

Network Security

6CCS3NSE / 7CCSMNSE

Diego Sempredoni
(Kudos L. Vigano)

Department of Informatics
King's College London, UK

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Coursework 2

Revision (and possible exam) questions

- 1 What is a firewall?
- 2 What can a firewall protect from? What can't it protect from? Describe at least two examples of firewall limitations.
- 3 Describe packet-filter firewalls, explaining their advantages and disadvantages (give at least two of each).
- 4 Describe the two possible default policies of packet-filter firewalls and give the two rules that formalize them.
- 5 Describe the following rule set

action	src	port	dest	port	flags	comment
allow	{some hosts}	*	*	25		...
allow	*	25	*	*	ACK	...

Possible exam question

- 6 Consider the following packet filter firewall rule set for an imaginary network of IP address that range from 192.168.1.0 to 192.168.1.254. Describe the effect of each rule.

	action	src	port	dest	port	...
1	allow	*	*	192.168.1.0	>1023	...
2	deny	192.168.1.1	*	*	*	...
3	deny	*	*	192.168.1.1	*	...
4	allow	192.168.1.0	*	*	*	...
5	allow	*	*	192.168.1.2	SMTP	...
6	allow	*	*	192.168.1.3	HTTP	...
7	deny	*	*	*	*	...

Revision (and possible exam) questions

- 7 Describe two attacks to packet-filter firewalls and the possible countermeasures.
- 8 Describe stateful packet-filter firewalls, explaining their advantages and disadvantages.
- 9 Describe application-level gateways, explaining their advantages and disadvantages (give at least two of each).
- 10 Describe circuit-level gateways.
- 11 What is a bastion host?
- 12 What is a DMZ network, where can it be put in a firewall configuration, and what types of systems would you expect to find on a DMZ network?
- 13 What is a VPN?