	Global, non EMEA	HDST AWH-55 USB Wireless Headset
700413834	EMEA	AWH-65 USB WRLs Headset Euro RHS

To use these wireless headsets, you need Persono Suite software Release 1.1.

Avaya recommends the following wired headsets for use with Avaya one-X Communicator:

Model	Supported region	Headset
SupraElite		
700343718	Global	HDST – SUPRA ELITE MON VT (AH450)
700343726	Global	HDST – SUPRA ELITE MON NC (AH450N)
700343742	Global	HDST – SUPRA ELITE BI NC (AH460N)
700413925	EMEA	SUPRA ELITE MON VT (AH450-EURO RHS)
700413933	EMEA	SUPRA ELITE MON NC (AH450N-EURO RHS)
700413941	EMEA	SUPRA ELITE BI VT (AH460/A RHS)
700413958	EMEA	SUPRA ELITE BI NC (AH460N-Euro RHS)
SupraElite Wideband		
700453012	Global, non EMEA	HDST WBAND2 MONRL AW450N US
700453020	Global, non EMEA	HDST WBAND2 BINRL AW460N US
700453038	EMEA	HDST WBAND2 MONRL AW450N EURO
700453046	EMEA	HDST WBAND2 BINRL AW460N EURO
Encore		
700470578	Global, non EMEA	ENCORE ELITE MONAURAL
700470586	Global, non EMEA	ENCORE ELITE BINAURAL
700470594	EMEA	CE ENCORE ELITE MONAURAL
700470602	EMEA	CE ENCORE ELITE BINAURAL
Tristar		

Model	Supported region	Headset
408020758	Global, non EMEA	TRI STAR HEADPIECE NOISE CANCL

To use these wired headsets, you need:

- Avaya one-X Communicator Release 1.0 or later
- USB Adapter

Model	Supported region	USB
700414139	Global	HEADSET QD-USB ADAPTER RHS

For more information about these headsets, see the Avaya Headset Catalog available on the Avaya Web site.

😵 Note:

Before using these headsets, customers should test them in their environment. Other headsets may work as well, but they should be extensively tested in the customers' environment.

Web browser

End users can choose any of the following browsers:

For this Avaya one-X Communicator function	You can use these browsers
Telephony integration <i>with</i> Office Communicator	Microsoft Internet Explorer Version 6.0, 7.0, or 8.0 (with Microsoft Windows 7) Mozilla Firefox Version 2.0, 3.0, or 3.5
Telephony integration <i>without</i> Office Communicator	Microsoft Internet Explorer Release 6.0, 7.0, or 8.0 (with Microsoft Windows 7) Mozilla Firefox Release 2.0, 3.0, or 3.5

Enterprise requirements

System requirements for the Enterprise follow.

Avaya products and services for deployment options

	H.323	SIP
Avaya Communication Manager with Video Telephony configured	5.2 and later	6.0 SP1 and later

Avaya products and services for feature sets

	Basic	UC
Presence	Presence Services 6.0 for SIP mode	Intelligent Presence Server 1.0
Avaya Application Enablement Services	4.2.2 or 5.2	4.2.2 or 5.2
Avaya one-X Portal (in H.323 mode only)	N/A	5.2
Avaya Modular Messaging with Message Storage Server (MSS)	N/A	4.0 or 5.2
Avaya Aura [™] Conferencing	N/A	4.1 or 5.2
Avaya Integrator for Outlook	2003 or 2007	2003 or 2007

IBM products

This section only applies if you plan to deploy Avaya one-X Communicator in an IBM environment.

All of the Avaya one-X Communicator functions shown are optional. You can deploy Avaya one-X Communicator in an IBM environment without them. However, some functionality may require the following Avaya products:

- Avaya Application Enablement Services required for the click-to-call feature.
- Presence server required for the presence feature.

For this Avaya one-X Communicator function	You need this IBM product	At this release
Click-to-Dial from IBM Lotus Sametime Connect	IBM Lotus Sametime Connect	8.5
Telephony integration with IBM Lotus Sametime Connect	IBM Lotus Sametime Connect	8.0
Click-to-Dial from IBM Lotus Notes	IBM Lotus Notes	7.5.1 or 8.0

Optional Microsoft products

All of the Avaya one-X Communicator functions shown below are optional. You can deploy Avaya one-X Communicator in a Microsoft environment without them. However, some functionality may require the following Avaya products:

- Avaya Application Enablement Services required for the click-to-call feature.
- Presence server required for the presence feature.

For this Avaya one-X Communicator function	You need these Microsoft products
Telephony integration <i>with</i> Office Communicator	Microsoft Office Communicator 2007 Microsoft Office Communications Server 2007 Release 1 and Release 2 Microsoft Internet Explorer Release 7.0 A Web server to install Microsoft Office Communicator's Tab components.
Click-to-Dial from Microsoft Outlook	Microsoft Outlook 2003 or 2007
Contact management	Microsoft Active Directory server 2003 or Windows Server 2008 Active Directory Domain Services

Other optional products

You may also need the following products:

- Citrix Presentation Server Release 4.5 or Citrix XenApps 4.5
- IBM Domino or Novell eDirectory, for contact management in a non-Microsoft environment

Planning for implementation

Because Avaya one-X Communicator interacts with many different products and services, you need to plan for a successful implementation. Use the following steps as a guide for your planning activities:

1. Determine how your enterprise will deploy Avaya one-X Communicator. Deployment options follow:

Telephony protocol	Feature set	Usage mode
H.323 and SIP	Basic	Desk Phone My Computer Other Phone

Telephony protocol	Feature set	Usage mode
H.323	Basic with optional video	Desk Phone My Computer
SIP	Basic with optional video	My Computer
H.323	Unified Communication	Desk Phone My Computer Other Phone
H.323	Unified Communication with optional video	Desk Phone My Computer



Avaya one-X Communicator supports video with H.323 in My Computer and Desk Phone modes but not in Other Phone mode. It supports video with SIP in My Computer mode but not in Desk Phone and Other Phone modes. There is no support for video with the Citrix Presentation Server.

- 2. Ensure that all product licenses are in place.
- 3. Ensure that the end user and enterprise environments can support Avaya one-X Communicator. For your deployment option, consider the following:
 - · Is the required hardware in place?
 - Have all related Avaya software products been installed and administered correctly?
 - Have all related third-party software products been installed and administered correctly?
 - Have you verified that your infrastructure is ready for video telephony? For more information see the Avaya Video Telephony Solution Quick Setup guide, available on the Avaya Web site at http://www.avaya.com/support.
- 4. Determine how you will distribute Avaya one-X Communicator software to your employees. You can:
 - Use a tool like the Microsoft Software Management Server (SMS) for silent installations
 - Use a customer-installable process that requires end users to manually install Avaya one-X Communicator and other related software
- 5. Ensure that end users can access the following Avaya one-X Communicator implementation and set up documents:
 - Avaya one-X Communicator Getting Started
 - Avaya one-X Communicator Quick Setup

Implementation

Your enterprise can use either of the following deployment methods to install Avaya one-X Communicator:

- Silent installation. Your enterprise's system administrator customizes, tests, and deploys the Avaya one-X Communicator installer software.
- Customer installation. Your enterprise's end users manually do the following:
 - Uninstall Avaya Softphone and related software (required only if they are currently using Avaya Softphone with video)
 - Download and install all required software onto their computers

Related topics:

<u>Silent installation</u> on page 64 <u>Customizing the installer</u> on page 65 <u>Uninstalling existing software</u> on page 66 <u>Installing Avaya one-X Communicator manually</u> on page 67 <u>Initial configuration</u> on page 68 <u>Customization</u> on page 73

Silent installation

The silent installer for Avaya one-X Communicator installs Avaya one-X Communicator with the following features and integrations:

- H.323 and SIP protocols
- Video telephony
- Avaya Integrator for Outlook
- Avaya one-X Portal
- Microsoft Internet Explorer
- Mozilla Firefox

Properties

The value of 1 enables the following properties:

- •INST_OUT_1XC
- INST_IE_1XC

- INST_FIREFOX_1XC
- FEATURERADIO=2 (SIP)

Syntax for MSI files

The installer uses MSI files to install the following. All parameters are case sensitive.

• H.323 protocol

msiexec /i "onexc_setup_6.0.0.26.msi" ADDLOCAL=Complete,H. 323,Outlook_Integrator,IE,FIREFOX INST_OUT_1XC=1 INST_IE_1XC=1 INST_FIREFOX_1XC=1 /I*v C:\install.log /qn

SIP protocol

```
msiexec /i "onexc_setup_6.0.0.26.msi"
ADDLOCAL=Complete,SIP,Outlook_Integrator,IE,FIREFOX INST_OUT_1XC=1
INST_IE_1XC=1 INST_FIREFOX_1XC=1 /l*v C:\install.log /qn
```

Silent uninstall

msiexec /x "onexc_setup_6.0.0.26.msi" /I*v C:\temp\Uninstall.log /qn

OR

msiexec /uninstall "onexc_setup_6.0.0.26.msi" /I*v C:\temp\Uninstall.log /qn

Example

An example for the SIP protocol is:

C:\Users\Administrator\Desktop>msiexec /i onexc_setup_6.0.0.26.msi ADDLOCAL=Complete,SIP,Outlook_Integrator,IE,FIREFOX INST_OUT_1XC=1 INST_IE_1XC=1 INST_FIREFOX_1XC=1 /l*v c:\installerlogs.log /qn

Customizing the installer

You can customize the Avaya one-X Communicator installer for your enterprise's specific deployment.

Prerequisites

Before you begin customizing the Avaya one-X Communicator installer, complete the following:

- Complete all planning activities described in <u>Planning for implementation</u> on page 62 so you have a clear understanding of how your company's network and end user environments need to change to support Avaya one-X Communicator.
- Optional. If you want to enable the Auto-configure button and pre-populate some of the end user's configuration fields, configure the automatic settings in the 46xxsetting.txt file that is hosted on your http/https server. Also ensure that end-user computers are in a network that has access to the Dynamic Host Configuration Protocol (DHCP).

Use the following guidelines for customizing the Avaya one-X Communicator installer to meet your company's needs. Use only the guidelines that apply to your networking environment, but script the installer to follow the sequence shown below.

- 1. Uninstall Avaya softphone software as described in <u>Uninstalling existing</u> <u>software</u> on page 66.
- 2. Install Microsoft .Net Framework onto the end users' computers *before* you install Avaya one-X Communicator.
- 3. Use the appropriate installation script to install Avaya one-X Communicator. See <u>Silent installation</u> on page 64 and <u>Silent installation on non-English operating</u> <u>systems</u> for more information.
- 4. If you are integrating Avaya one-X Communicator with Microsoft Office 2003 or 2007, then install Microsoft Redistributable Primary Interop Assemblies (PIA). If this software has previously been installed on end user computers, you do not have to reinstall it. However, if it has not been installed previously, be sure to install it *after* you install the Avaya Integrator for Outlook.

Next steps

Test your installer until it meets your expectations. Then follow you company's silent installation process for deploying software.

Uninstalling existing software

If you are not currently using Avaya softphones with video, you can skip this section.

If you are currently using Avaya softphones with video, and if you plan to use Avaya one-X Communicator with video, then you must uninstall the following Avaya software from your computer before you install Avaya one-X Communicator:

- Avaya IP Softphone
- Avaya one-X Desktop Edition (formally SIP Softphone)
- Avaya Integrator for Outlook

Prerequisites

Before uninstalling Avaya IP Softphone software, record the following information. You need this information when you install Avaya one-X Communicator:

- Your IP Softphone call server address
- Your IP Softphone login
- The password for your extension

To uninstall Avaya software:

- 1. Navigate to the Windows Add or Remove Programs utility (Start/Settings/Control Panel).
- 2. Follow the standard process for removing programs from Windows.

Installing Avaya one-X Communicator manually

Prerequisites

The following are prerequisites to installing Avaya one-X Communicator:

- If you plan to install Avaya one-X Communicator with video and if Avaya IP Softphone with video is on your computer, then you must remove all of the software discussed in <u>Uninstalling existing software</u> on page 66 before you install Avaya one-X Communicator.
- Microsoft .NET Framework 3.5 Service Pack 1 has been installed on the computer. See <u>Required third-party software products</u> on page 25 for more information.
- Optional. If you want to use the Auto-configure button to pre-populate some of your configuration fields, your system administrator must first configure the automatic discovery settings in the 46xxsettings.txt file that is hosted on your http/https server. Your computer must also be in a network that has access to the Dynamic Host Configuration Protocol (DHCP).

To install Avaya one-X Communicator on to your computer, follow these steps:

2. Follow the installation instructions in the Avaya one-X Communicator Getting Started guide.

^{1.} Close all open applications.

Next steps

Launch Avaya one-X Communicator and follow the instructions in the Avaya one-X Communicator Quick Setup guide.

Initial configuration

After you install Avaya one-X Communicator you need to configure it. If your company has implemented the Auto-configure functionality of Avaya one-X Communicator, the Auto-configure button on the General Setting screens pre-populates some settings for you. See the *Avaya one-X Communicator Getting Started* guide for more information.

Related topics:

Pre-configure using Avaya one-X Communicator on page 68 Manually create or edit the configuration files on page 68 Auto-configure at startup on page 72 Auto-configure as needed on page 73

Pre-configure using Avaya one-X Communicator

The administrator can install Avaya one-X Communicator on a machine with the typical installation. Once installed, start the application and configure the desired values through the Settings menu. The administrator can enter the server address, desktop integration settings and/or public directory settings. As long as the administrator does not enter any user specific data, such as password and user name, the configuration data generated after such configuration can be copied and distributed to all users. This is less error-prone.

Manually create or edit the configuration files

The configuration files used by Avaya one-X Communicator are XML files which can be edited using either XML file editor or any text editor such as Notepad. However, administrators need to know the specific configuration parameters to be edited. For more advanced features and options, administrators need to contact Avaya technical support.

Location of the configuration files

Avaya one-X Communicator configuration files are located under user data directory: %APPDATA%\Avaya\Avaya one-X Communicator where %APPDATA% is Windows environment variable.

- For Windows XP, the path is C:\Documents and Settings\<USER_NAME> \Application Data\Avaya\Avaya one-X Communicator
- For Windows 7 and Vista:, the path is C:\Users\<*USER_NAME*>\AppData\Roaming \Avaya\Avaya one-X Communicator

Names of important configuration files

- config.xml: Phone-related information.
- onexcuiconfig.xml: Message Access-related information.
- dirsever.xml: Public Directory related information. Administrators need to use this file to enable Public Directory feature.

Sample configuration files

• config.xml: It contains the format of configuration parameters.

Format:

<parameter>

<name>parameterName</name>

<value>parameterValue</value>

</parameter>

Sample:

- H.323 protocol

```
<ConfigData xmlns="http://xml.avaya.com/endpointAPI">
<version>1</version>
<parameter>
<name>SipProxyServerList</name>
<value>135.11.11.111</value>
</parameter>
<parameter>
<name>AvayaSearchDirectory</name>
<value>1</value>
</parameter>
</configData>
```

where *SipProxyServerList* is the CLAN IP (H.323) address

where *AvayaSearchDirectory* enables the public directory search. If this is set to 1, dirsever.xml specifies the information to access the LDAP server for public directory search.

- SIP protocol

```
<parameter>
<name>DialPlanCountryCode</name>
<value>1</value>
</parameter>
<parameter>
<name>DialPlanInternationalAccessCode</name>
<value>00</value>
</parameter>
<parameter>
<parameter>
<parameter>
</parameter>
```

```
<name>DialPlanLongDistanceAccessCode</name>
<value>0</value>
</parameter>
<parameter>
<name>DialPlanOutsideLineAccessCode</name>
<value>0</value>
</parameter>
<parameter>
<name>DialPlanAreaCode</name>
<value>086</value>
</parameter>
<parameter>
<name>DialPlanNationalPhoneNumbLengthList</name>
<value>11,12</value>
</parameter>
<parameter>
<name>DialPlanLocalCallPrefix</name>
<value>0</value>
</parameter>
<parameter>
<name>DialPlanExtensionLengthList</name>
<value>7</value>
</parameter>
<parameter>
<name>DialPlanPBXPrefix</name>
<value>848</value>
</parameter>
<parameter>
<name>ConfirmDialStringEnabled</name>
<value>1</value>
</parameter>
```

where *SipControllerList* is the SM (Asset Card) IP (SIP) address in the following format:

host[:port][;transport=xxx]

- host is an IP address of SM in dotted-decimal format or DNS name.
- *port* is the optional port number. If a port number is not specified, the default value 5060 for UDP and 5061 for TLS is used.
- transport is the optional transport type (where xxx is TLS, TCP, or UDP). If a transport type is not specified, the default value of TLS is used.

SipDomain is the SIP Domain name for registration.

where *AvayaSearchDirectory* enables the public directory search. If this is set to 1, dirsever.xml specifies the information to access the LDAP server for public directory search.

- Dialing rules—H.323 and SIP

```
<parameter>
<name>DialPlanCountryCode</name>
<value>l</value>
</parameter>
<parameter>
<name>DialPlanInternationalAccessCode</name>
<value>00</value>
</parameter>
<parameter>
<name>DialPlanLongDistanceAccessCode</name>
<value>0</value>
</parameter>
```

```
<parameter>
<name>DialPlanOutsideLineAccessCode</name>
<value>0</value>
</parameter>
<parameter>
<name>DialPlanAreaCode</name>
<value>086</value>
</parameter>
<parameter>
<name>DialPlanNationalPhoneNumbLengthList</name>
<value>11,12</value>
</parameter>
<parameter>
<name>DialPlanLocalCallPrefix</name>
<value>0</value>
</parameter>
<parameter>
<name>DialPlanExtensionLengthList</name>
<value>7</value>
</parameter>
<parameter>
<name>DialPlanPBXPrefix</name>
<value>848</value>
</parameter>
<parameter>
<name>ConfirmDialStringEnabled</name>
<value>1</value>
</parameter>
```

where:

- DialPlanOutsideLineAccessCode is the number to dial to access outside line.
- DialPlanCountryCode is the country code.
- DialPlanAreaCode is the area/city code.
- DialPlanPBXPrefix is the PBX main prefix.
- DialPlanLongDistanceAccessCode is the number to dial for long distance calls.
- DialPlanInternationalAccessCode is the number to dial for international calls.
- *DialPlanExtensionLengthList* is the extension length for internal extension calls.
- *DialPlanNationalPhoneNumbLengthList* is the length of national phone numbers.
- ConfirmDialStringEnabled is to enable displaying of confirmation dialog before making a call.
- one-X Portal URL-H.323 and SIP

```
<parameter>
<name>oneXPortalURL</name>
<value)portalurl</value>
</parameter>
```

onexcuiconfig.xml

```
<?xml version="1.0" encoding="utf-8"?>
<UserData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://xml.avaya.com/
endpointAPI"
<Messaging>
```

```
<MessageAccessMode>DialNumber</MessageAccessMode>
<EnableMessageAccess>true</EnableMessageAccess>
<MessageAccessApplication />
<MessageAccessWebPage />
</Messaging>
</UserData>
```

where:

- EnableMessageAccess enables message access (voicemail configuration).
- MessageAccessMode is the DIAL_NUMBER to dial the pilot number.
- MessageAccessApplication is the path to the application that runs.
- MessageAccessWebPage is the URL of the web page that will run.

😵 Note:

If message access is enabled to dial a number, that number must be defined in config.xml.

```
<parameter>
<name>MessagingAppPhoneNumber</name>
<value>9999999</value>
</parameter>
```

• dirserver.xml (optional)

It contains the following information related to Public directory configuration. AvayaSearchDirectory parameter needs to be set to 1 in config.xml otherwise information in dirsever.xml will not be used.

```
<SearchDirectorySettings xmlns="http://xml.avaya.com/endpointAPI">
<searchDirectories> <id>0</id> <name>LDAPServerName</name>
<address>ldapserver.xcompany.com</address>
<port>389</port> <userName/> <userPassword/>
<searchRoot>ou=people;o=xcompany.com</searchRoot>
<searchTimeout>100</searchTimeout> <maxEntriesReturned>50</maxEntriesReturned>
<bindOption/> <type>ActiveDirectory</type> </searchDirectories>
<currentSearchServerIndex>0</currentSearchServerIndex>
</searchDirectorySettings>
```

where:

- name is the identifier the LDAP server entry.
- address is the LDAP server address.
- port is the LDAP server port.
- searchRoot is the search root to perform the contact search through LDAP server.

Auto-configure at startup

This option enables the administrator to configure the client to automatically retrieve settings from the 46xxsettings.txt file when the end-user first runs the application. For more information,

see The Auto-configure Feature section in the *Avaya one-X*[®] *Communicator Quick Setup* guide.

Auto-configure as needed

46xxsettings.txt file is setup with default user configuration data that is hosted on the HTTP server. The end-user can just click the Auto-configure button on the General Settings windows of Avaya one-X Communicator. The HTTP server retrieves the configuration information, and the this configuration information appears in the General Settings window automatically. For more information, see "The Auto-configure Feature" section in the *Avaya one-X*[®] *Communicator Quick Setup* guide.

Customization

Enterprises can customize Avaya one-X Communicator by selecting the softphone protocol (H.323 or SIP) at the time of installation.

End users can customize Avaya one-X Communicator by:

- · Selecting their preferred usage mode when they log in
- · Adding additional choices to their presence status list

Avaya one-X Communicator log files

Avaya one-X Communicator stores the following log files in your computer's Documents and Settings\<user name>\Application Data\Avaya\Avaya one-X Communicatior\Log Files folder:

- AudioLog.txt (audio information)
- AVC.txt (video component)
- AVCClient.txt (user interface video component)
- EndpointLog.txt (general debugging information)
- H323Station.txt (station administration)
- onexcapi.log (messages to and from the user interface)
- onexcui.log (general user interface debugging information)

Deployment planning

Chapter 7: Feature set comparison

Comparison of Basic and Unified Communication feature sets

The tables in this section compare the Avaya one-X Communicator Basic and Unified Communication feature sets.

Communication History and call logs

Feature	Basic	UC
Logs incoming and outgoing calls for Avaya desk phones when Avaya one-X Communicator is running	Yes	Yes
Logs incoming and outgoing calls for Avaya desk phones when Avaya one-X Communicator is not running	No	Yes
View call logs from the user interface	Yes	Yes
View voice mail logs from the user interface	No	Yes
Sort records by name, time, status, etc.	Yes	Yes
Call the caller from the call log	Yes	Yes
Add a caller to contacts	Yes	Yes
Send an e-mail to a contact from the call log	No	Yes
Send an instant message to a contact from the call log	Yes (with SIP)	Yes

Contact management

Feature	Basic	UC
Display corporate and personal directories	Yes	Yes
Search for a contact in all of your directories	Yes	Yes
Filter directories by latest search or contact availability	Yes	Yes
Add, change, and delete personal contacts	Yes	Yes

Feature	Basic	UC
View contact details. You can change this information for a personal contact, but not for a corporate contact.	Yes	Yes
Call the contact from your contact directories	Yes	Yes
Single-click on a contact to open your default e-mail client. The e-mail that opens is pre-addressed to that contact.	Yes	Yes
Send an Instant Message from your contact directories. Avaya one-X Communicator launches native Instant Messaging, your default Instant Message client, Microsoft Office Communicator or IBM Lotus Sametime Connect.	Yes (in case of native Instant Messaging))	Yes
Select a contact to display more details	Yes	Yes
Create Journal entries (in a Microsoft Outlook environment)	Yes	Yes
Display the Presence Access List (PAL) and view presence information for corporate contacts	No	Yes

Desktop integration

Feature	Basic	UC
Action bar for search, dial, redial, Dialpad	Yes	Yes
Action bar for Bridge Conference	No	Yes
Communication channel indicator for phone, Instant Message, e-mail, and video	No	Yes
Inbox dashboard for incoming messages, calls, Instant Messages, and contacts	Yes	Yes
Message Waiting Indicator (MWI)	Yes	Yes
Mode indicator that shows your active usage mode	Yes	Yes
Presence indicator. You can use the predefined statuses or you can define your own.	No	Yes
Window controls for contextual menu, task bar, tool bar system tray	Yes	Yes

Intelligent Presence

Feature	Basic	UC
View a contact's presence via status messages	No	Yes
• Available		
• Busy		

Feature	Basic	UC
• Away		
• Unavailable		
Out of Office		
Offline (automatic and user selected)		
View a contact's usage mode or set your own mode	No	Yes

Visual Messaging

Feature	Basic	UC
Click the Message Waiting Indicator (MWI) to call into your voice mail system	Yes	Yes
View your voice mail	No	Yes
View the status of a message (read, unread)	No	Yes
Click-to-play and delete voice messages from your desk top	No	Yes
View the caller's name (if available) or phone number	No	Yes
Call a number from a voice mail	No	Yes
Add a number from a voice mail to contacts	No	yes
Add a contact to favorites	No	Yes
Send an e-mail to a contact	Yes	Yes
Send an instant message to a contact	No	Yes
Save and download a voice mail	No	Yes

Instant Messaging and e-mail

Feature	Basic	UC
Click the Instant Message icon for a specific contact to start your default Instant Message client (Native Instant Messaging, Microsoft Office Communicator or Lotus Sametime)	Yes (in case of native Instant Messaging)	Yes
Click the e-mail icon to use your default mail client (Microsoft Outlook or IBM Lotus Notes) to compose a new e-mail	No	Yes

Telephony

The following telephony features are available and may require administration and configuration in Communication Manager.

Feature	Basic	UC
Audio Tuning Wizard	Yes	Yes
Call answer	Yes	Yes
Call forwarding	Yes	Yes
Send all calls to coverage	Yes	Yes
Call hold (automatic and user selected)	Yes	Yes
Call resume (user selected only)		
Call transfer (user selected only)	Yes	Yes
Call mute (user selected only)	Yes	Yes
Automatic call back	Yes	Yes
Outgoing calls from the desk top, Dialpad, and personal contact list	Yes	Yes
Click-to-Dial from Microsoft Outlook and Lotus Sametime Contact directories	Yes	Yes
Click-to-Dial from any number highlighted in Internet Explorer and Firefox browsers	Yes	Yes
Wipe-to-dial (clipboard dialing) from an application	Yes	Yes
Manage multiple call appearances	Yes	Yes
Extension to Cellular	Yes	Yes
Call logs	Yes	Yes
Integration with Communication History logs	No	Yes

Video

Video features differ depending on the Communication Manager release.

Feature	Basic	UC
Desktop video controls: stop, mute/unmute, display properties and options, and relinquish camera control	Yes	Yes
Video ad hoc conferencing when the required hardware and software is available	Yes	Yes
Point-to-point and multipoint video	Yes	Yes
Bandwidth management	Yes	Yes
Class of Service and Differentiated Services Code Point (DSCP) control	Yes	Yes
Video window always on top	Yes	Yes
Full screen video	Yes	Yes

Feature	Basic	UC
Disabling Screen Saver and Monitor Power Savings mode when on a call	Yes	Yes

Feature set comparison

Chapter 8: Softphone comparison

Overview of softphone comparisons

The tables in this section compare Avaya one-X Communicator and Avaya IP Softphone Release 6 and Avaya one-X Desktop Edition Release 2.1.

Feature comparisons

Communication History and call logs

Feature	Basic	UC	IP Softphone	one-X Desktop
Logs incoming, outgoing, and missed calls for Avaya desk phones when Avaya one-X Communicator is running	Yes	Yes	Yes	Yes
Logs incoming, outgoing, and missed calls for Avaya desk phones when Avaya one-X Communicator is not running	No	Yes	No	No
View call logs from the user interface	Yes	Yes	Yes	Yes
View voice mail logs from the user interface	No	Yes	No	No
Sort records by name, time, status, etc.	Yes	Yes	Yes	Yes
Call the caller from the call log	Yes	Yes	Yes	Yes
Add a caller to contacts	Yes	Yes	Yes	Yes
Send an e-mail to a contact from the call log	No	Yes	Yes	Yes
Send an instant message to a contact from the call log	Yes (with SIP)	Yes	Yes	Yes

Contact management

Feature	Basic	UC	IP Softphone	one-X Desktop
Display corporate and personal directories	Yes	Yes	Yes	Yes
Search for a contact in all of your directories	Yes	Yes	Yes	Yes
Filter directories by latest search or contact availability	Yes	Yes	Yes	Yes
Add, change, and delete personal contacts	Yes	Yes	Yes	Yes
View contact details. You can change this information for a personal contact, but not for a corporate contact.	Yes	Yes	Yes	Yes
Call the contact from your contact directories	Yes	Yes	Yes	Yes
Dial from TAPI-compliant contact mangers/Personal Information Managers (like ACT!)	No	No	Yes	Yes
Single-click on a contact to open your default e-mail client. The e-mail that opens is pre-addressed to that contact.	Yes	Yes	Yes	Yes
Send an Instant Message from your contact directories. Avaya one-X Communicator launches native Instant Messaging, your default Instant Message client, Microsoft Office Communicator or IBM Lotus Sametime Connect.	Yes	Yes	Yes, using Avaya IM through AES or Session Manager	Yes, using Avaya IM through AES or Session Manager
Select a contact to display more details	Yes	Yes	Yes, with optional Avaya Integrator with Outlook	No
Create Journal entries (in a Microsoft Outlook environment)	Yes	Yes	No	No
Display the Presence Access List (PAL) and view presence information for corporate contacts	No	Yes	No	No

Desktop integration

Feature	Basic	UC	IP Softphone	one-X Desktop
Action bar for search, dial, redial, Dialpad	Yes	Yes	No	No
Action bar for bridge conference	No	Yes	No	No
Communication channel indicator for phone, Instant Message, e-mail, and video	No	Yes	Yes	Yes
Inbox dashboard for incoming messages, calls, Instant Messages, and contacts	Yes	Yes	No	No
Message Waiting Indicator (MWI)	Yes	Yes	Yes	Yes
Click the Message Waiting Indicator (MWI) to call into your voice mail system	Yes	Yes	Yes	Yes
Mode indicator that shows your active usage mode	Yes	Yes	No	No
Presence indicator. You can use the predefined statuses or you can define your own.	No	Yes	Yes, using Avaya IM through AES or Session Manager	Yes, using Avaya IM through AES or Session Manager
Window controls for contextual menu, task bar, tool bar system tray	Yes	Yes	Yes	Yes
Dial from Microsoft Outlook, Lotus SmartSuite (and other TAPI-enabled contact managers, PIMs)	Yes, for Outlook if not using TAPI	Yes, for Outlook if not using TAPI	Yes	Yes
Public Directory access using LDAP	Yes	Yes	Yes	Yes
Screen Pop to Softphone's Contact Directory	No	No	Yes	Yes
Screen Pop to user defined application/directory	Yes	Yes	Yes	No
Click-to-Dial from Internet Explorer	Yes	Yes	Yes	Yes
Click-to-Dial from other Windows applications	Yes	Yes	Yes	Yes

Feature	Basic	UC	IP Softphone	one-X Desktop
Click-to-Dial from Mozzilla Firefox	Yes	Yes	Yes	Yes
Name Look-up into Contact Directory	Yes	Yes	Yes	Yes
Name Look-up into Microsoft Outlook	Yes	Yes	Yes	Yes
Name Look-up into LDAP Public Directory	Yes	Yes	Yes	Yes
Name Look-up into Lotus Notes address book	Yes	Yes	Yes	Yes

Intelligent Presence

Feature	Basic	UC	IP Softphone	one-X Desktop
View a contact's presence via status messages	No	Yes	No	No
Available				
• Busy				
• Away				
• Unavailable				
Out of Office				
Offline (automatic and user selected)				
View a contact's usage mode or set your own mode	No	Yes	No	No

Visual Messaging

Feature	Basic	UC	IP Softphone	one-X Desktop
Message Waiting Indicator (MWI)	Yes	Yes	Yes	Yes
View the voice mail and the mail logs.	No	Yes	No	No
View the status of a message (read, unread)	No	Yes	No	No
Click-to-play and delete voice messages from your desktop	No	Yes	No	No
View the caller's name (if available) or phone number	No	Yes	No	No

Feature	Basic	UC	IP Softphone	one-X Desktop
Call a number from a voice mail	No	Yes	No	No
Add a number (registered in one-X Portal) from a voice mail to contacts	No	Yes	No	No
Add a contact to favorites	No	Yes	No	No
Send an e-mail to a contact	Yes	Yes	No	No
Send an instant message to a contact	No	Yes	No	No
Save and download a voice mail	No	Yes	No	No

Instant Messaging and e-mail

Feature	Basic	UC	IP Softphone	one-X Desktop
Click on the Instant Message icon for a specific contact to start native Instant Messaging, your default Instant Message client (Microsoft Office Communicator or Lotus Sametime)	Yes	Yes	No	No
Click on the e-mail icon to use your default mail client (Microsoft Outlook or IBM Lotus Notes) to compose a new e- mail	Yes	Yes	No	No
Native Instant Messaging sessions	Yes (with SIP)	Yes (with SIP)	Yes	Yes

Telephony

The following telephony features must be available and properly configured in Communication Manager.

Feature	Basic	UC	IP Softphone	one-X Desktop
Audio Tuning Wizard	Yes	Yes	Yes	Yes
Call answer	Yes	Yes	Yes	Yes
Call forwarding	Yes	Yes	Yes	Yes
Send all calls to coverage	Yes	Yes	Yes	Yes
Call hold/resume (automatic and user selected)	Yes	Yes	Yes	Yes
Call resume (user selected only)	Yes	Yes	Yes	Yes

Feature	Basic	UC	IP Softphone	one-X Desktop
Call transfer (user selected only)	Yes	Yes	Yes	Yes
Call mute (user selected only)	Yes	Yes	Yes	Yes
Call control (drag and drop, transfer, and conference)	Yes	Yes	Yes	Yes
Automatic call back	Yes	Yes	Yes	Yes
Outgoing calls from the desk top, Dialpad, and personal contact list	Yes	Yes	Yes	Yes
Click-to-Dial from Microsoft Outlook and Lotus Sametime Contact directories	Yes	Yes	Yes	Yes
Click-to-Dial from any number highlighted in Internet Explorer and Firefox browsers	Yes	Yes	Yes	Yes
Speed Dial numbers	No	No	Yes	Yes
Wipe-to-Dial (clipboard dialing from an application)	Yes	Yes	Yes	Yes
Manage multiple call appearances	Yes	Yes	Yes	Yes
Extension to Cellular	Yes	Yes	Yes	Yes
Call logs	Yes	Yes	Yes	Yes
Integration with Communication History logs	No	Yes	Yes	Yes

Usage modes

Mode	Basic	UC	IP Softphone	one-X Desktop
My Computer : Road Warrior (VoIP)	Yes	Yes	Yes	Yes
Other Phone : Telecommuter	Yes	Yes	Yes	No
Desk Phone : Shared control of an Avaya telephone (via the server).	Yes	Yes	Yes	No
Instant Messaging Only	Yes (with SIP)	Yes (with SIP)	Yes	No

User interface

Feature	Basic	UC	IP Softphone	one-X Desktop
Picture of Phone:	No	No	Enhanced	No
Enhanced: graphic image of the terminal				
Basic: approximation of the image of the terminal				
Support for multibyte telephones (4610, 4620)	Yes	Yes	Yes	N/A
View of the Contact Directory (Contacts)	Yes	Yes, for local and	Classic & IM	Classic
 Classic: grid based view of contact information 		1XP-based contacts		
 IM: expandable list view of contacts based on presence state and/or category 				
Dialpad	Yes	Yes	Yes	Yes
Quick access to certain feature buttons on a Call Bar toolbar. (You can add up to 7 buttons from the Phone Features dialog box.)	No	No	Yes	No
Click-to-Dial from an Internet Explorer Web page	Yes	Yes	Yes	Yes
Click-to-Dial from a Mozzilla Firefox Web page	Yes	Yes	Yes	No
Screen Pop on incoming calls	Yes	Yes	Yes	Yes

Video

Video features differ depending on the Communication Manager release.

Feature	Basic	UC	IP Softphone	one-X Desktop
Desktop start video control	No	No	Yes	No
Desktop video controls: stop, mute/ unmute, display properties and options, and relinquish camera control	Yes	Yes	Yes	No
Video ad hoc conferencing when the required hardware and software is available	Yes	Yes	Yes	No

Feature	Basic	UC	IP Softphone	one-X Desktop
Point-to-point and multipoint video	Yes	Yes	Yes	No
Bandwidth management and class of service control	Yes	Yes	Yes	No
Class of Service and Differentiated Services Code Point (DSCP) control	Yes	Yes	Yes	No
Video window always on top	Yes	Yes	No	No
Full screen video	Yes	Yes	No	No
Disabling Screen Saver and Monitor Power Savings mode when on a call	Yes	Yes	Yes	No

Administration comparisons

ARS and dialing rules

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Log in as 7-digit station	Yes	Yes	Yes
Dial 7-digit stations internally (If the server supports a 7-digit dial plan, users can instruct it to treat a 7-digit number as either an external call or an internal extension.)	Yes	Yes	Yes
Dialing rules based on Microsoft TAPI Dial Locations	No	Yes	No

Direct IP-IP voice traffic

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Shuffling (Direct audio path between IP endpoints that are using similar codecs)	Yes	Yes	Yes
Shuffling with change in codec (Server-assisted dynamic codec change during a call to allow direct	Yes	Yes	Yes

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
IP voice traffic between two IP endpoints.)			
Hairpinning (The audio stream going to the media processor is not placed on the TDM bus and the TDM bus resources are saved.)	Yes	Yes	Yes

Emergency Call Handling

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Based on extension	Yes	Yes	No
Based on CAMA CESID Centralized Automated Message Accounting (for billing information); Caller's Emergency Service Identification	Yes	Yes	No

Firewall interoperability

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
TCP/UDP port range configuration	Yes	Yes	Yes

Security

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Survivability against Denial of Service (DoS) attacks	Yes	Yes	Yes
Encryption of audio streams via AES with Secure Real-time Transport Protocol (SRTP) in H. 323 and SIP	Yes	No	No
Encryption of audio stream using Advanced Encryption Standard (AES)	No	Yes	Yes
Encryption of audio stream using Avaya Audio Encryption Algorithm Version 2 (AEAv2)	No	Yes	No

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Encryption of audio stream using Avaya Audio Encryption Algorithm Version 1 (AEAv1)	No	No	No
Password protected login sessions	Yes	Yes	Yes
Authenticated & encrypted passwords	Yes	Yes	Yes

Survivability

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Enhanced Link recovery and call preservation	Yes	Yes	No
Load balancing across gatekeepers	Yes	Yes	N/A
Recover link using alternate gatekeepers	Yes	Yes	No
Protection against Denial of Service (DoS) attacks	Yes	Yes	Yes

Voice control and quality

Function	Avaya one-X Communicator	IP Softphone	one-X Desktop
Ring to secondary audio devices (My Computer/Road Warrior only)	Yes	Yes	No
Support Bluetooth audio devices (for audio only)	Yes	Yes	Yes
Robust handling of removal of USB headsets (Audio Tuning Wizard settings are retained if the USB is removed and then re-inserted.)	Yes	Yes	Yes
Operating system prioritization (The process priority for Avaya iClarity is increased to above normal (Windows 2000 and Windows XP) for better voice quality.)	No	Yes	Yes

Configuration comparisons

Avaya server software

Avaya server software	Avaya one-X Communicator	IP Softphone	one-X Desktop
Avaya Communication Manager 6.0 and later	Yes	Yes	Yes
Session Manager 6.0 SP1 and later	Yes	Yes	Yes

Operating systems

Operating systems	Avaya one-X Communicator	IP Softphone	one-X Desktop
Microsoft Windows 7	Yes	No	No
Windows Vista (Enterprise, Ultimate, and Business Editions)	Yes	Yes	No
Windows XP (Home and Professional Editions)	Yes	Yes	Yes
Windows XP (Tablet PC Edition)	No	No	Yes
Windows 2000 (Professional)	No	Yes	Yes

Other configurations

Configuration	Avaya one-X Communicator	IP Softphone	one-X Desktop
Microsoft Office Communicator 2005 (Feature tab for telephony functionality via Microsoft Office Communications Server 2005)	No	Yes	Yes
Microsoft Office Communicator 2007 (Feature tab for telephony functionality via Microsoft Office Communications Server 2007)	Yes	No	No
IBM Lotus Sametime Connect 2005	No	Yes	Yes
IBM Lotus Sametime Connect 8.0	Yes	No	No

Softphone comparison

Chapter 9: Avaya one-X Portal comparison

Comparison to Avaya one-X Portal

The tables in this section compare Avaya one-X Communicator (in H.323 mode) to Avaya one-X Portal Release 5.2.

Some functionality also requires integration with additional products.

Environment

Avaya one-X Communicator is a windows-based application that runs on the user's computer and works with Microsoft Internet Explorer and Mozilla Firefox. Avaya one-X Portal is a Webbased software solution that requires a server to provide functionality that is similar to Avaya one-X Communicator.

	Basic	UC	Avaya one-X Portal
Login modes	My Computer (VoIP), Desk Phone (shared control), Other Phone (telecommuter)	My Computer (VoIP), Desk Phone (shared control), Other Phone (telecommuter)	VoIP, shared control, telecommuter
Authentication against	Communication Manager extension, Session Manager for SIP	AD, Corporate directory	AD, Corporate directory

Intelligent Presence, Visual Messaging, Conferencing, Video

	Basic	UC	Avaya one-X Portal
No Presence Services	No presence	Yes	No presence
Presence Services, but no Microsoft Office Communications Server	No presence	Presence + phone status. No IM bubble in contacts.	Presence + phone status. No IM bubble in contacts.

	Basic	UC	Avaya one-X Portal
Presence Services + Microsoft Office Communications Server	No presence	Presence + phone status. Presence status from OCS. IM bubble.	Presence + phone status. Presence status from OCS. IM bubble.
Call History	Only if logged in with Avaya one-X Communicator	Unified call log	Unified call log
History log name resolution	Communication Manager	Corporate directory	Corporate directory
Call journal in Outlook	Yes	Yes	No
Call journal in Lotus Notes	No	No	No
Desktop video telephony	Yes (My Computer, Desk Phone)	Yes (My Computer, Desk Phone)	No
Visual Messaging (Modular Messaging with MSS)	MWI	MWI, number of unread messages, access to messages (play, delete)	MWI, number of messages, access to messages (play, delete)
Visual Conferencing (Conferencing Enterprise)	No	Display conferences in separate window. Control hosted conferences, control own participation on other conferences.	Display conferences in separate window. Control hosted conferences, control own participation on other conferences.

Desktop Integration

	Basic	UC	Avaya one-X Portal
Display personal contacts in GUI	Add personal contacts manually	Display personal contacts that are uploaded to 1XP	Only if uploaded via OXPE
Click-to-Dial - Outlook contacts	Outlook add-in, search in 1XC. Addl. "call" icon in Outlook.	Outlook add-in, search in 1XC. Addl. "call" icon in Outlook.	Addl. 1XP extension application necessary. Addl. "call" icon in Outlook.
Click-to-Dial - Lotus Notes	Search in 1XC	Search in 1XC	No

	Basic	UC	Avaya one-X Portal
Click-to-Dial - Microsoft Office Communications Server	Yes	Yes	Yes
Add-in - Microsoft Office Communications Server 2007	Yes	Yes	No
Click-to-Dial from Lotus Sametime	Yes	Yes	Yes
Add-in - Lotus Sametime	No	No	No
Start e-mail from contacts. (Opens default e-mail application)	Yes	Yes	Yes
Start IM from contacts	No	Yes	Yes

Search

	Basic	UC	Avaya one-X Portal
Corporate directory	Yes	Yes	Yes
LDAP directory	Yes	Yes	Yes
Outlook contact directory	Yes	Yes	Yes, if uploaded
Lotus Notes contact directory	Yes	Yes	N/A
Personal contact directory	Yes	Yes	Yes

Avaya one-X Portal comparison

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