IT REQUIREMENTS - LOGICAL LAYOUT

NOTE: If firewall rules are domain dependant, please allow current and future domains:
*.imseismology.org
*.imsi.org

Data Transfer (24/7 real time connections) – Seismic Server Only			
IP	DNS Name (URL)	Port	Protocol
196.44.37.99 (South Africa)	portal1.imsi.org	443	https
41.0.209.203 (South Africa)	portal2.imsi.org		
196.22.244.59 (South Africa)	portal3.imsi.org		
120.29.243.116 (Australia)	portal5.imsi.org		
150.228.226.35 (Australia)	portal6.imsi.org		
142.115.255.58 (Canada)	portal7.imsi.org		

Software Update Centres & Services			
IP	DNS Name (URL)	Port	Protocol
120.29.241.81 (Australia)	updates5.imseismology.org devupdates5.imseismology.org software5.imseismology.org downloads5.imseismology.org services.au.imseismology.org licensing.imsi.org directory.imsi.org	443	https
150.228.226.35 (Australia)	directory6.imsi.org		
184.149.7.253 (Canada)	updates7.imsi.org devupdates7.imsi.org software7.imsi.org downloads7.imsi.org		
196.44.37.98 (South Africa)	updates.imseismology.org devupdates.imseismology.org software.imseismology.org downloads.imseismology.org www.imseismology.org / www.imsi.org mobile.imseismology.org directory1.imsi.org myservices.imseismology.org myservices.imsi.org		
196.44.37.100 (South Africa)	issues.imseismology.org		
13.248.203.52 (primary) 35.71.138.35 (backup)	nexus.imsi.org		
166.117.58.28 (primary) 166.117.165.56 (backup)	rbha.imsi.org		
Amazon Cloudfront IP ranges (non-static)	updates-cloud.imsi.org devupdates-cloud.imsi.org software-cloud.imsi.org		

Remote Access			
Option 1) Direct ssh access restricted to IMS public IPs			
Source IP	DNS Name (URL)	Destination Port	Protocol
196.44.37.100 (South Africa)	access1.imsi.org	remote port	ssh
41.0.209.204 (South Africa)	access2.imsi.org		
196.22.244.60 (South Africa)	access3.imsi.org		
120.29.241.81 (Australia)	access5.imsi.org		
184.149.7.253 (Canada)	access7.imsi.org		
Option 2) VPN setup to customer network			
VPN account allowing access to all the ports of the seismic server			

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IMS Firewall

Internet

Firewall / Proxy Server / VPN server

Software Update Centres & Services only

Customer Workstations and VPN Jumpbox for IMS

Communication between VPN Jumpbox/Workstations and Seismic server		
Function	Port	Protocol
Ping	-	ICMP
SSH connection between workstation and server	22	ssh
Ports to interface Software application with seismic server (all required)	8001 - 8099 8101 - 8199	http https
File Sharing	137, 138, 139, 445	tcp, udp, smb,cifs

Seismic Server

Direct SSH or via dedicated jumpbox

Communication between Seismic Server and Seismic Equipment		
Function	Port	Protocol (tcp & udp)
Ping	-	ICMP
Remote administration	80	http
Communication protocol between seismometers and seismic server	8001 8101	http https
SSH connection between server and equipment	22	ssh
Telnet session between server and equipment	23	telnet
File transfer	69,20-21	tftp, ftp
Moxa Nport Device server	950-981,4900 4800	tcp, udp
Timing protocols to seismic equipment	123,319-320	udp,ntp,ptp
- PTP system require IP multicast		

Network Time server (NTP) [for system without GPS]		
IP or URL	Port	Protocol
Internal or external time server address External example: ntp.ubuntu.com	123	tcp,udp, ntp

Seismic equipment (incl. IMS branded devices)

Customer

Non-IMS external sources			
IP	DNS Name (URL)	Port	Protocol
Country specific	archive.ubuntu.com (seismic server only)	443	https
Country specific	https://*.googleapis.com https://*.gstatic.com *.google.com *.googleusercontent.com		
Non-static	support.imsi.org imseismology.atlassian.net (users only)		

- Outbound connections from customer to IMS
- Outbound connections from customer to non-IMS source
- Inbound connections to customer from IMS
- Local traffic in customer network

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