

# 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)			
IP	DNS Name (URL)	Port	Protocol
196.44.37.99 (South Africa)	portal1.imseismology.org	80 443	http https
41.0.209.203 (South Africa)	portal2.imseismology.org		
196.22.244.59 (South Africa)	portal3.imseismology.org		
120.29.243.116 (Australia)	portal5.imseismology.org		
206.83.120.214 (Australia)	portal6.imseismology.org		
142.115.255.58 (Canada)	portal7.imseismology.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 nexus.au.imseismology.org licensing5.imseismology.org	443	https
184.149.7.253 (Canada)	updates7.imseismology.org devupdates7.imseismology.org software7.imseismology.org downloads7.imseismology.org		
196.44.37.98 (South Africa)	updates.imseismology.org devupdates.imseismology.org software.imseismology.org downloads.imseismology.org - www.imseismology.org mobile.imseismology.org		
196.44.37.100 (South Africa)	issues.imseismology.org licensing1.imseismology.org		
196.44.37.101 (South Africa)	myservices.imseismology.org		
196.22.244.58 (South Africa)	nexus.za.imseismology.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.imseismology.org	remote port	ssh
41.0.209.204 (South Africa)	access2.imseismology.org		
196.22.244.60 (South Africa)	access3.imseismology.org		
120.29.241.81 (Australia)	access5.imseismology.org		
184.149.7.253 (Canada)	access7.imseismology.org		
Option 2) VPN setup to customer network			
VPN account allowing access to all the ports of the seismic server			



Communication between 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 - 8020 8101 - 8120	http https
File Sharing	137, 138, 139, 445	tcp, udp, smb,cifs



Network Time server (NTP) [for system without GPS]		
IP or URL	Port	Protocol
Internal or external Time server address	123	tcp,udp, ntp

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	8001,8003 8101,8103	http https
SSH connection between server and equipment	22	ssh
Telnet session between server and equipment	23	telnet
File transfer	69,20-21	fttp, 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		

Customer

Seismic equipment (incl. IMS branded devices)

Non-IMS external sources			
IP	DNS Name (URL)	Port	Protocol
Country specific	archive.ubuntu.com	80	http
Country specific	security.ubuntu.com	80	http
Country specific	ntp.ubuntu.com (Unless locally available)	123	ntp

- 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