

Appendix D - Port Usage

This appendix contains port usage information.

- [Port Usage Tables](#)

Port Usage Tables

The following sections provide port usage information for the Connect system. For easier printing and viewing, the information is divided into three parts, as shown in the table below.

Table 80: Devices Included in Parts 1, 2, and 3

Originating Device	Destination Device
SG-Generation Switch	Destination Devices Shown in Part 1 (Table 81: Port Usage — Part 1 on page 243)
V-Switch & ST-Generation Switch	
Service Appliance (Conferencing and IM)	
IP Phone	
MGCP Phone	
Connect Client and Softphone	Destination Devices Shown in Part 2 (Table 82: Port Usage — Part 2 on page 252)
Connect Client for Web and Softphone	
ECC Supervisor Client	
Linux DVS	
Windows DVS	
Headquarters Server	Destination Devices Shown in Part 3 (Table 83: Port Usage — Part 3 on page 256)
Mobility Client (SMC)	
Mobility Router (SMR)	
D&M Server (Standalone)	
Edge Gateway	
Other (such as SIP endpoints)	<ul style="list-style-type: none"> • Connect Client Softphone • Connect Client for Web Softphone • Linux DVS • Windows DVS • Headquarters Server • Other

Port Usage Part 1

The following table contains the first part of the port usage information for the Connect system.

Table 81: Port Usage — Part 1

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Service Appliance (Conferencing and IM)	IP Phone	
Switch	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255	Call Control UDP 2427 MGCP Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
V-Switch	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255 Transport: TCP 5432 – Xprt SMTP TCP 25 – SMTP	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255	Call Control UDP 2427 MGCP Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255
V-Switch		Transport: TCP 5432 – Xprt SMTP TCP 25 – SMTP			

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Service Appliance (Conferencing and IM)	IP Phone	
Service Appliance (Conferencing and IM)	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445– Admission Control	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443– Bandwidth Manager UDP 5445 – Admission Control	Call Control UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace ICMP 33434+255
	Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-20000 RTP (configurable)		
	IP Path Trace UDP 33434+255	IP Path Trace UDP 33434+255			
Service Appliance (Conferencing and IM)			CMCA (Web Share): TCP/UDP 5450 Ping Sync TCP 80 HTTP Web share TCP 443 HTTPS Web share Transport TCP 5432 – Xprt SMTP TCP 25 – SMTP		

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
IP Phone	Call Control TCP 5061 SIPS Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Call Control TCP 5061 SIPS Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Peer SW Update TCP 80 HTTP Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace ICMP Traceroute	Media Stream UDP 10000-10550 RTP (configurable) IP Path Trace ICMP Traceroute
MGCP Phone	Call Control UDP 2727 MGCP Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Call Control UDP 2727 MGCP Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace ICMP Traceroute	Media Stream UDP 10000-10550 RTP (configurable) IP Path Trace ICMP Traceroute
Connect Client and Softphone	Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP 33434+500	Media Stream UDP 10000-10550 SRTP	Media Stream UDP 10000-10550 RTP
Linux DVS	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: UDP 5458 SUNRPC Broadcast	Call Control TMS RPC: UDP 5458 SUNRPC Broadcast	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
Linux DVS	Call Control UDP 2427 MGCP – Media proxy UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC NCC commands UDP 5453 – Broadcasts	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC/ NCC commands UDP 5453 - Broadcasts Transport TCP 5432 – CDS	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC/ NCC commands UDP 5453 – Broadcasts Transport TCP 5432 – CDS		
Linux DVS	Configuration Control (for VxWorks switches Only) TCP 1024-65535 – Firmware download (Burn flash) WSS call control (MGCP) TCP 2727 – WSS to switch Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	WSS call control (MGCP) TCP 2727 – WSS to switch Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	IP Path Trace UDP 33434+255 CAS-XMPP TCP 5222 – XMPP/TLS		

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
Windows DVS	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: UDP 5458 SUNRPC Broadcast	Call Control TMS RPC: UDP 5458 SUNRPC Broadcast	Media Stream UDP 10000-10128 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255
Windows DVS	Call Control UDP 2427 MGCP – Media proxy UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC NCC commands UDP 5453 – Broadcasts	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC/ NCC Commands UDP 5453 – Broadcasts Transport TCP 5432 – CDS	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC/ NCC Commands UDP 5453 – Broadcasts Transport TCP 5432 – CDS		

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
Windows DVS	Configuration Control (for VxWorks switches only) TCP 1024-65535 – Firmware download (Burnflash) WSS call control (MGCP) TCP 2727 – WSS to switch Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	WSS call control (MGCP) TCP 2727 – WSS to switch Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Transport TCP 5432 – CDS IP Path Trace UDP 33434+255		
Headquarters Server	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: UDP 5458 SUNRPC Broadcast	Call Control TMS RPC UDP 5458 SUNRPC Broadcast	Media Stream UDP 10000-10128 RTP (configurable) SoftSwitch IP Path Trace UDP 33434+255	Media Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Appliance (Conferencing and IM)	IP Phone	
Headquarters Server	Call Control UDP 2427 MGCP – Media proxy UDP 5440 - Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC NCC commands UDP 5453 – Broadcasts	Soft Switch UDP 2427 MGCP – Media proxy UDP 5440 - Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC NCC commands UDP 5453 – Broadcasts	Soft Switch UDP 2427 MGCP – Media proxy UDP 5440 - Location Service UDP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control TCP 5452 RPC NCC commands UDP 5453 – Broadcasts		
Headquarters Server	Configuration Control TCP 1024-65535 – Firmware download. (Burnflash) WSS call control (MGCP) TCP 2727 – WSS to switch Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Transport TCP 5432 - CDS Media Stream UDP 10000-20000 RTP (configurable) WSS call control (MGCP) TCP 2727 – WSS to switch IP Path Trace UDP 33434+255	Transport TCP 5432 – CDS IP Path Trace UDP 33434+255		
Mobility Client (SMC)	NA	NA	Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-10128 RTP (configurable)	Media Stream UDP 10000-10128 RTP (configurable)

Originating Device	Destination Device				MGCP Phone
	SG Switch	V-Switch ST Switch	Service Appliance (Conferencing and IM)	IP Phone	
Mobility Router (SMR)	TCP 5061 - SIPS TCP/UDP 5060 – SIP Media Stream UDP 10000-20000 RTP (configurable)	TCP 5061 - SIPS TCP/UDP 5060 – SIP Media Stream UDP 10000-20000 RTP (configurable)	Media Stream UDP 10000-20000 RTP (configurable) Instant Messaging TCP 5222 – XMPP/TLS	Media Stream UDP 10000-10128 RTP (configurable)	Media Stream UDP 10000-10550 RTP (configurable)
DM Server (Standalone)	TCP 22 - SSH (RpCap Maintenance)	TCP 22 - SSH (RpCap Maintenance)	NA	TCP 22 - SSH (RpCap Maintenance)	NA
Edge Gateway	TURN: Media Stream UDP 10000-20000 RTP (configurable)	TURN: Media Stream UDP 10000-20000 RTP (configurable)	TURN: Media Stream UDP 10000-20000 RTP (configurable)	TURN: Media Stream UDP 10000-10128 RTP (configurable)	TBD
Other (such as SIP endpoints)	SSH TCP 22	SSH TCP 22	SSH TCP 22	SH TCP 22 PAPI TCP 8086	Telnet TCP 23

Port Usage Part 2

The following table contains the second part of the port usage information for the Connect system.

Table 82: Port Usage — Part 2

Originating Device	Destination Device				
	ECC Supervisor Client	Mobility Client (SMC)	Mobility Router (SMR)	D&M Server (Standalone)	Edge Gateway
Switch	NA	Media Stream UDP 42000-42100 RTP P Path Trace UDP 33434+255	SIP Lines and Trunk UDP/TCP 5060- SIP TCP 5061 - SIPS UDP - 50000 - 60000 – SIP Lines Media Stream UDP 15000-32000 IP Path Trace UDP 33434+255	UDP 5060 - SIP	TURN Media Stream UDP 10000-15000 SRTP (configurable) IP Path Trace UDP 33434+255
V-Switch	NA	Media Stream UDP 42000-42100 RTP IP Path Trace UDP 33434+255	NA	NA	TURN Media Stream UDP 10000-15000 SRTP (configurable) IP Path Trace UDP 33434+255
Service Appliance (Conferencing and IM)	NA	Media Stream UDP 42000-42100 RTP IP Path Trace UDP 33434+255	Media Stream UDP 15000-32000 (RTP) IP Path Trace UDP 33434+255	UDP 5060 - SIP	TURN Media Stream UDP 10000-15000 RTP (configurable) IP Path Trace UDP 33434+255
IP Phone	NA	Media Stream UDP 42000-42100 RTP IP Path Trace ICMP Traceroute	Media Stream UDP 15000-32000 (SRTP) IP Path Trace ICMP Traceroute	NA	RAST (for OFF-NET phones) TCP/UDP 443 – RAST (on external interface)

Originating Device	Destination Device				
	ECC Supervisor Client	Mobility Client (SMC)	Mobility Router (SMR)	D&M Server (Standalone)	Edge Gateway
MGCP Phone	NA	Media Stream UDP 42000-42100 RTP IP Path Trace ICMP Traceroute	Media Stream UDP 15000-32000 (SRTP) IP Path Trace ICMP Traceroute	NA	TURN Media Stream UDP 10000-15000 RTP (configurable) IP Path Trace ICMP Traceroute
Connect Client and Softphone	NA	Media Stream UDP 42000-42100 RTP (configurable)	Media Stream UDP 15000-32000 (SRTP)	NA	TURN Signaling TCP/UDP 443 – STUN and Media Media Stream UDP 10000-15000 RTP (configurable) Reverse Proxy TCP 443 – HTTPS (Auth, Bootstrapper, CAS, Conferencing)
Connect Client for Web and Softphone	NA	NA	NA	NA	TURN Signaling TCP/UDP 443 – STUN & Media Media Stream UDP 10000-15000 RTP (configurable) Reverse Proxy TCP 443 - HTTPS (Auth, Bootstrapper, CAS, Conferencing)

Originating Device	Destination Device				
	ECC Supervisor Client	Mobility Client (SMC)	Mobility Router (SMR)	D&M Server (Standalone)	Edge Gateway
ECC Supervisor Client	NA	NA	NA	NA	HAProxy (not available yet) ECC Supervisor TCP 31451-31452
Mobility Client (SMC)	NA	Video CMCP (Server) – TCP 5464 CMCP (Client) – TCP 5465 Media Stream UDP 42000-42100 RTP (configurable)	Call Control TCP 5061 - SIPS TCP/UDP 5060 – SIP Management TCP: 80 - http TCP: 443 – https RAST TCP/UDP 443 – RAST (on external interface) Media Stream UDP 15000-32000 RTP (configurable)	NA	NA
Linux DVS	NA	Media Stream UDP 42000-42100 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 15000-32000 RTP (configurable) IP Path Trace UDP 33434+255	NA	TURN: Media Stream UDP 10000-15000 RTP (configurable) WSS Media Control UDP 2223 – NG Allocator IP Path Trace UDP 33434+255

Originating Device	Destination Device				
	ECC Supervisor Client	Mobility Client (SMC)	Mobility Router (SMR)	D&M Server (Standalone)	Edge Gateway
Windows DVS	NA	Media Stream UDP 42000-42100 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 15000-32000 RTP (configurable) IP Path Trace UDP 33434+255	NA	TURN: Media Stream UDP 10000-15000 RTP (configurable) WSS Media Control UDP 2223 – NG Allocator IP Path Trace UDP 33434+255
Headquarters Server	NA	Media Stream UDP 42000-42100 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 15000-32000 RTP (configurable) IP Path Trace UDP 33434+255	NA	TURN: Media Stream UDP 10000-15000 RTP (configurable) WSS Media Control UDP 2223 - NG Allocator IP Path Trace UDP 33434+255
Mobility Router (SMR)	NA	Call Control TCP 5061 - SIPS TCP/UDP 5060 – SIP Media Stream UDP 42000-42100 RTP (configurable)	NA	NA	TURN: Media stream UDP 10000-20000 RTP (configurable)
D&M Server (Standalone)	NA	NA	NA	D&M Offline Upgrade - TRANSIENT TCP 4312 - Old MySQL D&M	NA

Originating Device	Destination Device				
	ECC Supervisor Client	Mobility Client (SMC)	Mobility Router (SMR)	D&M Server (Standalone)	Edge Gateway
Edge Gateway	NA	NA	Media stream UDP 10000-32000 RTP (configurable)	NA	TURN: Media Stream UDP 10000-20000 RTP (configurable)
Other (such as SIP) endpoints	NA	NA	SSH TCP 22	NA	NA

Port Usage Part 3

The following table contains the third part of the port usage information for the Connect system.

Table 83: Port Usage — Part 3

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Switch	Media Stream UDP10000-10550 RTP IP Path Trace UDP 33434+255	NA	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast TCP/UDP 5500-5600	Configuration Control UDP 162 SNMP TRAP Call Control UDP 5060 SIP Media Stream UDP 1024-65535 RTP – for SIP IP Path Trace ICMP 33434+255

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Switch			SoftSwitch UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files	SoftSwitch UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files	SoftSwitch UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files	
Switch			Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
V-Switch	Media Stream UDP10000-10550 RTP IP Path Trace UDP 33434+255	NA	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast	Port Mapper TCP 111 RPC Port Mapper UDP 111 RPC Port Mapper Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast TCP/UDP 5500-5600	Configuration Control UDP 67 DHCP Server Maintenance UDP 162 SNMP TRAP Call Control UDP 5060 SIP Media Stream UDP 1024-65535 RTP – for SIP
V-Switch			SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5442 – DRS UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	IP Path Trace ICMP 33434+255 SMTP TCP 25 – SMTP (third party for Virtual Machine notification)

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
V-Switch			Database TCP 4306 - MYSQLCC TCP 4308 - MYSQL config Transport TCP 5432 - Xprt Configuration Control TCP 21 FTP CTL - Boot files TCP 20 FTP DATA - Boot files	Database TCP 4306 - MYSQLCC TCP 4308 - MYSQL config Transport TCP 5432 - Xprt Configuration Control TCP 21 FTP CTL - Boot files TCP 20 FTP DATA - Boot files	Database TCP 4306 - MYSQLCC TCP 4308 - MYSQL config Transport TCP 5432 - Xprt Configuration Control TCP 21 FTP CTL - Boot files TCP 20 FTP DATA - Boot files	
V-Switch			Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255 SMTP TCP 25 - SMTP	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255 SMTP TCP 25 - SMTP	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace UDP 33434+255 SMTP TCP 25 - SMTP	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Service Appliance (Conferencing and IM)	Media Stream UDP10000-10550 RTP IP Path Trace UDP 33434+255	Browser determined dynamic port (WebRTC)	Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5442 – DRS UDP 5443 – Bandwidth Manager	Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast SoftSwitch UDP 5440 – Location Service UDP 5441 – Call Control UDP 5442 – DRS UDP 5443 – Bandwidth Manager	Call Control TMS RPC: TCP 5457 NCC Event port UDP 5458 SUNRPC Broadcast TCP/UDP 5500-5600 SoftSwitch UDP 5440 – Location Service UDP 5442 – DRS UDP 5442 – DRS	Configuration Control UDP 162 SNMP TRAP Call Control UDP 5060 SIP Media Stream UDP 1024-65535 RTP – for SIP
Service Appliance (Conferencing and IM)			SoftSwitch UDP 5445 – Admission Control UDP 5446 – DRS keepalive Database TCP 4306 MYSQLCC TCP 4308 – MYSQL config Transport TCP 5432 – CDS	SoftSwitch UDP 5445 – Admission Control UDP 5446 – DRS keepalive Database TCP 4306 MYSQLCC TCP 4308 – MYSQL config Transport TCP 5432 – CDS	SoftSwitch UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive Database TCP 4306 MYSQLCC TCP 4308 – MYSQL config	IP Path Trace ICMP 33434+255 SMTP TCP 25 – SMTP (third party for email notification)

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Service Appliance (Conferencing and IM)			ABC TCP 80, 443 – ABC (for Exo-IM) CAS TCP 5447/5448–CAS (for Exo-IM) Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files IP Path TraceUDP 33434+255	ABC TCP 80, 443 – ABC (for Exo-IM) CAS TCP 5447/5448–CAS (for Exo-IM) Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files IP Path TraceUDP 33434+255	Transport TCP 5432 – CDS Conferencing License TCP 80 – HTTP Voice Prompts TCP 21 – FTP of phr files ABC TCP 80, 443 – ABC (for Exo-IM)	
Service Appliance (Conferencing and IM)					CAS TCP 5447/5448–CAS (for Exo-IM) Configuration Control TCP 21 FTP CTL – Boot files TCP 20 FTP DATA – Boot files IP Path TraceUDP 33434+255	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
IP Phone	Media Stream UDP10000-10550 RTP IP Path Trace ICMP Traceroute	NA	Media UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute File Download/ Linux DVS Update TCP 80 HTTP TCP 443 HTTPS ABC TCP 80, 443 HTTPS	Media UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute File Download/ WinDVS Update TCP 80, 443 HTTPS ABC TCP 80, 443 HTTPS	Media UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute File Download/ WinHQ Update TCP 80, 443 HTTPS ABC TCP 80, 443 HTTPS	Syslog Server UDP 514 NTP Server UDP 123 – This is the default port. Can be configurable. UDP 61373 – RpCap end of capture
IP Phone			CAS TCP 5447/5448 HTTPS	CAS TCP 5447/5448 HTTPS	CAS TCP 5447/5448 HTTPS	
MGCP Phone	Media Stream UDP10000-10550 RTP IP Path Trace ICMP Traceroute	NA	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute FTP TCP 21 – FTP	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute FTP TCP 21 – FTP	Media Stream UDP 10000-20000 RTP (configurable) IP Path Trace ICMP Traceroute FTP TCP 21 – FTP	NA

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Connect Client Softphone	Media Stream (if both clients are on same network) – Both audio & video UDP 10000-10550 RTP (configurable)	NA	Configuration Control TCP 5449, 5469 – TBD: webproxy, Mgmt API– TCP 80 HTTP – Online help WSS call (MGCP) TCP 4431 - WSS nginx TCP 7777 - WSS internal only TCP 9090, 8181 - Mgmt TCP 2427 - Switch to WSS	Configuration Control TCP 5449, 5469 – TBD: webproxy, Mgmt API– TCP 80 HTTP – Online help WSS call (MGCP) TCP 4431 - WSS nginx TCP 7777 - WSS internal only TCP 9090, 8181 - Mgmt TCP 2427 - Switch to WSS	Configuration Control TCP 5449, 5469 – TBD: webproxy, Mgmt API– TCP 80 HTTP – Online help WSS call (MGCP) TCP 4431 - WSS nginx TCP 7777 - WSS internal only TCP 9090, 8181 - Mgmt TCP 2427 - Switch to WSS	NA
Connect Client Softphone			Media Stream UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 HTTPS CAS TCP 5447/5448 HTTPS Image Download TCP 80, 443	Media Stream UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 HTTPS CAS TCP 5447/5448 HTTPS Image Download TCP 80, 443	Media Stream UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 HTTPS CAS TCP 5447/5448 HTTPS Image Download TCP 80, 443	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Linux DVS Media	Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255	NA	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	Voice Mail Notification TCP 25 SMTP
Linux DVS Media			TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport Transport TCP 5432 – Xprt	TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport Transport TCP 5432 – Xprt	TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport Transport TCP 5432 – Xprt	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Windows DVS	Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255	NA	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 – Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	Voice Mail Notification TCP 25 SMTP
Windows DVS			TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport Transport TCP 5432 – Xprt	TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport Transport TCP 5432 – Xprt	TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/DTAS interserver communication Distributed Voice Mail TCP 25 SMTP - Voice Mail transport	

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Windows DVS					Database TCP 4308 – config DB (RO via ODBC for DDB) (R11.x) CAS Session Manager (R11.x) TCP 5449 – TMS to Data API to fulfill CSR Transport TCP 5432 – Xprt	
HQ Server	Stream UDP 10000-10550 RTP (configurable) IP Path Trace UDP 33434+255	NA	SoftSwitch UDP 5440 - Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	SoftSwitch UDP 5440 - Location Service TCP 5441 – Call Control UDP 5443 – Bandwidth Manager UDP 5445 – Admission Control UDP 5446 – DRS keepalive	CDR Offline Upgrade - TRANSIENT TCP 4311 – Old MySQL CDR DB D&M Offline Upgrade TRANSIENT TCP 4312 – Old MySQL D&M DB	Voice Mail Notification TCP 25 SMTP CDR TCP 3306 - CDR archive on remote server

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
HQ Server			TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/ DTAS interserver communication WSS-SoftPhone (Int Prod) TCP 4431 – WSS nginx (Keypush from HQ Key Notifier)	TMS UDP dynamic [1024-65535] – broadcast. TMSTMS disaster recovery TCP 5430 – TMS/ DTAS interserver communication WSS-SoftPhone (Int Prod) TCP 4431 – WSS nginx (Keypush from HQ Key Notifier)	ThirdParty Double-Take (If Configured) TCP 8000 Heartbeat Transmit TCP 8005 Status Transmit TCP 8006 Stats Report	
HQ Server			Distributed Voice Mail TCP 25 SMTP – Voice Mail transport Transport TCP 5432 – Xprt	Distributed Voice Mail TCP 25 SMTP – Voice Mail transport Transport TCP 5432 – Xprt		
ECC Supervisor Client	NA	NA	NA	ECC Supervisor TCP 31451 - 31452	NA	NA
Mobility Client (SMC)	Media Stream UDP 10000-10550 RTP (configurable)	NA	Media UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 CAS TCP 5447/5448	Media UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 CAS TCP 5447/5448	Media UDP 10000-20000 RTP (configurable) ABC TCP 80, 443 CAS TCP 5447/5448	NA

Originating Device	Destination Device					
	Connect Client and Softphone	Connect Client for Web and Softphone	Linux DVS	Windows DVS	HQ Server	Other
Mobility Router (SMR)	Media Stream UDP 10000-10550 RTP (configurable)	NA	Media UDP 10000-20000 RTP (configurable) ABC TCP 443 HTTPS CAS TCP 5447/5448 HTTP(S)	Media UDP 10000-20000 RTP (configurable) ABC TCP 443 HTTPS CAS TCP 5447/5448 HTTP(S)	Media UDP 10000-20000 RTP (configurable) ABC TCP 443 HTTPS CAS TCP 5447/5448 HTTP(S) Data API TCP 5449/4430 HTTP(S)	NA
Edge Gateway	TURN: Media Stream UDP 10000-10550 RTP (configurable)	TURN: Browser determined dynamic port (WebRTC)	TURN: Media Stream UDP 10000-10550 RTP (configurable)	TURN: Media Stream UDP 10000-10550 RTP (configurable)	TURN: Media Stream UDP 10000-10550 RTP (configurable)	NA
Other	NA	NA	SSH TCP 22	NA	D2, D&M TCP 5478	NA