



Why we chose CNaaS as our networking solution

Who am I

- Network technician, IT-architect and software developer
- Worked at Örebro University for 4 years
- Recently started working for SUNET



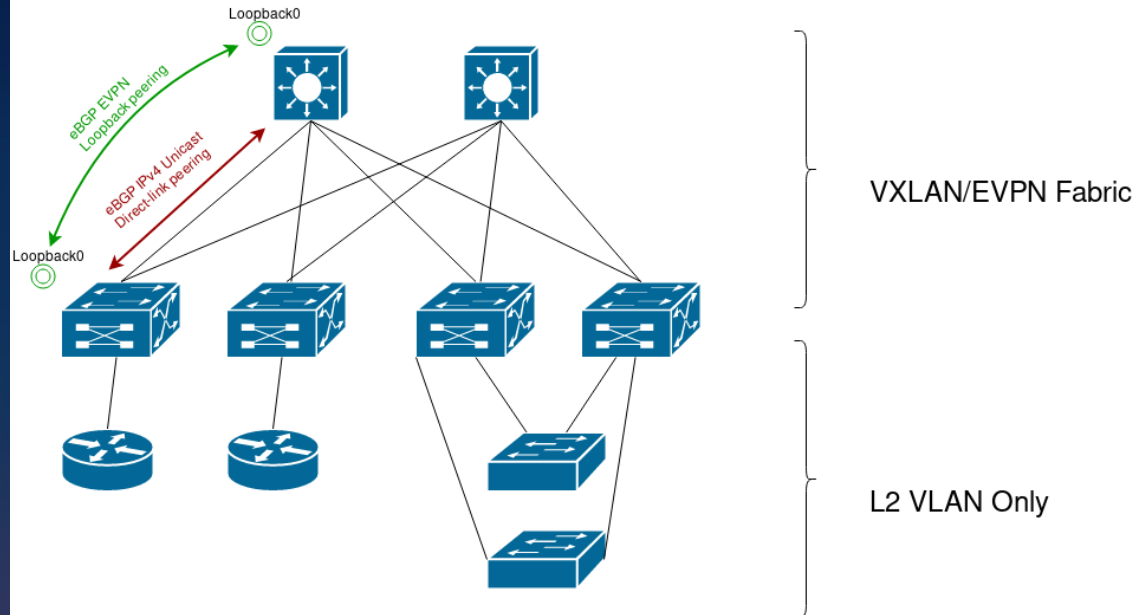
CNaaS – What is that?

- **C**ampus **N**etwork as a **S**ervice
- Service built by SUNET



Design

Default design, Spine/Leaf + Access



Components

- Configurationmanagement – NMS
- Monitoring – NAV
+ SUNET NOC
- Logging – Graylog
- Support
- Centralized purchasing
 - Switches
 - Wireless
 - Firewall

Opt in components

- Network Admission Control (NAC)
- getEduroam



Starting position before CNaaS

- New Cisco access-switches
- Low automation of the legacy network
- Oversized network cabinets
- Wireless also needs to be renewed
- New architecture principles



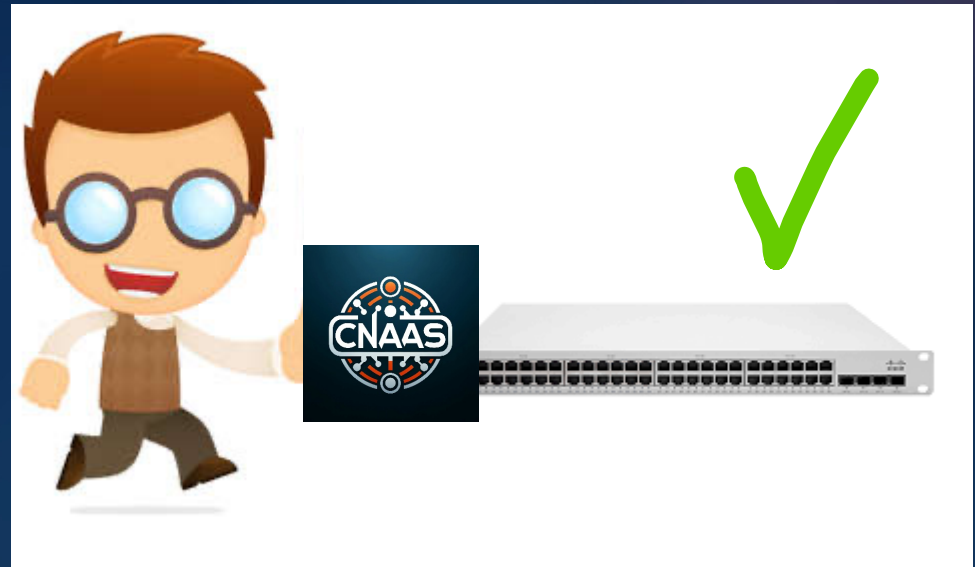
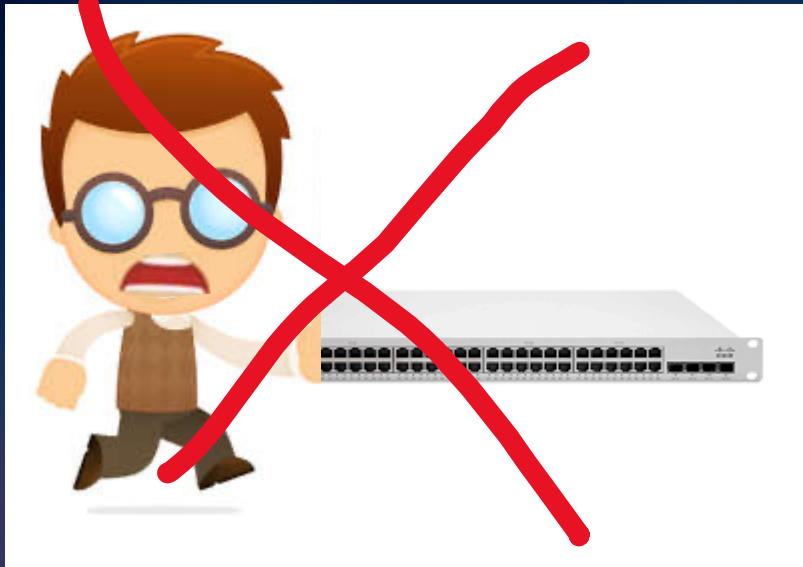
Architecture principles

- Strive for high levels of automation
- Procure services according to priority/ranking*
- Utilize standardized services
- Maintain strong manageability, cost-efficiency, and competence supply throughout the lifecycle
- Promote collaboration, utilize open source

Advantages of CNaaS

- Built on open protocols
Can use different manufacturers, not vendor-locked
Örebro University reuses Cisco-switches within CNaaS NMS
- Close cooperation with other educational institutes
- Can together build and contribute to the service
- Partnership, we build the network together

Safer and more effective way of working



Where are we in the journey?

Network

Done: Layer 1 and layer 2

Left to do: Layer 3, routing, firewall, acls

Support systems

Change routines and systems

- Update our ACL management
- Migrate to a new NAC solution

Campus size

- 100 network cabinets
- 220 access-switches
- 400-500 fibre-cables
- 6000 patched outlets



Questions?



- How was this implementation perceived by the department?
- Now that you've come a long way, what has been the best part about CNaaS?
- What challenges have you encountered?