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| **Network Security**  Diploma in CSF  Year 3 (2021/22) Semester 5 | Week 2 |
| Tutorial |
| **Firewall Technologies** | |

**Objectives**

At the end of this lesson, students should be able to understand functions of firewalls, types of filtering, and security zones.

**Activities**

1. Discuss the advantages for defining Management Profiles on a Layer 3 Interface.

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| • Allows the interface to respond to ping for ease of troubleshooting network problems.  • Allows Network Admin to configure the firewall from anywhere in the network i.e., no need to be physically at the firewall to connect to the MGT interface. (Using HTTPS or SSH). |

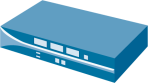
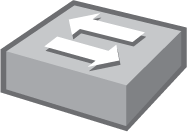
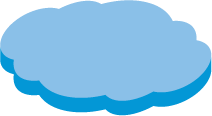
1. Discuss the advantage of setting the DHCP Mode to “auto”.

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| If a network is already with an existing DHCP server that is issuing IP address, the DHCP will be disabled automatically on the firewall interface. |

1. For each of the Deployment Options:

* Determine the virtual network device name
* Determine/Suggest the Network ID for the LAN
* Draw the Security Zones with meaningful names

**3.1 Virtual Wire Mode**



Internet

**E1/6**

**E1/5**

**Untrust Zone**

**Trust Zone**

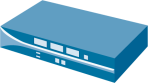
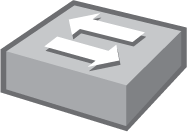
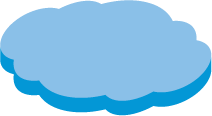
**Net ID: 172.168.1.0**

**Virtual wire**

**Net ID: 172.16.1.0**



**3.2 Layer-2 Mode**



Internet

**E1/6**

**E1/5**

**Untrust-L2 Zone**

**Trust-L2 Zone**

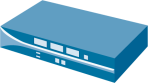
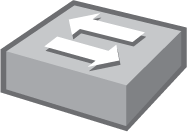
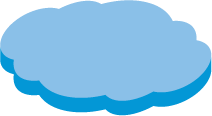
**Net ID: 172.168.1.0**

**Virtual Lan**

**Net ID: 172.16.1.0**



**3.3 Layer-3 Mode**



Internet

**E1/6**

**E1/5**

**Untrust-L3 Zone**

**Trust-L3 Zone**

**Net ID: 192.168.1.0**

**Virtual Router**

**Net ID: 172.16.1.0**

