APPENDIX A

Interworking with Session Initiation Protocol (SIP)

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The most popular protocol used by enterprises for video conferencing is H.323. That protocol has been used for a long time, and capabilities such as H.235 for security and H.239 for data sharing make it popular. However, newer endpoints and systems support SIP too, which is seeing increased adoption.

Enterprises that want to use a common protocol for voice, video, instant messaging, and presence would like to standardized on SIP, and new deployments with call agents that have SIP servers providing call resolution find the support of SIP in video communication devices desirable. Enterprises that use Secure RTP (sRTP) for call encryption and do not need data sharing capabilities through the call, may prefer to deploy endpoints with SIP protocol.

A SIP network can consist of various SIP servers that provide the following functionality:

- Registration

  The SIP registrar server provides registration for the endpoints. Usually the SIP server that provides the dial plan capabilities would also support the registration functionality.

- Signal proxy

  SIP proxy servers proxy the call signaling through them. The proxy servers can support two modes:

  - Proxy the initial call signaling and then have the SIP servers control the call.
  - Proxy the call and the signaling on behalf of the SIP server. In this mode the SIP proxy operates in a record route mode.

- Location services.

  The location services inform the SIP registrar of a new location of an endpoint. In scalable networks, this is useful to associate properties of that location with the endpoint.

A typical SIP network consists of all these functions in a single server, or multiple servers can be used with the functionality distributed to each server according to its role.

Note Call agents such as Cisco Unified Communications Manager support registration of SIP endpoints and connectivity with SIP trunks. Cisco Unified Communications Manager supports additional protocols such as H.323 and Skinny Client Control Protocol (SCCP), and it can also be used to provide interworking between H.323 networks and SIP networks while supporting large-scale deployments.

Give adequate consideration to the MCUs, gateways, and other systems or servers that support SIP protocol to service all the deployment requirements, so that your system design can support all the required calls, conferences, and collaboration services needed by your enterprise.