Port Utilization in Unified CVP

Port Utilization Table Columns

The columns in the port utilization tables in this document describe the following:

Listener (Process or Application Protocol)

A value representing the server or application and where applicable, the open or proprietary application protocol.

Listener Protocol and Port

An identifier for the TCP or UDP port that the server or application is listening on, along with the IP address for incoming connection requests when acting as a server.

Remote Device (Process or Application Protocol)

The remote application or device making a connection to the server or service specified by the protocol; or listening on the remote protocol and port.

Remote Protocol and Port

The identifier for the TCP or UDP port that the remote service or application is listening on, along with the IP address for incoming connection requests when acting as the server.

Traffic Direction

The direction that traffic flows through the port: Inbound, Bidirectional, Outbound.

Note The operating system dynamically assigns the source port that the local application or service uses to connect to the destination port of a remote device. In most cases, this port is assigned randomly above TCP/UDP 1024.

Unified CVP Port Utilization

Table 1: Cisco Unified Customer Voice Portal Port Utilization

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
TCP	2000-2002			Bi-directional	Sub to phone
Call Server JMX	2098	JConsole	Random	Bi-directional	JMX access by JConsole into Call Server
Call Server JMX RMI port	2097	JConsole	Random	Bi-directional	JMX access by JConsole into Call Server
WSM JMX	TCP 10002	JConsole	Random	Bi-directional	JMX access by JConsole into WSM
WSM JMX RMI	TCP 10003	JConsole	Random	Bi-directional	JMX access by JConsole into WSM
OAMP JMX	TCP 10001	JConsole	Random	Bi-directional	JMX access by JConsole into OAMP
OAMP JMX RMI	TCP 10000	JConsole	Random	Bi-directional	JMX access by JConsole into OAMP
CVP Messaging Layer	TCP 23000 - 28000 (First available)	CVP Subsystem		Bi-directional	CVP Message Bus communications
7960-CUVA Video	UDP 5445	7960-CUVA			Cisco 7960-CUVA Video Phone
CVP SIP Subsystem, SIP Proxy Server, Gateway, Unified CM: SIP (Session Initiation Protocol)	UDP 5060 TCP 5060 TLS 5061	SIP endpoints	Local / Remote between CVP components	Bi-directional	Listen port for incoming SIP requests. Port is configurable.

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
SIP Heartbeat Local Listen Port	UDP 5067 TCP 5067 **Note** This port must be different from the default SIP port which is 5060/5061 (see aforementioned row).	SIP endpoints	Random	Bi-directional	Listen port for incoming Heartbeat.
VXML Server: HTTP	TCP 7000	IOS VXML gateways/VVB	Random	Bi-directional	VXML over HTTP. Calls/sessions answered on port 7000 by HTTP server which relays request to WAS on local system port 9080.
VXML Server: HTTPS	TCP 7443	IOS VXML gateways/VVB	Random	Bi-directional	VXML over HTTPS. Calls/sessions answered on port 7443 by HTTPS server.
VXML Server with Tomcat	TCP 7005	Local machine		Local	Port restricted to local access only
	TCP 7009			Local	AJP/1.3 Connector
VXML Server JMX	TCP 9696	JConsole		Bi-directional	JMX access by JConsole into VXML Server
VXML Server JMX RMI port	TCP 9697	JConsole	Random	Bi-directional	JMX access by JConsole into VXML Server
VXML Server	TCP 10100	Local VXML Server Administration Scripts		Local	Port restricted to local access only
CVP Call Server Tomcat: HTTP	TCP 8000	Browser	Random	Bi-directional	HTTP
CVP Call Server Tomcat: HTTPS	TCP 8443	Browser	Local / Remote Random	Bi-directional	HTTPS

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
CVP IVR Server	TCP 8002	VXML Server		Local	Message over TCP
CVP Call Server: HTTP	TCP 8005			Local	Port restricted to local access only
CVP OPSConsole: HTTP	TCP 9000	Web Browser	Random	Bi-directional	Web-based interface for configuring CVP components
CVP OPSConsole: HTTPS	TCP 9443	Web Browser	Random	Bi-directional	Web based interface for configuring CVP components with SSL
CVP OPSConsole	TCP 9005	Local machine		Local	Port restricted to local access only
CVP OPSConsole	TCP 9009			Local	AJP/1.3 Connector
CVP OPSConsole	TCP 1529	Local machine		Local	Port restricted to local access only
CVP Resource Manager FTP Server	TCP 21	Content Services Switch	Random	Bi-directional	Only opened by Resource Manager residing on the same machine as the CVP OPSConsole
CVP Resource Manager	TCP 2099	CVP OPSConsole	Random	Bi-directional	JMX communication from OPSConsole to CVP Resource Manager on remote device
CVP Resource Manager RMI Port	TCP 3000	CVP OPSConsole	Random	Bi-directional	JMX communication from OPSConsole to CVP Resource Manager on remote device
CVP Resource Manager Java Service Wrapper	TCP 32000 - 32999 (first available)	JVM instance launched by wrapper	Random	Local	CVP Resource Manager Service Wrapper will no longer accept connections after the first JVM instance is connected.

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
MRCP V1 (RTSP)	TCP 554	VXML gateway			MRCP session between gateway voice browser and MRCP server. This is the signaling path; the media path uses RTP. Also, Helix streaming audio/ ASR/TTS (MRCP/RTSP)
MCRP V2 (SIP)	TCP 5060	VXML gateway			MRCP session between gateway voice browser and MRCP server. This is the signaling path; the media path uses RTP.
CVP SNMP SubAgent	UDP 5517, 5519, 5521, 5523, 5525, 5527, 5529, 5531, 5533, 5535, 5537, 5539, 5541, 5543, 5545, 5547, 5549, 5551, 5553, 5555	CVP SNMP subsystem		Local	CVP SNMP SubAgent services local requests from CVP SNMP subsystem
CVP SNMP subsystem	UDP 5516, 5518, 5520, 5522, 5524, 5526, 5528, 5530, 5532, 5534, 5536, 5538, 5540, 5542, 5544, 5546, 5548, 5550, 5552, 5554	CVP SNMP SubAgent		Local	CVP SNMP subsystem services local requests from CVP SNMP SubAgent
CVP ICM Subsystem	TCP 5000	IPCC Enterprise VRU CTI (ICM/IVR message interface)	Random	Bi-directional	Between CVP ICM Subsystem (Call Server) and Unified CCE/ICM VRU PG. Port is configurable.
Web Server: HTTP	TCP 80	Voice Browsers	Random	Bi- directional	Voice browsers fetches media and "External VXML" files from media server. This port is configurable.

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
Web Server: HTTPS	TCP 443	Voice Browsers	Random	Bi- directional	Voice browsers fetches media and "External VXML" files from media server. This port is configurable.
IBM Informix	TCP 1526	CVP Reporting Subsystem	Random from CUIC	Bi-directional	Database Connection
IBM Informix Storage Manager	TCP 7939 - 7942 TCP 111			Local	IBM Informix Storage Manager Services
IBM WAS Console	TCP 9043, 9060		Random for remote desktop	Bi-directional	
CVP Web Services Manager: HTTP/HTTPS	TCP 8101, 8110, 8111 TCP 10000, 10001, 10002, 10003	Unified System CLI, Diagnostic Portal, Custom Agent Desktop	Random	Bi-directional	REST Web Services TCP 10000, 10001, 10002, 10003 OAMP ports are used for transferring data related to the configuration and administration of VXML Server and Call Server.

Table 2: Network Management and Remote Administration

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
SNMP Primary Agent	TCP 7161	Local SNMP subagents		Local	SNMP Primary Agent listens for TCP connections from local SNMP subagents.
SNMP–Trap	UDP 162	SNMP Primary Agent	Random	Bi-directional	SNMP Primary Agent sends SNMP traps to SNMP management application.

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
Syslog	UDP 514		Random	Bi-directional	Syslog protocol provides a transport to allow a machine to send event notification messages across IP network to event message collectors. Port is configurable.
Telnet	TCP 23				
RDP (Terminal Services)	TCP 3389		Random	Bi-directional	
pcAnywhere	TCP 5631 UDP 5632				
VNC	TCP 5900 TCP 5800				

Table 3: Windows Authentication and Remote Administration Ports

Listener (Process or Application Protocol)	Listener Protocol and Port	Remote Device (Process or Application Protocol)	Remote Protocol and Port	Traffic Direction	Notes
RPC	TCP 135				
NetBIOS Session	TCP 139				
NetBIOS NameResolution	TCP 137 UDP 137				
NetBIOS Netlogon/Browsing	UDP 138				
SMB	TCP 445 UDP 445				Microsoft CIFS
DNS	TCP 53 UDP 53				
optima-vnet	TCP 1051				TCP Optima VNET
optima-vnet	UDP 1051				UDP Optima VNET

Note

- Ephemeral loopback client ports may be opened locally for CVP services to talk to port 1529 for communications with Derby database.
- Similarly, ephemeral loopback client/server ports may be opened locally by CVP services for internal calls.
- Ephemeral loopback client ports may also be opened by local subagents for talking to the SNMP primary agent running on port 7161.

The above ports are closed when the services concerned are shut down.

From a security perspective, it is recommended to review the ports opened by the underlying Windows operating system or other services running on a machine and close all ports except those required for normal system operation.

Note For more information on Windows authentication and remote administration ports, see *Service overview and network port requirements for the Windows Server system* (Microsoft Knowledge Base Article Q832017) at https://support.microsoft.com/en-us/help/832017/service-overview-and-network-port-requirements-for-windows.