Servers Platforms and Network Security (COMP10067)
Web Application Network Design Project

You have been hired as a consultant for an e-commerce company. They want you to design the network Security Zones including firewall pseudo code rules and IDS placement for an Ecommerce network. The following have been identified as components or requirements for the web application:

- There is an Apache web server, a database server, and a commerce (application) server.
- The web server needs to be accessible from the internet.
- There is an internal network which must be protected.
- Internal users must be allowed to access internet resources freely.
- Internal users must be able to access both the web server and commerce server using SSH (port 22)
- The Database Administrator needs to be able to access the database server on port 3306 from the protected network.
- The web server must be able to communicate with the database server on a custom port 2345.
- The web server must be able to communicate with the commerce server on a custom port 2723.
- The web server may be administered remotely by a single Apache user ("admin") using a web interface. The administration site URL points to "/var/www/admin/admin.htm" on the Web Server. Remote access to the URL should be restricted to hosts located on the protected network subnet.

You will be assigned a network range to work with. You can assign each security zone its own network address range using a 24 bit subnet mask. Each network will support up to 254 hosts.

For example:

DMZ zone network address - 193.21.1.0/24
Protected network address - 193.21.2.0/24

You will must provide design documentation that includes at least one network layout schematic indicating the security zones, their network IP address ranges, and firewall and IDS sensor placements.

In addition, you must provide the firewall pseudo-code rules necessary to enforce your schematic as well as any Apache directives necessary to implement the access controls indicated for the administration link of the website (admin/admin.htm).

This assignment is an individual effort. It is expected that all work submitted is your own and has not been copied from any other source. Please include a title page with a statement of authorship with your submission. The statement of authorship should look like the following, replacing your name and student number where appropriate.

I, John Doe, 000123456 certify that this material is my original work. No other person's work has been used without due acknowledgement.