

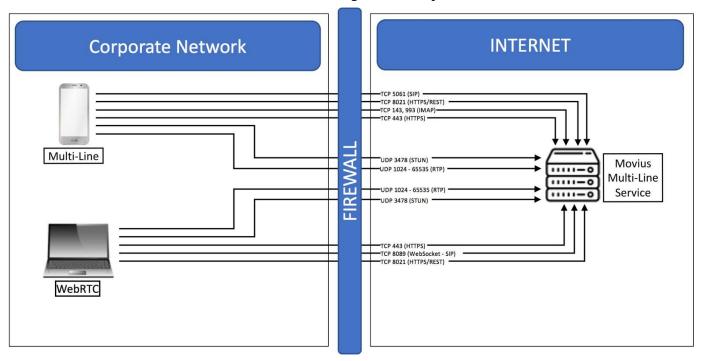


Enterprise network requirements to fully enable Movius MultiLine

The following short note describes the networking setup required in order to deploy the Movius MultiLine Android and iOS Client and Movius WebRTC Web Client in a managed corporate network.

Network architecture

The diagram below illustrates the TCP and UDP messages performed by both the MultiLine Client and Movius WebRTC Web Client. All connections are established by the Movius MultiLine Client and/or Movius WebRTC Web Client and terminate to the hosted Movius MultiLine Service. All communication is outbound initiated, bi-directional and responses from the Movius MultiLine Service will return through the same path.





Applicable Ports

The table below shows the required TCP and UDP ports which the Managed Corporate Network must allow egress rules for in the Firewall. Note that all rules are outbound initiated, bidirectional and responses from the Movius MultiLine Service will return through the same path.

Internal Corporate Network				INTERNET		
Requirement	Description	Ports	Direction	FW	Movius Service	
SIP over TLS	Session Initiation Protocol for Call Signalling	TCP 5061			Call Signalling	
HTTPS / REST	RESTful API to Movius Platform	TCP 8021			REST API	
SSL/TLS encrypted IMAP	Internet Message Access Protocol for Visual Voicemail	TCP 143, 993			➡ IMAP for Visual Voicemail	
HTTPS	HTTPS requests for accessing HTML content	TCP 443			→ HTTPS for HTML / Web Content	
Web Socket	Secure Web Socket for WebRTC Call Signalling	TCP 8089			→ Web Socket for WebRTC	
STUN	Session Traversal Utilities for NAT	UDP 3478			STUN for NAT Traversal	
RTP	Real-time Transport Protocol for Audio / Media Flow	UDP 1024 - 65535			RTP for Media Flow	

Note - Port 143 is being phased out as it is for non-secure IMAP, but is included here to support legacy clients which may still be in production.

Note - RTP requires that 1024 - 65535 UDP port be allowed to egress from the Internal Corporate Network. An IP Range can be provided to limit the rule to only Movius MultiLine Service, however if an IP range is used then future expansions (which may require additional IP ranges) or adding hosting sites may require updates to the rule.

IP Ranges can be made available upon request to your Movius contact



Applicable IP Addresses

US Site

INBOUND	TCP/UDP	service	primary_addresses	DNS Resolve
8021	TCP	adk	dal12.moviuscorp.net	[169.63.26.228]
				[169.63.160.148]
8021	TCP	adk	sml.moviuscorp.net	[169.63.26.228]
				[169.63.160.148]
8021	TCP	adk	us.moviuscorp.net	[169.63.26.228]
8021	TCP	adk	wdc06.moviuscorp.net	[169.63.160.148]
			wdcgc2.moviuscorp.net	[169.63.160.148]
8021	TCP	adk	dal12.moviuscorp.net	[169.63.26.228]
			169.63.160.148	
443	TCP	auth	169.63.26.228	
443	TCP	elk	insights.moviuscorp.net	[169.63.160.153]
				[169.63.160.148]
8021 & 443	TCP	glb-address	sml.moviuscorp.net	[169.63.26.228]
			169.63.160.148	
25 & 993	TCP	imap	169.63.26.228	
			cdnakauamq11hbp9.cdn.appdomain.cloud	[23.7.99.89] *
443	TCP	mldt	workspace.movius.ai	[184.25.123.59] *
			169.63.160.152	
5061	TCP	sip	169.63.26.232	
1024 -			169.63.160.152	
65535	UDP	rtp	169.63.26.232	
			169.63.160.148	
3478	UDP	stun	169.63.26.228	
			webclient-wdc06.moviuscorp.net	[169.63.129.151]
443	TCP	webclient-sip	webclient-dal12.moviuscorp.net	[169.63.26.230]
443	TCP	webrtc-gateway	sml-webrtc.moviuscorp.net	[169.63.26.234]
				[169.63.160.154]
443	TCP	webrtc-gateway	slab-webrtc.moviuscorp.net	169.46.89.190
443	ТСР	webclient-sip	webclient-slab.moviuscorp.net	169.46.89.188

UK Site

INBOUND	TCP/UDP	service	primary_addresses	DNS Resolve
8021	TCP	adk	uk3.moviuscorp.net	[169.50.222.162]
443	TCP	auth	169.50.222.162	
443	TCP	elk	insights.moviuscorp.net	[169.63.160.153]
8021 & 443	TCP	glb-address	uk3.moviuscorp.net	[169.50.222.162]
25 & 993	TCP	imap	169.50.222.162	
			cdnakauamq11hbp9.cdn.appdomain.cloud	[23.7.99.89] *
443	TCP	mldt	workspace.movius.ai	[184.25.123.59] *
5061	TCP	sip	169.50.222.168	
1024 -			169.50.222.168	
65535	UDP	rtp		
3478	UDP	stun	169.50.222.162	
443	TCP	webclient-sip	webclient-uk3.moviuscorp.net	[169.50.222.172]



443 TCP webrtc-gateway lon02-webrtc.moviuscorp.net [169.50.222.166]



SG Site

INBOUND	TCP/UDP	service	FQDN / IP	DNS Resolve
8021	TCP	adk	sng01.moviuscorp.net	[161.202.2.132]
443	TCP	auth	161.202.2.132	
443	TCP	elk	insights.moviuscorp.net	[169.63.160.153]
8021 & 443	TCP	glb-address	sng01.moviuscorp.net	[161.202.2.132]
25 & 993	TCP	imap	161.202.2.132	
			cdnakauamq11hbp9.cdn.appdomain.cloud	[23.7.99.89] *
443	TCP	mldt	workspace.movius.ai	[184.25.123.59] *
443	TCP	mldt	sg1.moviuscorp.net	[161.202.2.132]
5061	TCP	Sip	161.202.2.137	
1024 -			161.202.2.137	
65535	UDP	rtp		
3478	UDP	stun	161.202.2.132	
443	TCP	webclient-sip	webclient-sng01.moviuscorp.net	[161.202.2.140]
443	TCP	webrtc-gateway	sng01-webrtc.moviuscorp.net	[161.202.2.141]

^{*} note that IP Addresses are subject to change



DISCLAIMER

Movius has performed testing of these Corporate Port Settings Instructions on one or more corporate networks and such testing has confirmed that (1) the Movius MultiLine service correctly operates on such a corporate network when such Instructions are followed and (2) the corporate network is not negatively impacted by implementation of such Corporate Port Settings Instructions. However, because corporate networks may have configurations that were not anticipated by Movius, Movius is unable to test these Corporate Port Settings Instructions on all possible corporate network configurations. Accordingly, Movius recommends that after a corporate customer implements the Movius MultiLine service and these Corporate Port Settings Instructions on its Network, such corporate customer should test (1) the operation of the MultiLine service on its network, and (2) test the operability and stability of its corporate network. Movius disclaims all responsibility for a customer's Network and the operability and functionality of a customer's Network after implementation of these Corporate Port Settings Instructions and the Movius MultiLine service. IN NO EVENT WILL MOVIUS BE LIABLE FOR ANY DAMAGES TO A CUSTOMER'S NETWORK AS A RESULT OF THE USE OF THESE CORPORATE NETWORK PORT SETTINGS INSTRUCTIONS AND THE MOVIUS MULTILINE SERVICE ON SUCH NETWORK, INCLUDING BUT NOT LIMITED TO SPECIAL, INDIRECT, PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING ANY LOST PROFITS, LOST DATA, OR LOST SAVINGS ARISING FROM THE USE OF THESE CORPORATE PORT SETTINGS INSTRUCTIONS ON YOUR CORPORATE NETWORK AND THE USE OF THE MOVIUS SECOND LINE SERVICE ON YOUR NETWORK.