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Oppgavebeskrivelse:

1. Lag to (eller flere) ulike VLAN. Vis at to PCer på samme VLAN kan kommunisere direkte, mens PCer på ulike VLAN bare kan nå hverandre via ruter. Det siste kan f.eks. vises med traceroute. Husk at ulike VLAN bruker ulike ip-nettverk.
2. Vi valgte vi å få satt opp trunking mellom ruter og svitsj.



Vårt oppsett.

Oppgave 1:

```
# ericyounger at Eric's-MacBook-Pro.local in ~ [14:58:58] DevTools Matte Eksamens Atmosphere P
→ traceroute 192.168.4.101
traceroute to 192.168.4.101 (192.168.4.101), 64 hops max, 52 byte packets
  1  192.168.4.101 (192.168.4.101)  1.036 ms  0.398 ms  0.328 ms
```

Det øverste skjermbildet viser at Eric har IP-addresse 192.168.4.100. Han kan kommunisere med med Jonas, som har IP-addresse 192.168.4.101 direkte, da de er på samme VLAN (200).

The screenshot shows the 'Interface Settings' page of a Cisco SG 200-08 8-Port Gigabit Smart Switch. The left sidebar has a 'VLAN Management' section with 'Interface Settings' selected. The main table lists port configurations:

Entry No.	Interface	Interface VLAN Mode	PVID	Frame Type	Ingress Filtering	VLAN Priority
1	g1	Trunk	1	Admit All	Enabled	0
2	g2	Access	200	Admit Untagged Only	Enabled	0
3	g3	Access	200	Admit Untagged Only	Enabled	0
4	g4	Access	1	Admit Untagged Only	Enabled	0
5	g5	Access	1	Admit Untagged Only	Enabled	0
6	g6	Access	1	Admit Untagged Only	Enabled	0
7	g7	Access	1	Admit Untagged Only	Enabled	0
8	g8	Access	1	Admit Untagged Only	Enabled	0

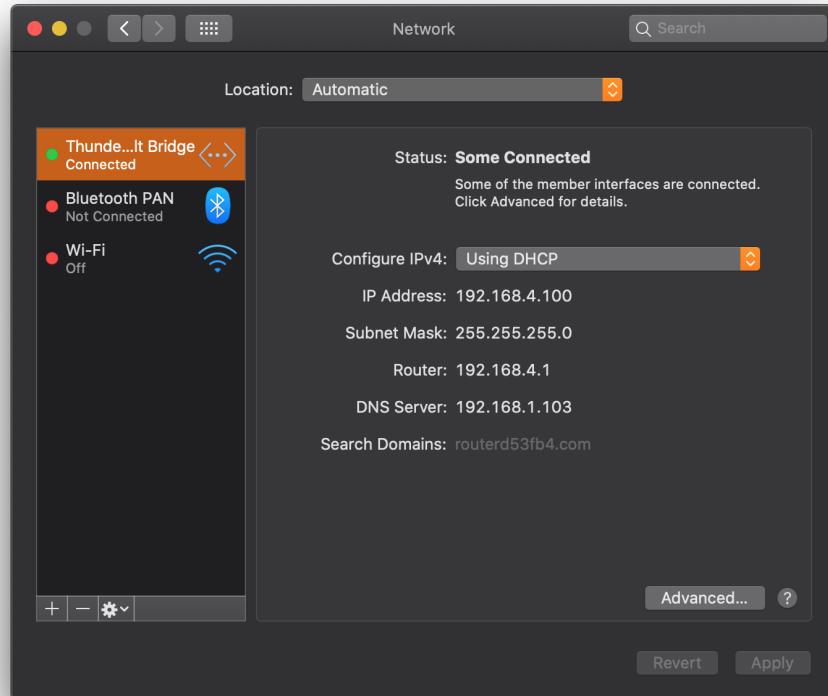
Buttons at the bottom include 'Copy Settings...' and 'Edit...'. The top navigation bar includes 'Small Business' and 'cisco'.

Oppgave 2

The screenshot shows the 'DHCP Status' page of a Cisco RV320 Gigabit Dual WAN VPN Router. The left sidebar has a 'DHCP' section with 'DHCP Status' selected. The main table lists DHCP client information:

Client Host Name	Rule Name	IP Address	MAC Address	Client Lease Time
Eric's-MBP		192.168.4.100	82:0d:5d:26:fa:01	23 Hours, 57 Minutes, 7 Seconds
jonasbl-MacBookAir		192.168.4.101	18:7e:b9:02:c0:22	23 Hours, 57 Minutes, 15 Seconds

Buttons at the bottom include 'Delete', 'Refresh', and pagination controls. The top navigation bar includes 'Small Business' and 'cisco'.



Forskjellige VLAN:

```
# ericyounger at Erics-MacBook-Pro.local in ~ [14:33:05]
→ traceroute 192.168.4.100
traceroute to 192.168.4.100 (192.168.4.100), 64 hops max, 52 byte packets
 1  192.168.1.1 (192.168.1.1)  1.051 ms  0.602 ms  0.542 ms
 2  192.168.4.100 (192.168.4.100)  1.025 ms  1.046 ms  0.965 ms
```

Skjermbildet over viser at Eric (192.168.5.100) kommuniserer med Jonas (192.168.4.100) gjennom ruteren når begge er på forskjellige VLAN.

Small Business **cisco** RV320 Gigabit Dual WAN VPN Router

- Getting Started
- System Summary
- Setup
- ▼ **DHCP**
 - DHCP Setup
 - DHCP Status**
 - Option 82
 - IP & MAC Binding
 - DNS Local Database
 - Router Advertisement
- System Management
- Port Management
- Firewall
- VPN
- Certificate Management
- Log
- SSL VPN
- User Management
- Wizard

DHCP Status

IPv4 **IPv6** VLAN Option 82

VLAN ID: 200

DHCP Server: 192.168.4.1

Dynamic IP Used: 1

Static IP Used: 0

DHCP Available: 49

Total: 50

DHCP Status Table

Client Host Name	Rule Name	IP Address	MAC Address	Client Lease Time
jonasbl-MacBookAir		192.168.4.100	18:7e:b9:02:c0:22	23 Hours, 49 Minutes, 23 Seconds

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DHCP Status

IPv4 **IPv6** VLAN Option 82

VLAN ID: 300

DHCP Server: 192.168.5.1

Dynamic IP Used: 1

Static IP Used: 0

DHCP Available: 49

Total: 50

DHCP Status Table

Client Host Name	Rule Name	IP Address	MAC Address	Client Lease Time
Eric's-MBP		192.168.5.100	82:0d:5d:26:fa:01	23 Hours, 41 Minutes, 22 Seconds

Andre innstillinger:

Ruter:

The screenshot shows the 'VLAN Membership' configuration page for the Cisco RV320 router. The left sidebar menu is visible, showing various management options like Getting Started, System Summary, Setup, DHCP, System Management, Port Management (which is selected and highlighted in green), Firewall, VPN, Certificate Management, Log, SSL VPN, User Management, and Wizard. The main content area is titled 'VLAN Membership' and contains a note: 'VLAN: Enable' and 'Create VLANs and assign the Outgoing Frame Type. Up to four new VLANs can be created. VLAN IDs must be in the range (4...4094)'. Below this is a 'VLAN Table' with the following data:

	VLAN ID	Description	Inter VLAN Routing	Device Management	LAN1	LAN2	LAN3	LAN4
<input type="checkbox"/>	1	Default	Enabled	Enabled	Untagged	Untagged	Untagged	Untagged
<input type="checkbox"/>	25	Guest	Disabled	Disabled	Tagged	Tagged	Tagged	Tagged
<input type="checkbox"/>	100	Voice	Disabled	Disabled	Tagged	Tagged	Tagged	Tagged
<input type="checkbox"/>	200	1+1	Enabled	Enabled	Tagged	Tagged	Tagged	Tagged
<input type="checkbox"/>	300	vlan3	Enabled	Enabled	Tagged	Tagged	Tagged	Tagged

At the bottom of the page are buttons for 'Add', 'Edit', and 'Delete', and below them are 'Save' and 'Cancel' buttons.

Skjermbildet viser innstillingene vi satt opp for våre egne VLAN (200 og 300) på ruteren.