## **CNaaS in Norway**

Vidar Faltinsen 07.10.20



#### Uninett CNaaS service operational as of June 2020

- Offered packages:
  - CNaaS full package (3)
  - CNaaS student dormitory (1)
  - CNaaS wifi only (0)
  - CNaaS wired campus network only (0)
  - CNaaS campus routers only (12)

(current number of customers in parenthesis)



2

- Can be included:
  - Complete IPv6 address space
  - Extra IPv4 address space (+ reuse existing)
  - NAT44 service for wireless network
  - DHCP service (for IPV4, SLAAC for IPv6)
  - NTP service
  - DNS firewall
  - · eduroam including local radius service
  - eduVPN
  - Access list management
  - Monitoring package
    - Netflow analysis (currently nfdump/NfSen)

UNINET

NAV (Network Administration Visualized)

#### Service delivery model

- Spring 2020: developed service level document (per service type)
- > We prefer to include local hands in installation
- Need to fine tune operations as we gain experience:
  - 1st line of support at customer helpdesk
  - 2nd line at our NOC

3

- core network monitored 24x7, access network monitored at daytime
- 3rd line our cnaas experts





#### Payment model

4

- Established new framework agreement with supplier
- Uninett purchases, owns and maintains all equipment
- Two alternative payments models:
  - No establishment cost, fixed yearly cost
  - Upfront cost for all equipment and manpower to establish service + yearly cost for operations





### Large case: CNaaS dormitory



Completely new network - 2200 dormitories (60% installed so far)

5

UNINETT

# Today's students have high expectations...

#### Uninett provides:

- Dedicated Wifi access point in all dormitories
- Wired 1 Gbit/s
- eduroam
- Self service setup of personal SSID















uninett.no