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# CCNP2

## Implementing Secure Converged Wide Area Networks

Halmstad University

Olga Torstensson

035-167575 [olga.torstensson@ide.hh.se](mailto:olga.torstensson@ide.hh.se)

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## Implementing Secure Converged Wide Area Networks

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- **Basic teleworker services ( xDSL technologies, ADSL)**
- **MPLS (Multiprotocol Label Switching)**
- **IPSec and VPN**
- **Network security strategies**
- **Device Hardening (AAA, SSH, SNMP, SYSLOG)**
- **Cisco IOS firewall & IPS**

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## Schedule Computer Networks 5 CCNP2

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- **Lecture W 36, 37, 38,39**  
**Labs W 36,37,38,39,40,41,42**  
**Tuesday gr1, Wednesday gr2**
- **Final Exam W43**
- **Skills Exam W44**

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## Instructors

Cisco.com

- **Olga Torstensson, course responsible, lectures**  
**olga.torstensson@hh.se**
- **Adnan Khalid , labs**  
**adnan.khalid@hh.se**

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## LABs, slides and more

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### Course homepage

[www.hh.se/staff/olto](http://www.hh.se/staff/olto)

Computer networks V

<http://www.hh.se/computernetworks5>

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## Lectures 10.15-12.00 Tuesday

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- W 36 Introduction, Remote connectivity
- W 37 VPN
- W 38 MPLS
- W 39 Firewall and IPS

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## LABs

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### W 36 -37 Labs VPN

3.2 Basic GRE, 3.3 SPAN , 3.5 Site-to site VPN, 3.7 Secure GRE  
3.8 IPsec VTI, 3.10 Easy VPN

### W 38 Labs with SDM

3.1 SDM (only page 1-7), 3.4 Site-to site VPN, 3.6 GRE, 6.1  
Firewall

### W39-40 Labs MPLS& Security, AAA

4.1 Frame mode MPLS, 4.2 MPLS VPN,  
5.2 Auto Secure, 5.3 Disabling Uneded Services, 5.4 Enhancing  
Router Security

5.5 Logging, 5.6c AAA, 5.8 NTP

6.2 CBAC 6.4 IPS

### W 41-42 Case study 1 / Case study 2

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## Mandatory LABs

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**Basic GRE, Site-to Site VPN**

**IPSEC VTI, Easy VPN,**

**Firewall, CBAC, IPS**

**MPLS VPN,**

**Case study 1, Case study 2**

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## D512 – LAB room

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**Email :Olga.torstensson@hh.se**

**Name, personal number - Card activation**

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## Examination Computer Networks 5 CCNP2

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- **Mandatory LABs**
- **All labs bonus (20%)**
- **Final Exam - 50 % pass**
- **Skills Exam**

**50%-3, 81%-4, 96%-5**

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