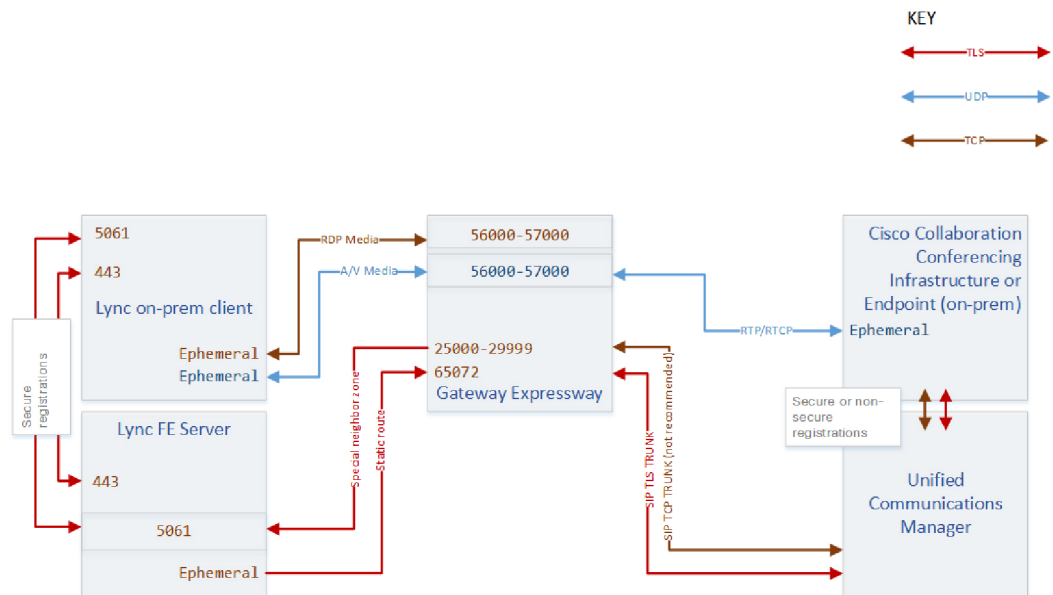




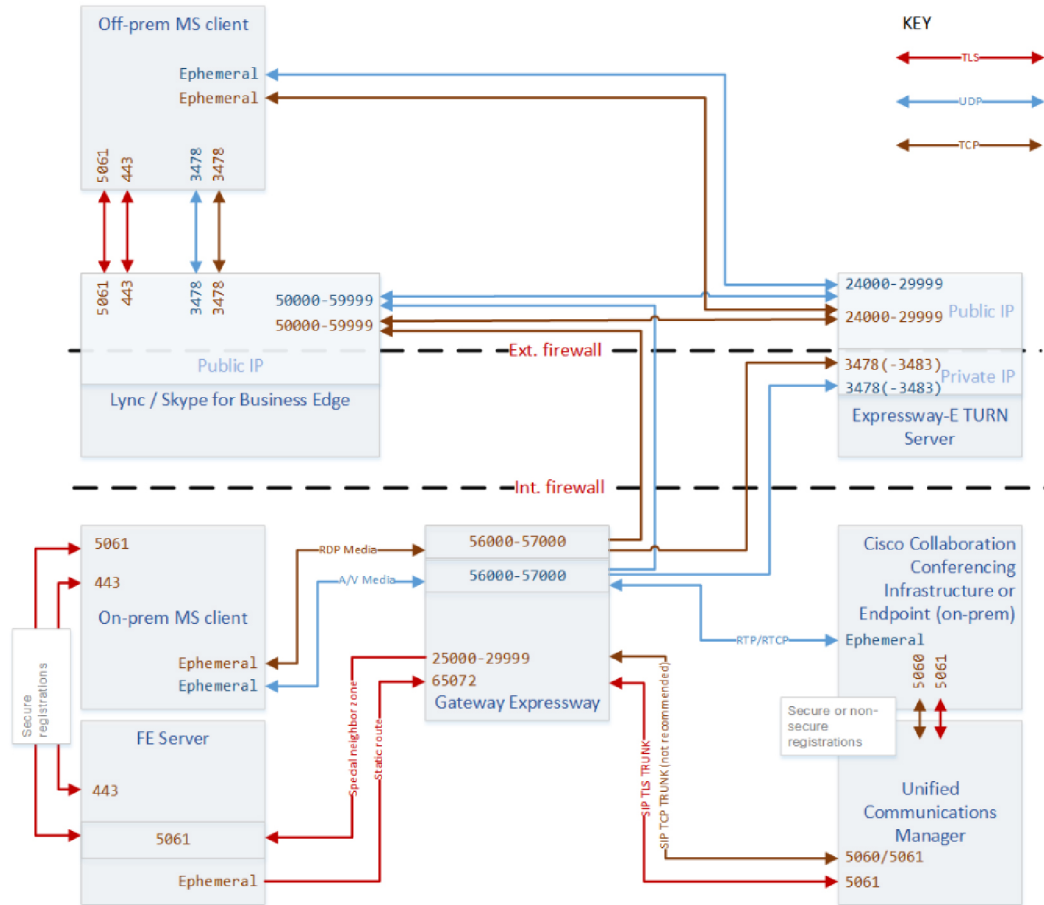
Microsoft Interoperability Using Gateway Expressway

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On-Premises Microsoft Clients



Off-Premises Microsoft Clients



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Expressway with Microsoft Infrastructure Port Reference

About the deployment connections and ports

- Trunk connections between Microsoft infrastructure elements not shown.
- Media/signaling connections required for Microsoft client to client calls not shown.
- Microsoft port ranges may vary from those shown here; check the Microsoft documentation to determine the port ranges defined for your infrastructure.
- Cisco Unified Communications Manager and collaboration endpoint connections not shown (for clarity). You can see an example of those on [MRA Connections](#).

- Multiple media paths are possible because there are two TURN servers in the DMZ. "Any" source IP address is listed because ICE negotiation could mean the media path uses a relay address provided by one of the TURN servers, or a reflexive address from the egress side of a firewall/NAT.
- The Microsoft Interoperability service on the gateway Expressway has a shared pool of media ports (default 56000-57000). The service can use any port in the range for media connection on either TCP or UDP transport.
- The drawing shows two IP addresses on the Expressway-E because you may have one or two NICs enabled on the Expressway-E. The address you enter for the TURN server (on the Microsoft interoperability configuration of the gateway Expressway) is the one that should listen on 3478 (TCP and UDP).

Table 1: SIP Signaling Port Reference

| Purpose | Src. IP | Src. ports | Protocol | Dest. IP | Dst. Ports |
|--|--------------------|------------------------------|----------|--------------------------------------|-------------------------|
| SIP signaling to Lync environment | Gateway Expressway | 25000-29999 | TLS | Lync FE Server | 5061 |
| SIP signaling from Lync environment | Lync FE Server | Ephemeral ports (1024-65535) | TLS | Gateway Expressway: MS interop B2BUA | 65072 |
| SIP signaling | Microsoft client | 5061 | MTLS | Microsoft Edge | 5061 |
| SIP signaling | Microsoft Edge | 5061 | MTLS | Microsoft client | 5061 |
| SIP/TLS & TCP TURN | Microsoft client | 443 | TLS | Microsoft Edge | 443 |
| SIP/TLS & TCP TURN | Microsoft Edge | 443 | TLS | Microsoft client | 443 |
| STUN | Microsoft client | 3478 | UDP | Microsoft Edge | 3478 |
| STUN | Microsoft Edge | 3478 | UDP | Microsoft client | 3478 |
| AV media to on-prem Lync clients | Gateway Expressway | 56000-57000 | UDP | Lync clients | Lync client media ports |
| Screen sharing from on-prem Lync clients | Lync client | 443 | TCP | Gateway Expressway | 56000-57000 |

| Purpose | Src. IP | Src. ports | Protocol | Dest. IP | Dst. Ports |
|--|--------------------------|-------------------|-----------------|--|--|
| Media from Microsoft interoperability B2BUA towards on-premises Cisco collaboration recipients | Gateway Expressway | 56000-57000 | UDP | Deployment dependent; bridge, endpoint, or a SIP proxy | Endpoint media ports |
| ICE negotiation and TURN requests from Gateway Expressway to Expressway-E TURN server | Gateway Expressway | 56000-57000 | UDP or TCP | Expressway-E TURN server | UDP 3478 TCP 3478 (3478-3483 on large systems) |
| UDP TURN media relays | Expressway-E TURN server | 24000-29999 | UDP | Any (reflexive or relay) from MS client or Edge | 50000-59999 (Edge range) or client media ports |
| TCP TURN media relays | Expressway-E TURN server | 24000-29999 | TCP | Any (reflexive or relay) from MS client or Edge | 50000-59999 (Edge range) or client media ports |