

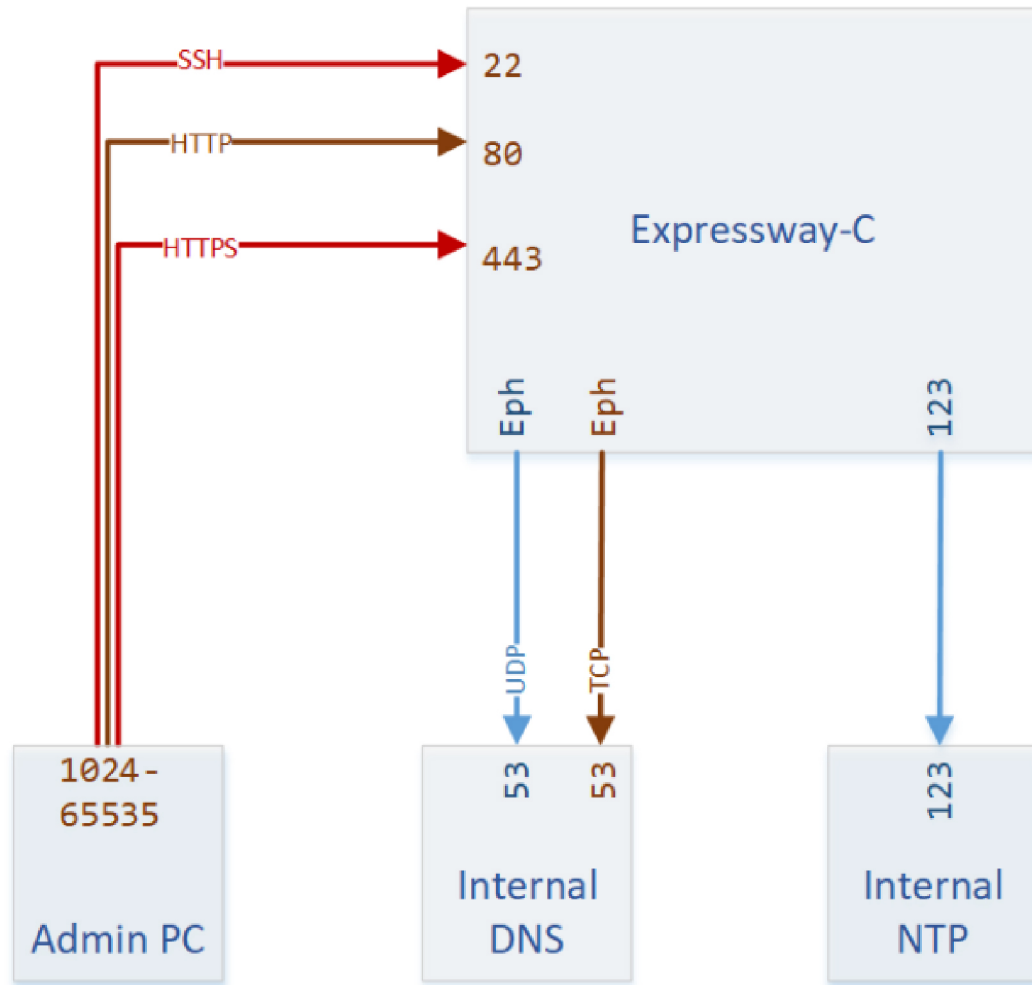


# Basic Networking Connections

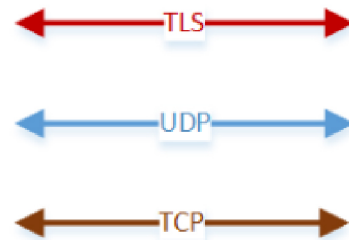
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# Basic Networking - Expressway



### KEY



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# Networking Port Reference - Expressway

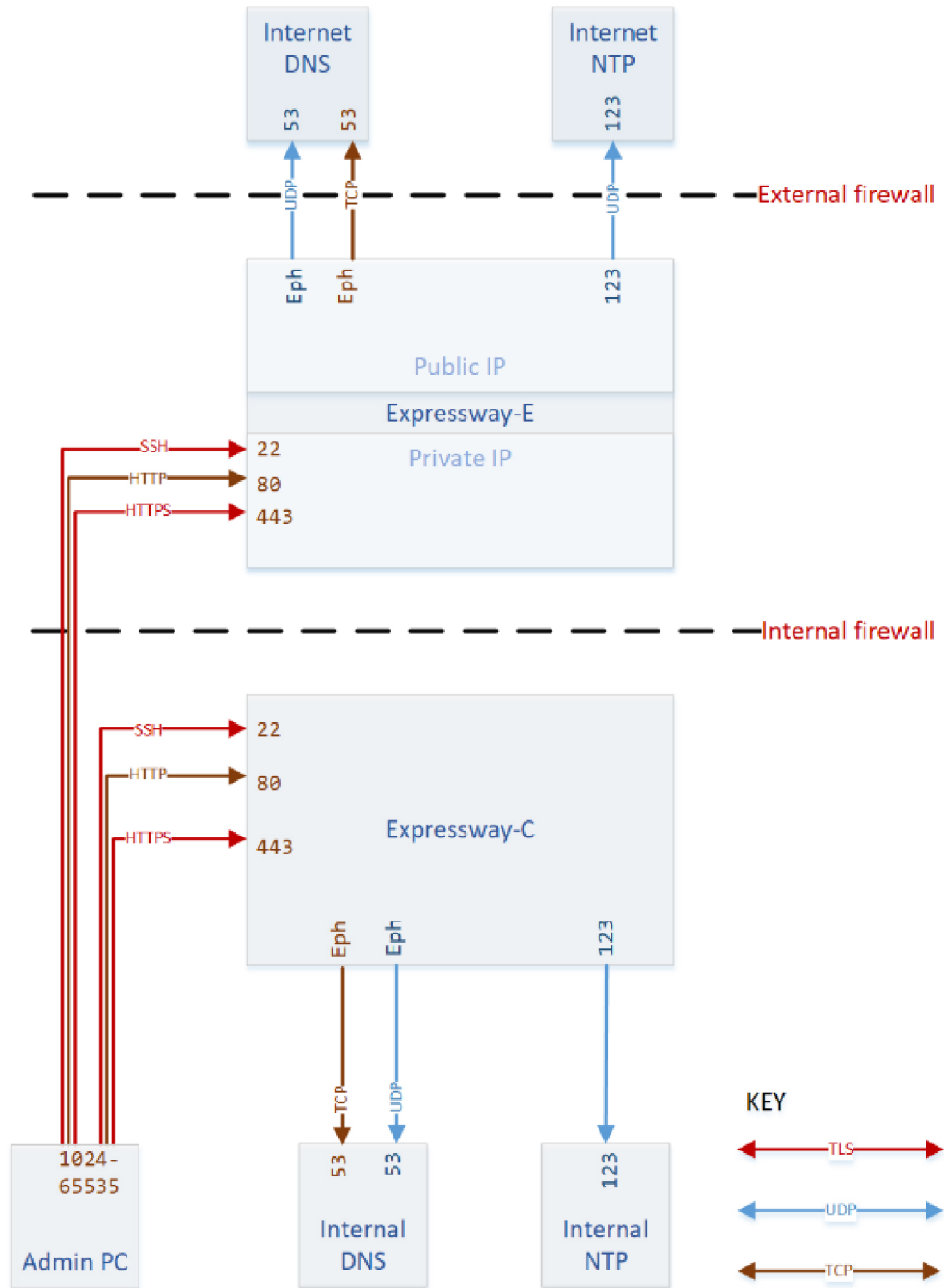
Table 1: Basic Networking Ports for Expressway-C

Purpose	Src. IP	Src. Ports	Protocol	Dest. IP	Dest. Ports
Administrator SSH	Admin PCs	1024-65535	TCP	Expressway-C	22
Administrator HTTP*	Admin PCs	1024-65535	TCP	Expressway-C	80
Administrator HTTPS	Admin PCs	1024-65535	TCP	Expressway-C	443
Name resolution (DNS)	Expressway-C	30000-35999	UDP & TCP†	Internal name server	53
Time synchronization (NTP)	Expressway-C	123	UDP	Internal time server	123

\* Expressway redirects HTTP to HTTPS by default. You don't need to open the HTTP port, but you can allow HTTP for convenience and redirect to HTTPS.

† Expressway will attempt DNS resolution over TCP if the response is too large.

# Basic Networking - Traversal Pair



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# Networking Port Reference - Expressway Traversal Pair

**Table 2: Basic Networking Ports for Expressway-C**

Purpose	Src. IP	Src. Ports	Protocol	Dest. IP	Dest. Ports
Administrator SSH	Admin PCs	1024-65535	TCP	Expressway-C	22
Administrator HTTP*	Admin PCs	1024-65535	TCP	Expressway-C	80
Administrator HTTPS	Admin PCs	1024-65535	TCP	Expressway-C	443
Name resolution (DNS)	Expressway-C	30000-35999	UDP & TCP †	Internal name server	53
Time synchronization (NTP)	Expressway-C	123	UDP	Internal time server	123

\* Expressway redirects HTTP to HTTPS by default. You don't need to open the HTTP port, but you can allow HTTP for convenience and redirect to HTTPS.

† Expressway will attempt DNS resolution over TCP if the response is too large.

**Table 3: Basic Networking Ports for Expressway-E**

Purpose	Src. IP	Src. Ports	Protocol	Dest. IP	Dest. Ports
Administrator SSH	Admin PCs	1024-65535	TCP	Expressway-E private IP	22
Administrator HTTP	Admin PCs	1024-65535	TCP	Expressway-E private IP	80
Administrator HTTPS	Admin PCs	1024-65535	TLS	Expressway-E private IP	443
Internal name resolution (DNS)*	Expressway-E private IP	30000-35999	UDP & TCP	Internal name server	53
External name resolution (DNS)	Expressway-E public IP	30000-35999	UDP & TCP	External name server	53
Internal time synchronization (NTP)*	Expressway-E private IP	123	UDP	Internal time server	123

<b>Purpose</b>	<b>Src. IP</b>	<b>Src. Ports</b>	<b>Protocol</b>	<b>Dest. IP</b>	<b>Dest. Ports</b>
External time synchronization (NTP)	Expressway-E public IP	123	UDP	External time server	123

\* You may prefer to connect Expressway-E to external DNS and NTP. You do not need both.