
t.CNI - Corporate Network Infrastructure

Person responsible for the course: Kurt Hauser, husr
Responsible OU: InES
ECTS: 4
Valid for: 2012/2013
Last saved: 15.03.2013 09:56

Expertise:

Please see below (learning objectives)

Methodological skills:

Graph theory used in the routing protocol OSPF

Social skills:

Teamwork is important in the "Semesterarbeit" and during the exercises in the lab

Personal skills:

-

Learning objectives:

- The students will be enabled to apply Virtual LANs (VLAN) in a corporate network successfully.
 - The students will be enabled to apply the Hot Standby Routing Protocol (HSRP) in a corporate network successfully.
 - The students will know the key features of the important dynamic routing protocols. The students will be enabled to apply the protocols in a corporate network.
 - The students will be able to introduce a network management in a corporate network, including the most important network security standards.
 - The students will be able to describe the architecture and structure of corporate networks.
-

Course content:

- Ethernet Switching, Virtual LANs. How to apply VLANs in a Corporate Network. Hot Standby Routing Protocol.
 - Routing Protocols: Most important aspects. Examples OSPF and EIGRP in detail.
 - IP Multicast Routing; routing protocols for IP Multicast.
 - Network Management and Monitoring; Simple Network Management Protocol (SNMP).
 - Architecture and structural development of corporate networks
 - Network Security Architecture: Threats; Firewall, Intrusion Detection systems; network surveillance and monitoring.
 - Network Architecture and structure
-

Previous knowledge:

KT1, KT2 was desirable

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14*2
Tutorial/Practicum	7*4
Block instruction	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

description	type	form	scope	assessment	weighting
Performance records during school hours	Prctical exercises and				40 %
Semester end exam	Test	Written	90 minutes		60 %

Language of instruction:

English

Instruction material:

Script (80%), Slides (20%) and Scripts for the practical exercises.

Literature: Ethernet; Technologien und Protokolle für die Computervernetzung. Autor: Jörg Rech. Heise Verlag;
2. Auflage, 2008.

Additional literature:

-

Comments:

This description is valuable as by the HS2012. For the FS2012 there is no chapter 'Architecture and structural development of corporate networks'.

In the FS2012 there is still:

- Connectivity Services
- Quality of Service and Performance aspects in the LAN and WAN.

This description is for information only. The details of the requirements of the course have to be seen in [https://olat.zhaw.ch/ ... Kurse....CNI](https://olat.zhaw.ch/...Kurse....CNI)