Cisco Meeting Server

Web Proxy for Cisco Meeting Server Connections

Web Proxy for Cisco Meeting Server Port Reference

Table 1: Web Proxy for Meeting Server

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
CMA Web client signaling	Guest PCs	1024-65535	TLS	Expressway-E public IP	443 [1]
Tunneled media	CMA Cisco Meeting WebRTC App	1024-65535	UDP	Expressway-E public IP	3478 (and TCP override port if configured)
Web interface access	Administrator PCs	1024-65535	TLS	Expressway-E IP	NOT 443 [2] 8443 [3]
SSH tunnels for firewall traversal	Expressway-C	30000-35999	TCP	Expressway-E private IP	2222
SIP signaling	Expressway-C	25000-29999	TCP or TLS	Expressway-E	7001 (for first traversal zone; 7002 for second etc.)
CMA Cisco Meeting WebRTC App TURN requests	Any IP	1024-65535	UDP	Expressway-E TURN server public IP	3478
CMA Cisco Meeting WebRTC App TURN requests (TCP fallback)	Any IP	1024-65535	TCP	Expressway-E TURN server public IP	3478 [4]
Webbridge signaling (HTTPS)	Expressway-C	30000-35999	HTTPS	Meeting Server	443
Webbridge signaling (HTTPS)	Meeting Server	>=1024	HTTPS	Expressway-C	30000-35999
TURN client requests	Meeting Server	1024-65535	UDP	Expressway-E TURN server private IP	3478

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
TURN relays [5][5]	Original Source: Expressway-E Private IP Translated Source: Expressway-E Public IP	24000- 29999	UDP and TCP	Original Destination: Expressway-E Public IP Translated Destination: Expressway-E Private IP	24000-29999
TURN relay (On premises)	Expressway-E Private IP	24000- 29999	UDP and TCP	Expressway-E Private IP	24000-29999
TURN relays [6][6]	Meeting Server	Ephemeral	UDP	Expressway-E public IP	24000-29999

[1] You must change the administration port because WebRTC clients use 443. If the WebRTC browser tries to access port 80, the Expressway-E redirects the connection to 443.

[2] Options for alternative management ports are shown on the web interface. You can use the CLI to change it to a different port, eg. 7443, so that you can lock it down. We strongly advise against opening an external management port on the public IP address. If the browser tries to access port 80, the Expressway-E redirects the connection to your chosen port

[3] If your Meeting Server and Expressway deployment is coexisting with MRA, you must not use port 8443 for web administration.

[4] In version X8.10, the Expressway cannot listen on TCP 443 for TURN at the same time as it is listening on TCP 443 for signaling from the Cisco Meeting WebRTC App. TCP 3478 is shown, because the Expressway listens on the configured TURN port for both transport protocols. From X8.11, Expressway-E can listen to both TURN and Cisco Meeting Server requests on the TCP port 443.

[5] You must configure your external firewall to allow NAT reflection for the Expressway-E public IP address. (Firewalls typically mistrust packets that have the same source and destination IP address). From X12.5.3 release, there is no need to configure NAT reflection on external firewall. This is because Expressway has the ability to detect its own address without NAT reflection.

Important From X12.5.5, support for static NAT functionality on TURN is extended to clustered systems. However, peers which are configured as TURN servers must be reachable using the private addresses for their corresponding public interfaces.

[6] If the relay ports are not open, then the Meeting Server will use UDP port 3478 to relay media in all cases. This adds load on the TURN server in cases where the CMA web client is also using a relay.

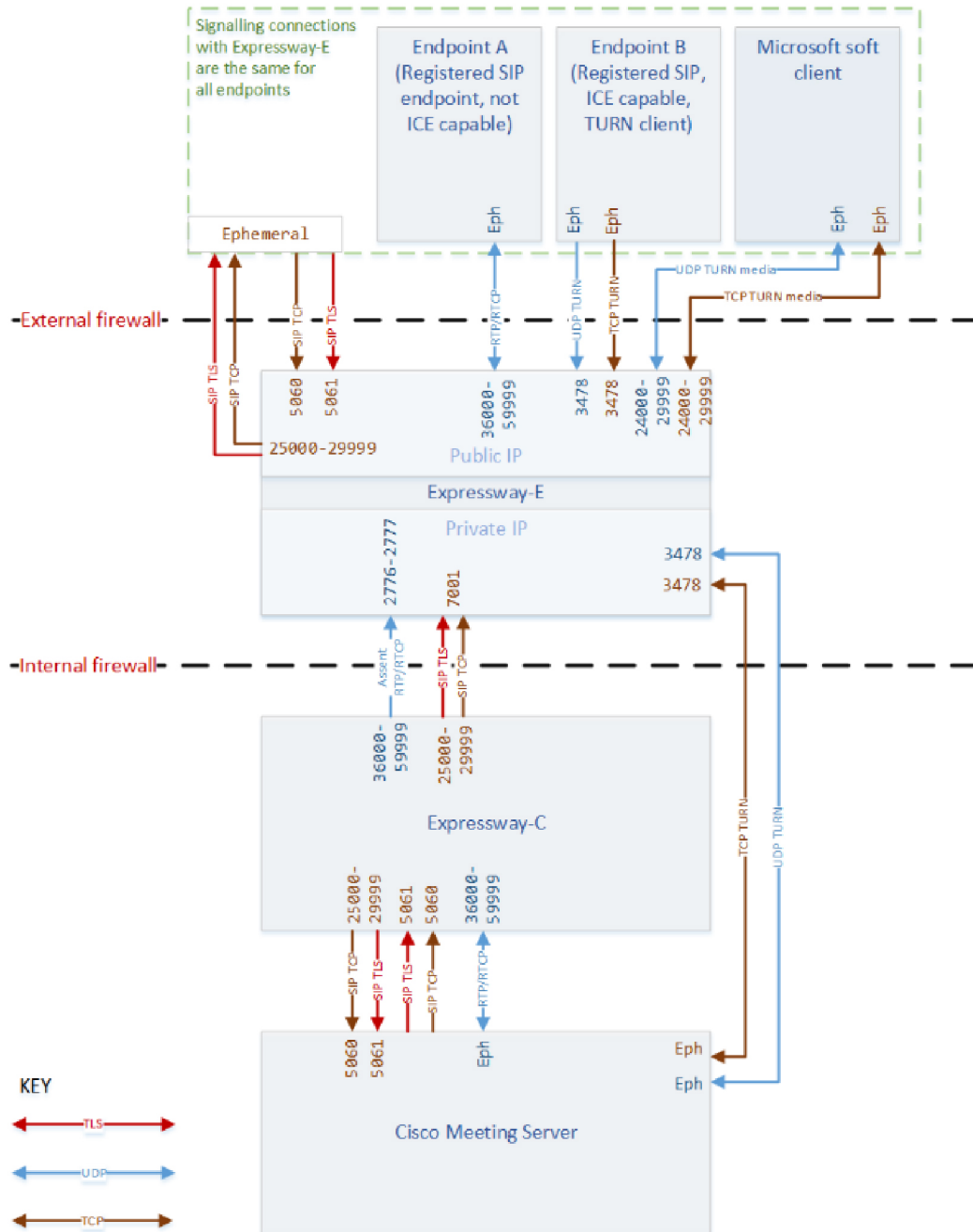# SIP Edge for Meeting Server Connections (Standards-based Endpoints)
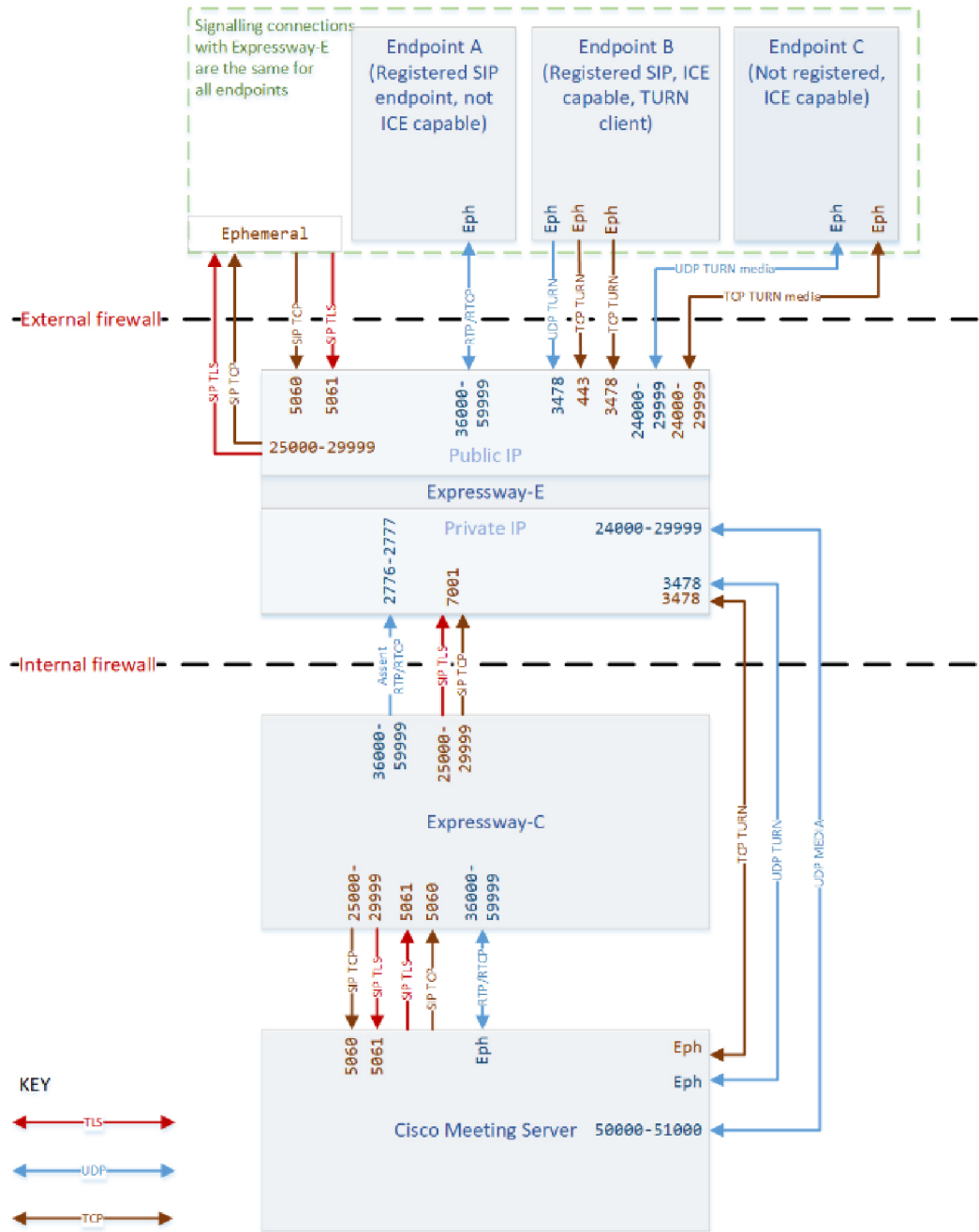
SIP Edge for Cisco Meeting Server Port Reference (Standards-based Endpoints)

Table 2: SIP Edge for Meeting Server Port Reference

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
SIP signaling	Expressway-C	25000-29999	TCP or TLS	Expressway-E	7001 (for first traversal zone; 7002 for second etc.)
SIP signaling	Expressway-C	5060	UDP	Meeting Server	5060
SIP signaling	Expressway-C	25000-29999	TLS	Meeting Server	5061
SIP signaling	SIP endpoint (or its firewall)	>=1024	TCP	Expressway-E	5060
SIP signaling	SIP endpoint (or its firewall)	>=1024	TLS	Expressway-E	5061
Assent RTP (traversed media)	Expressway-C	36000-59999	UDP	Expressway-E	2776 or 36000 (Small/Medium) 36000 - 36010 (even ports) (Large)
Assent RTCP (traversed media	Expressway-C	36000-59999	UDP	Expressway-E	2777 or 36001 (Small/Medium) 36001 - 36011 (odd ports) (Large)
Assent RTP (traversed media)	SIP endpoint (or its firewall)	>=1024 Could be the firewall port where the media egressed, rather than an endpoint port	UDP	Expressway-E	36000-59999

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
Assent RTCP (traversed media)	SIP endpoint (or its firewall)	>=1024 Could be the firewall port where the media egressed, rather than an endpoint port	UDP	Expressway-E	36000-59999
Assent RTP (traversed media)	Expressway-E	36000-59999	UDP	SIP endpoint (or its firewall)	>=1024 Expressway waits until it receives media, then sends media to that source port (which could be the port where the media egressed the firewall, not an endpoint port)
TURN request	Any IP address	>=1024 (signaling port from endpoint or the firewall)	UDP & TCP	Expressway-E public IP	3478 (Small/Medium) 3478-3483 (Large)
TURN request	Meeting Server	>=1024	UDP	Expressway-E private IP	3478 (Small/Medium) 3478-3483 (Large)
TURN media	Expressway-E	24000-29999	UDP & TCP	Any IP address	>=1024
TURN media	Any	>=1024 Port of relevant ICE candidate: host IP port, server reflexive port (outside firewall port), or TURN server port	UDP & TCP	Expressway-E	24000-29999
TURN media	Meeting Server	50000-51000	UDP	Expressway-E private IP	24000-29999

# SIP Edge for Meeting Server Connections (Microsoft Clients)

SIP Edge for Cisco Meeting Server Port Reference (Microsoft Clients)

Table 3: SIP Edge for Meeting Server Port Reference

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
SIP signaling	Expressway-C	25000-29999	TCP or TLS	Expressway-E	7001 (for first traversal zone; 7002 for second etc.)
SIP signaling	Expressway-C	25000-29999	TLS	Meeting Server	5061
SIP signaling	SIP endpoint (or its firewall)	>=1024	TCP	Expressway-E	5060
SIP signaling	SIP endpoint (or its firewall)	>=1024	TLS	Expressway-E	5061
Assent RTP (traversed media)	Expressway-C	36000-59999	UDP	Expressway-E	2776 or 36000 (Small/Medium) 36000 - 36010 (even ports) (Large)
Assent RTCP (traversed media)	Expressway-C	36000-59999	UDP	Expressway-E	2777 or 36001 (Small/Medium) 36001 - 36011 (odd ports) (Large)
Assent RTP (traversed media)	SIP endpoint (or its firewall)	>=1024 Could be the firewall port where the media egressed, rather than an endpoint port	UDP	Expressway-E	36000-59999
Assent RTCP (traversed media)	SIP endpoint (or its firewall)	>=1024 Could be the firewall port where the media egressed, rather than an endpoint port	UDP	Expressway-E	36000-59999

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
Assent RTP (traversed media)	Expressway-E	36000-59999	UDP	SIP endpoint (or its firewall)	>=1024 Expressway waits until it receives media, then sends media to that source port (which could be the port where the media egressed the firewall, not an endpoint port)
TURN control	Any IP address	>=1024 (signaling port from endpoint or the firewall)	UDP & TCP	Expressway-E	3478 (Small/Medium) 3478-3483 (Large)
TURN media	Expressway-E	24000-29999	UDP & TCP	Any IP address	>=1024
TURN media	Any	>=1024 Port of relevant ICE candidate: host IP port, server reflexive port (outside firewall port), or TURN server port	UDP & TCP	Expressway-E	24000-29999

Connection Map-Point to Point Microsoft Interoperability Using Meeting Server
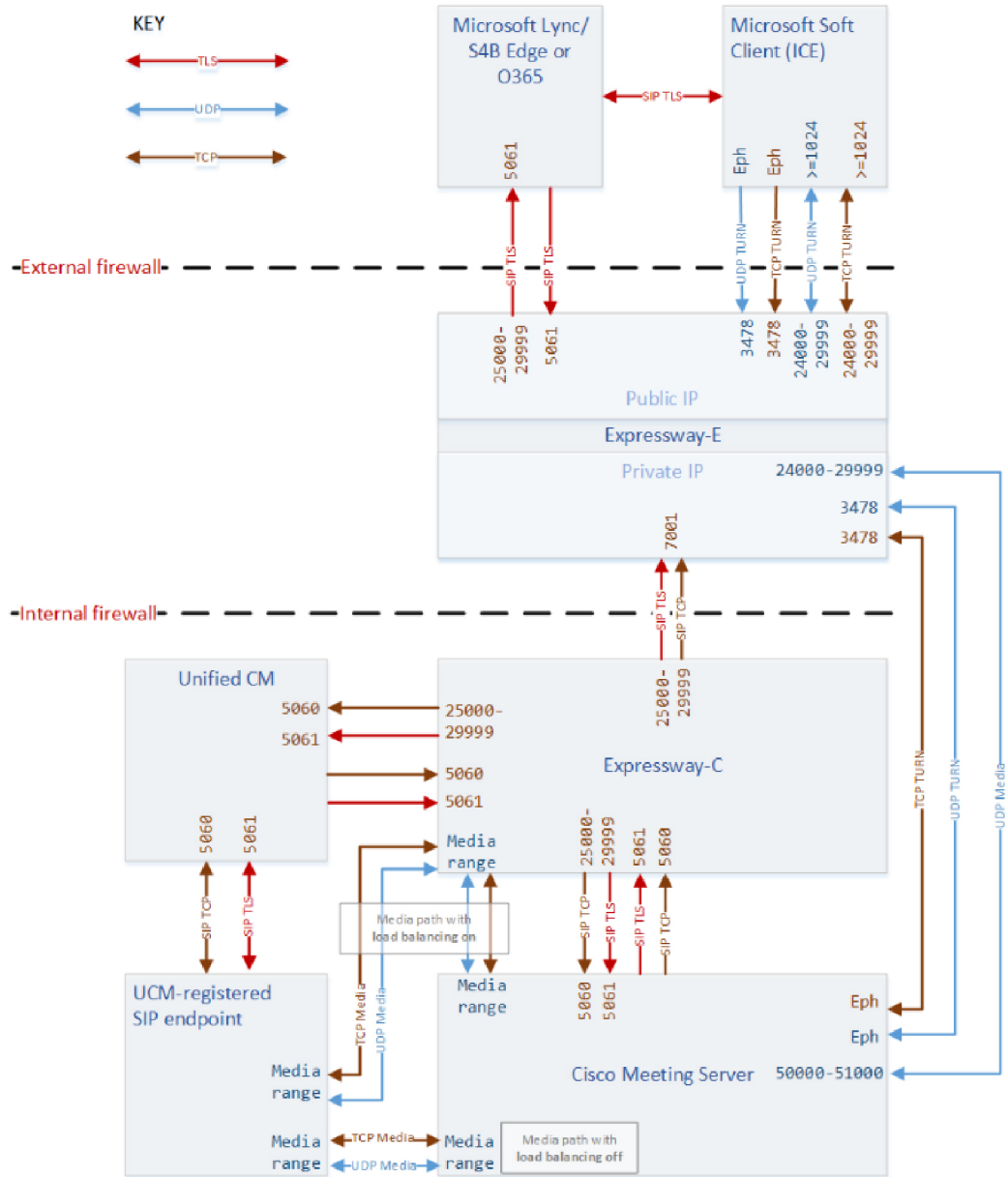
Port Reference-Point to Point Microsoft Interoperability Using Meeting Server

Table 4: Point to Point Microsoft Interoperability Using Meeting Server Port Reference

Purpose	Src. IP	Src. ports	Protocol	Dest. IP	Dst. Ports
SIP Signaling	Expressway-C	25000-29999	TCP or TLS	Expressway-E	7001 (for first traversal zone; 7002 for second etc.)
SIP Signaling	Expressway-C	25000-29999	TLS	Meeting Server	5061
SIP Signaling	Expressway-C	25000-29999	TCP	Meeting Server	5060
SIP Signaling	Microsoft client or its firewall	>=1024	TLS	Expressway-E	5061
SIP Signaling	Expressway-C	25000-29999	TLS	Unified CM	5061
SIP Signaling	Expressway-C	25000-29999	TCP	Unified CM	5060
SIP Signaling	Unified CM	Ephemeral	TLS	Expressway-C	5061
SIP Signaling	Unified CM	Ephemeral	TCP	Expressway-C	5060
TURN control	Any IP address	>=1024 (signaling port from endpoint or the firewall)	UDP & TCP	Expressway- E	3478 (Small/Medium)
TURN request	Meeting Server	>=1024	UDP/TCP	Expressway-E private IP	3478 (Small/Medium) 3478-3483 (Large)
TURN media	Expressway- E	24000-29999	UDP & TCP	Any IP address	>=1024
TURN media	Any	>=1024 Port of relevant ICE candidate: host IP port, server reflexive port (outside firewall port), or TURN server port	UDP & TCP	Expressway- E	24000-29999
TURN media	Meeting Server	50000-51000	UDP	Expressway-E private IP	24000-29999