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IT Requirements

for

IMS Services

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Change Control Record		
Date	Description	Revision
2013/06/14	Original document	1
2013/07/12	Added licensing server	2
2014/01/30	Updated IMS AU external IP address	3
2014/10/15	Added Diagram	4
2015/05/19	Updated diagram and IMS AU external IP's	5
2015/10/12	Updated diagram and IMS AU new external IP's	6
2016/04/11	Updated diagram and IMS ZA external IP's	7
2016/10/28	Updated diagram and added https	8

Table 1: Change record

1 General

The IMS has been contracted to provide support and seismological processing services. In order to provide these services, certain IT connections need to be enabled.

The establishment of a link to the client enables IMS to access seismic data recorded by the seismic network. The IMS will regard both the status of the seismic network and the data recorded by this network as confidential information. Access onto the client network will be used strictly for services related to the transfer of seismic data, remote maintenance of the seismic system and any other services in line with the agreed upon scope of work between the IMS and the client.

The details of the required connections are detailed in the following paragraphs and summarised in a block diagram in figure 1.

2 Connections to IMS Servers

These connections can be direct or via a proxy within the client LAN. If a proxy is used for the connection, the proxy account details (IP address, port, type of proxy and authentication credentials) need to be supplied to the IMS for the setup of the seismic server. For an authenticating proxy a non-expiring password is preferred to prevent the sudden loss of data transfer.

2.1 Data Transfer

To enable data transfer, the servers installed at the client site need to have access to the IMS Data servers as detailed in Table 2.

Data transfer is used for remote seismological data processing, configuration updates and to enable IMS to complete their reporting obligations. The method used for transferring data uses the HTTP protocol on port 80 or HTTPS on port 443. Software is set up on the seismic computer which connects to an authenticated access web server at IMS. All communication is initiated by the seismic computer on the client side and the transfer rate is limited. IMS has two fixed IP addresses for data transfer providing redundancy. The software will switch the address if the other cannot be reached.

Source	Destination	DNS Name	Port	Protocol
Seismic PC	120.29.244.52	portal0.imseismology.org	80/443	HTTP/S
	196.44.37.99	portal1.imseismology.org		
	41.0.209.203	portal2.imseismology.org		
	120.29.244.53	portal3.imseismology.org		
	41.0.209.203	portal4.imseismology.org		

Table 2: Data transfer connections

2.2 Software Updates

Software updates for the seismic server and client PC's running IMS software are also made available from the IMS Servers.

Source	Destination	DNS Name (URL)	Port	Protocol
Any	196.44.37.98	updates.imseismology.org software.imseismology.org devupdates.imseismology.org downloads.imseismology.org www.imseismology.org	80	HTTP
	120.29.244.52	updates0.imseismology.org software0.imseismology.org devupdates0.imseismology.org downloads0.imseismology.org		
	137.254.120.26	updates.netbeans.org		
	Country specific	archives.ubuntu.com		
	Country specific	ntp.ubuntu.com	123	NTP

Table 3: Software update connections

2.3 Software Licensing

Software licences for the seismic server and client PC's running IMS software are also made available from the IMS Servers.

Source	Destination	DNS Name (URL)	Port	Protocol
Any	120.29.244.52	licensing0.imseismology.org	8005	HTTP
	196.44.37.100	licensing1.imseismology.org		
	41.0.209.204	licensing2.imseismology.org		

Table 4: Software licence connections

2.4 Secure Ports for Customer Access

The service level settings for seismological processing customers can be accessed via a secure web page after registration.

Customers using Ticker 3D on a mobile device can access the event data via a secure port.

Source	Destination	DNS Name (URL)	Port	Protocol
Any	196.44.37.101	myservices.imseismology.org	443	HTTPS
	41.0.209.203	mobile4.imseismology.org	8010	

Table 5: Secure Customer Access

3 Connections from IMS

IMS provides support, maintenance, upgrading and trouble-shooting of the seismic system. To do this IMS support staff need to connect to the seismic PC.

Options for this include

- Secure shell (ssh) (preferred method). This can be restricted to the three fixed IMS IP addresses for added security. Access from all three addresses is preferred for redundancy. The external port can be changed but the connection should route to port 22 on the seismic PC.
- A connection via a VPN (this can restrict the access to specific PC's within the IMS). IMS will use ssh access within the VPN.
- Remote desktop access (limits the support we can offer).

Source	DNS Name (URL)	Destination	Port	Protocol
120.29.244.52	access0.imseismology.org	Seismic PC	22	SSH
196.44.37.100	access1.imseismology.org			
41.0.209.204	access2.imseismology.org			
120.29.244.53	access3.imseismology.org			
41.0.209.204	access4.imseismology.org			

Table 6: Connections from IMS

4 Block Diagram

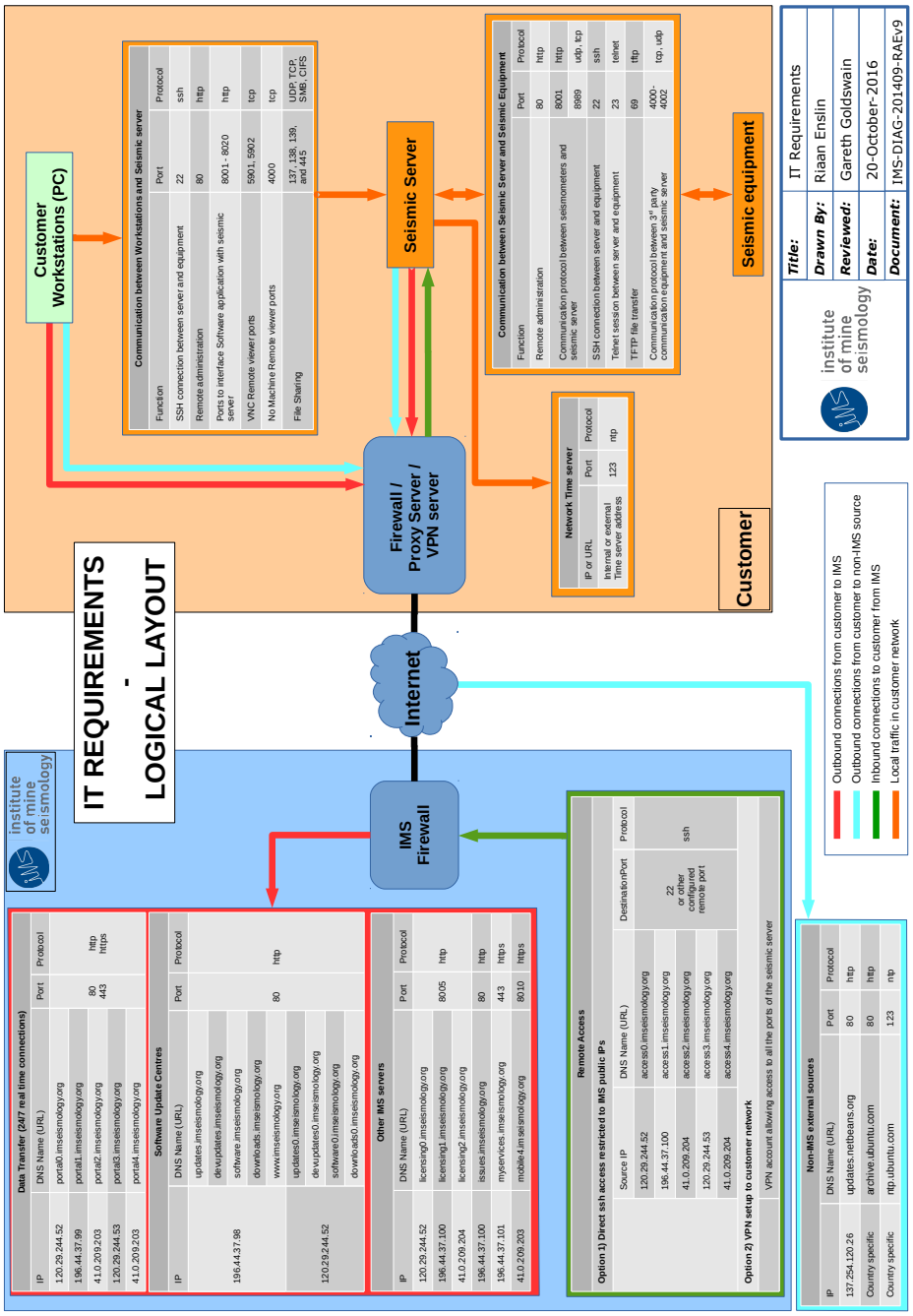

Figure 1: Diagram of Connections