



Firewall Tutorial

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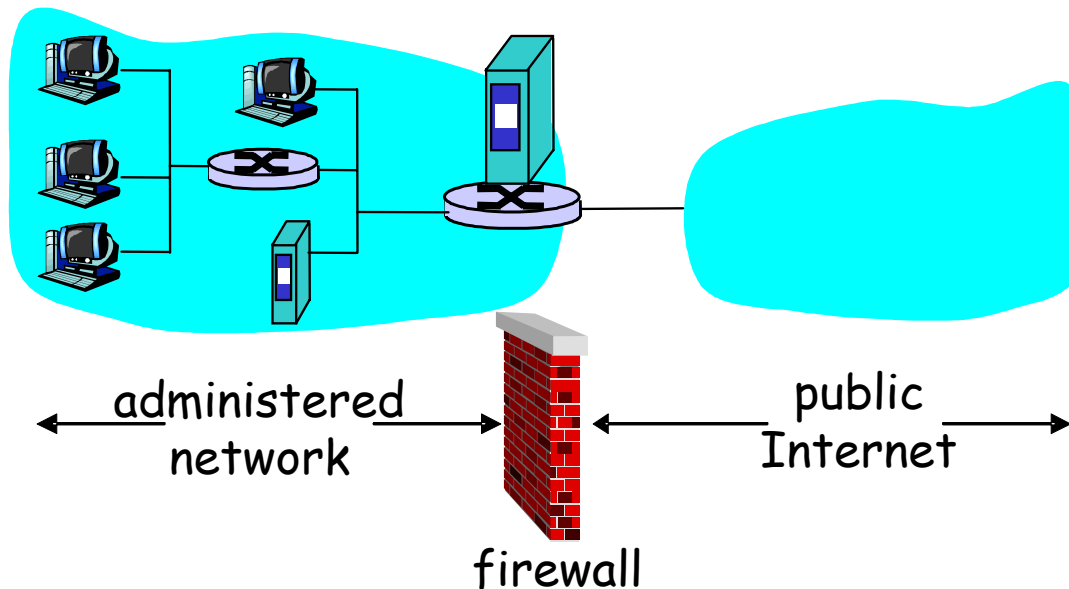
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What is Firewalls?

firewall

isolates organization's internal net from larger Internet, allowing some packets to pass, blocking others.



Why Firewalls?

- **prevent denial of service attacks:**
 - SYN flooding: attacker establishes many bogus TCP connections, no resources left for “real” connections.
- **prevent illegal modification/access of internal data.**
 - e.g., attacker replaces CIA's homepage with something else
- **allow only authorized access to inside network (set of authenticated users/hosts)**

Types of Firewalls

- packet-filtering firewall
 - At the network layer
- Application-level gateway
 - At the application layer

Communication Layers
Application
Presentation
Session
Transport
Network
Data Link
Physical

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