**Mock Network System Architecture**

Diagram

Description automatically generated

Figure 1. Logical Structure

Figure 1 shows the logical architecture of the mock system.

* This mock system is directly connected to COX network as the connection with the Internet. Since the system does not have a high data download/upload need, a 500 Mbps incoming/outgoing link with COX is sufficient.
* Internal networks (including Server Subnet, VDI Subnet, Subnet 1, Subnet 2, and Subnet 3) are all 1Gbps links.
* To monitor the network traffic, we will have a powerful computer/server that connects with the five switches’ traffic mirroring port.
* The VDI allows a system administrator to remotely log into the system, perform monitoring, and make configuration changes.
* The firewall will have capability to monitor encrypted traffic such as HTTPS and other SSL/TLS traffic. Thus, it will be some advanced Palo Alto Networks or Fortinet firewalls that have some “certificate” technique and allow the firewall to see all the content of encrypted communications.

The physical architecture is shown Figure 2. Two subnets, the Server Subnet and Subnet 1, will be implemented with virtualization techniques (i.e., VMware)

Diagram

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SolarWinds

10.1

40.1

Splunk Forwarder

Splunk Enterprise

50.1

20.1

30.1

Figure 2. Physical Structure

VLAN 10 – ge-0/0/0,1,2,3 - Subnet 1

VLAN 20- ge 14/15 – Subnet 2

VLAN 30- File Server