



SNS COLLEGE OF TECHNOLOGY
Coimbatore-35
An Autonomous Institution



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19ECT301-COMMUNICATION NETWORKS III YEAR/ V SEMESTER

UNIT 4- NETWORK & DATA SECURITY

TOPIC –Firewall Types



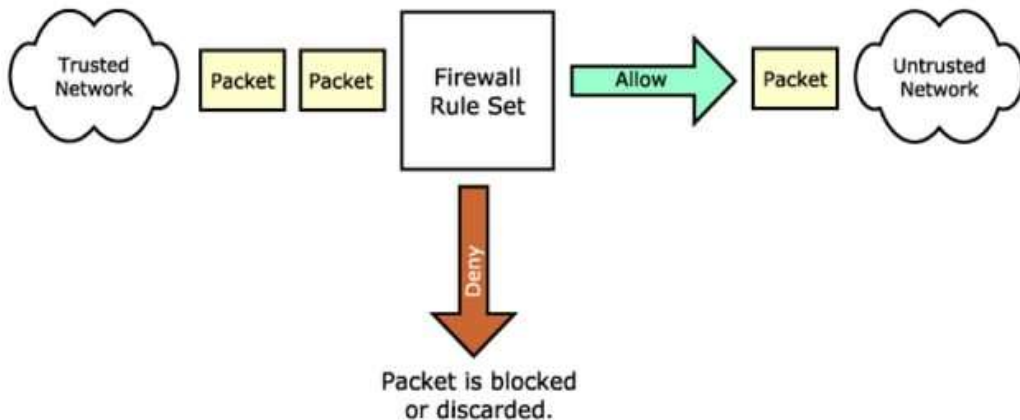
Types of firewall technique

- Packet filter
- Application gateway
- Circuit-level gateway
- Bastion host



Packet filter

- It looks at each packet entering or leaving the network and accepts or rejects it based on user-defined rules.



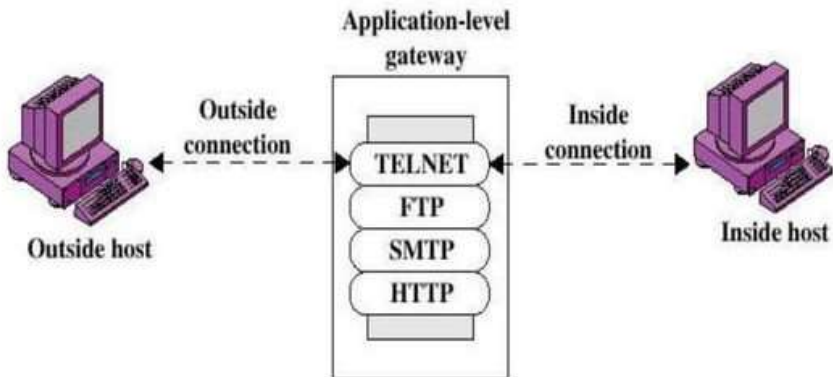


- Packet filtering is fairly effective & transparent to users, but it is difficult to configure.
- In addition, it is susceptible to IP spoofing.



Application gateway

- In such type of firewall remote host or network can interact only with proxy server, proxy server is responsible for hiding the details of the internal network i.e. intranet.
- Users uses TCP/IP application, such as FTP & Telnet servers.



- This is very effective, but can impose a performance degradation.



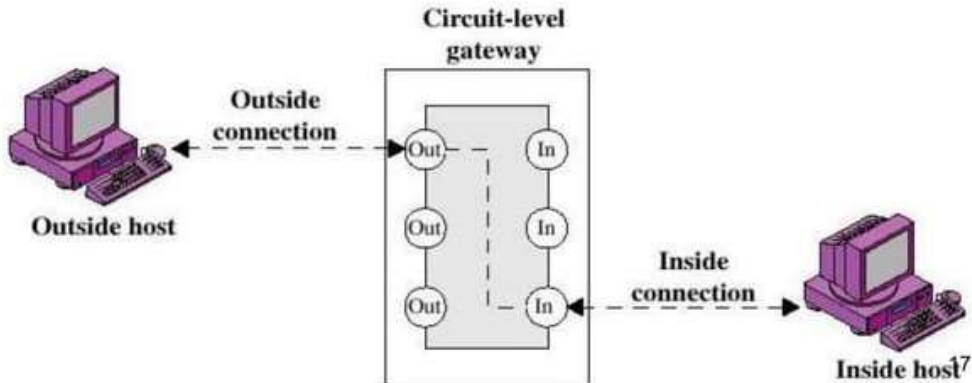
Circuit – level Firewall



- This can be a stand – alone system or it can be a specialized functions performed by an application – level gateway for certain applications.
- It does not permit an end – to – end TCP connection; rather, the gateway sets two TCP connections.
- A typical use of the circuit – level gateway is a situation in which the system administrator trusts the internal users.

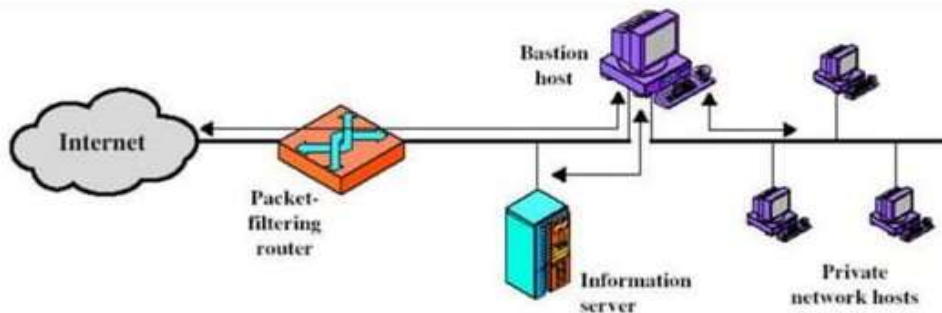


- The gateway can be configured to support application level or proxy service on inbound connections and circuit level functions for outbound connections.





Bastion Host



(b) Screened host firewall system (dual-homed bastion host)

- Bastion host is a special purpose computer on a network specifically designed and configured to withstand attacks.



- It generally hosts a single application, provides platform for application gateway and circuit-level gateway.
- It supports limited/specific applications to reduce the threat to the computer.
- Include application-Telnet, SMTP, FTP



What a personal firewall can do

- Stop hackers from accessing your computer.
- Protect your personal information.
- Blocks “pop up” ads and certain cookies.
- Determines which programs can access the internet.
- Block invalid packets.



What a personal firewall can not do

- Cannot prevent e-mail viruses
 - only an antivirus product with update definitions can prevent e-mail viruses.
- After setting it initially, you cannot forget about it
 - The firewall will require periodic updates to the rule sets and the software itself.



Thank You!