

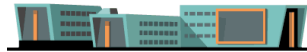
# Network & System Security CSM006/CSM039/EBIN

## OVERVIEW

Utz Roedig

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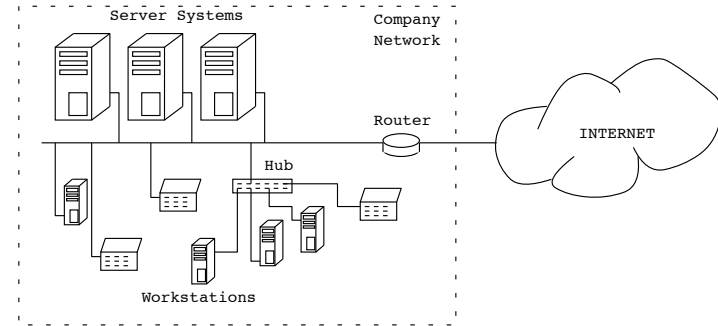
InfoLab21



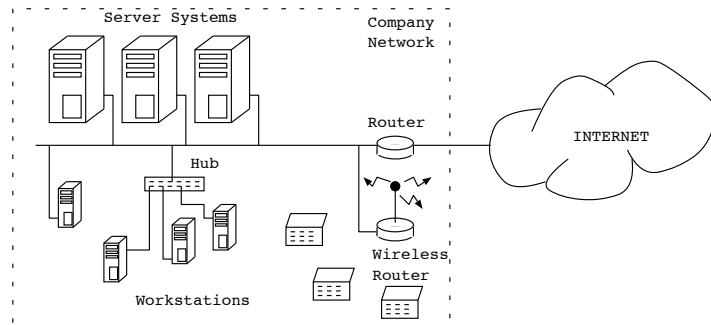
Department of Computing  
Department of Communication Systems  
Lancaster University, UK



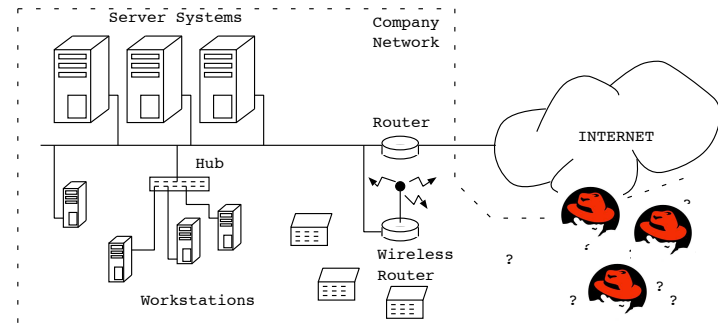
## Example



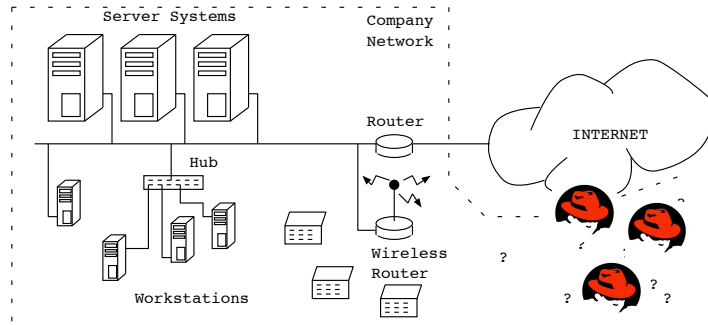
## Example



## Example



# Example



- ▶ Why do we have security problems?
- ▶ How can we make the scenario secure?

→ Understanding security problems, understanding how to solve problems  
 → To know what's out there; good and bad



# Module Aims

**ATTACKER:** who are they?; what do they want?; what are they doing?; ...  
**DEFENDER:** what can we do?; available methods and building blocks?; ...

Building blocks for secure systems:

- ▶ Cryptographic algorithms (L5)
- ▶ Key management (L6, and others)
- ▶ Secure communication channels (L7, L8, L9, L10, L11)
- ▶ Secure systems and components (L13, L14, L15)

→ Aim: You should be able to design and operate secure IT systems!



# Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30 - 10:30	<u>L1:</u> Intro- duction	<u>L5:</u> Crypto Basics	<u>L8:</u> Network Layer	<u>L9:</u> Transport Layer	<u>L12:</u> Firewalls IDS
10:45 - 12:00	<u>L2:</u> Attacker Defender	<u>L6:</u> Key Management	<u>P2:</u> FTP PWD Hack	<u>L10:</u> Application Layer	<u>L13:</u> System Security
13:30 - 14:30	<u>L3:</u> Security Concepts	<u>P1:</u> PGP Experiments	<u>A1:</u> Assignment	<u>L11:</u> Wireless Networks	<u>L14:</u> System Example
14:45 - 16:00	<u>L4:</u> Security Trade-offs	<u>L7:</u> VPNs		<u>P3:</u> WEP Hack	<u>L15:</u> Bad Designs



# Marking

20 Credits (CSM006)

- ▶ Masters programme in Advanced Computer Science
- ▶ Practicals: No marks
- ▶ 4 Mini Tests: 10%, 2 Assignments: 65% and 25%
- ▶ Deadline: 23. MARCH 3:00 PM

15 Credits (CSM039/EBIN/MRES)

- ▶ MSc in Networking and Internet Systems
- ▶ MSc in eBusiness and Innovation
- ▶ Design and Evaluation of Advanced Interactive Systems
- ▶ Practicals: No marks
- ▶ 4 Mini Tests: 13.3%, 1 Assignment: 86.6%
- ▶ Deadline: 23. MARCH 3:00 PM



# Questions

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Question?

