

WEB APPLICATION NETWORK DESIGN **PROJECT**

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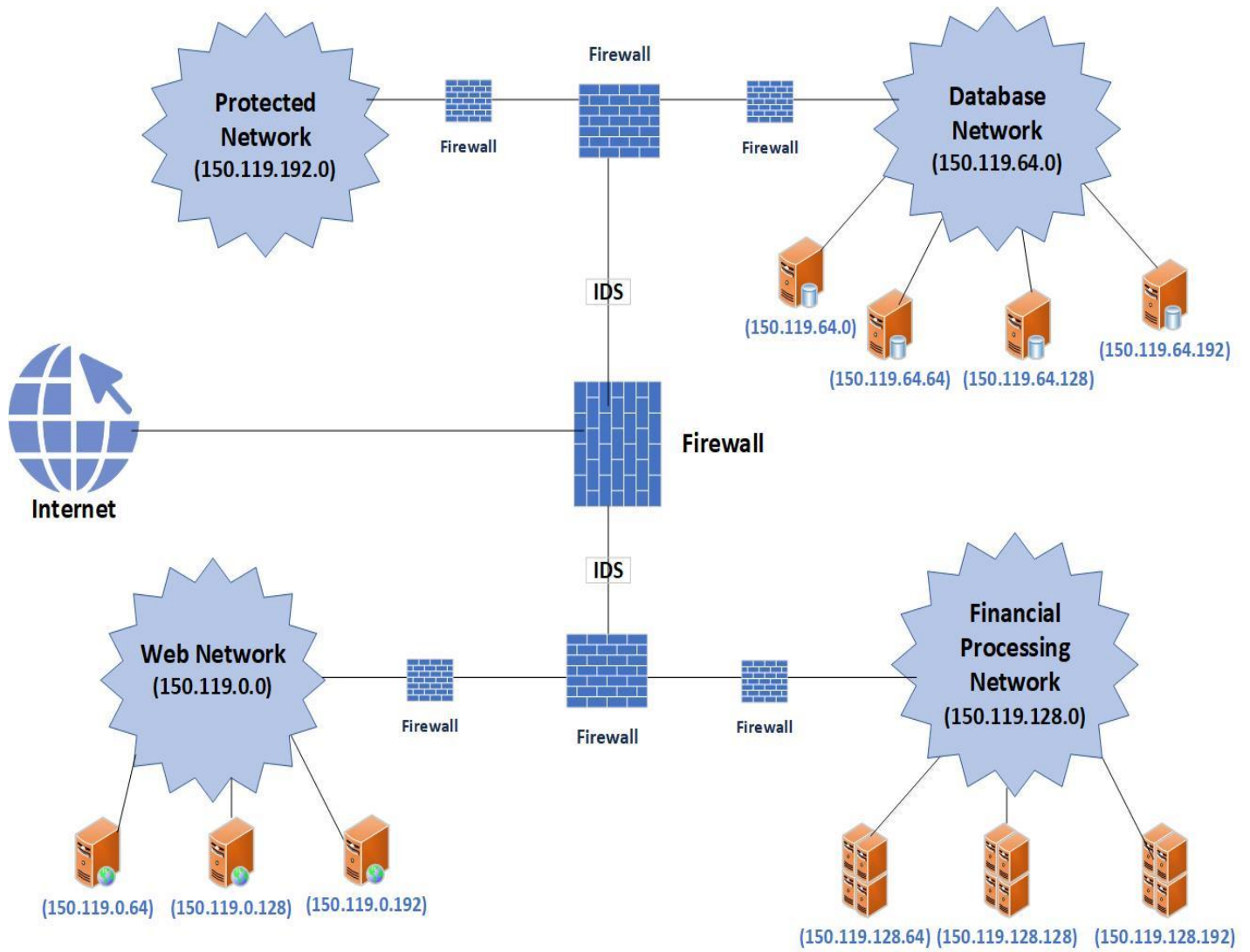
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Network Layout Diagram



Firewall Pseudocode

#DMZ (Web) Network is 150.119.0.0/16
#Database Network is 150.119.64.0/16
#Financial (Application) Processing Network is 150.119.128.0/16
#Intranet (Protected) Network is 150.119.192.0/16
#Database Administrator is 150.119.192.2

#Web Servers need to be accessible from the internet

allow any any 150.119.0.0/16 80
allow any any 150.119.0.0/16 443

#Internal users must have unrestricted access to internet resources

allow any any 150.119.192.0/16 80
allow any any 150.119.192.0/16 443

#Internal users must be able to use SSH to connect to both web and application servers on port 22.

allow 150.119.192.0 any 150.119.0.0 22
allow 150.119.192.0 any 150.119.128.0 22

#From the protected network, the Database Administrator must be able to connect to the database servers on port 3306.

allow 150.119.192.2 any 150.119.64.0 3306

#On a custom port 4400, the web servers must be able to communicate with the database servers.

allow 150.119.0.0 4400 any 150.119.64.0 4400

#On a custom port 4420, the web servers must be able to communicate with the financial processing servers.

allow 150.119.0.0 4420 any 150.119.128.0 4420

#All other traffic must be denied

deny any any any any

Apache Directives

```
<VirtualHost 150.119.0.0:443>  
    ServerAdmin 000820719@localhost  
    DocumentRoot /var/www/manager  
    DirectoryIndex webadmin.htm  
    ServerName 150.119.0.0  
    SSLEngine on  
    SSLCertificateFile /etc/httpd/conf/150.119.0.0.crt  
    SSLCertificateKeyFile /etc/httpd/conf/server.ca.key  
</VirtualHost>
```

```
<Directory /var/www/manager>  
    AuthType basic  
    AuthName "000820719"  
    AuthUserFile /etc/httpd/conf/users  
    Require valid-user  
    Order Deny, Allow  
    Deny from all  
    Allow from 150.119.192.1  
</Directory>
```