Funet Kampus Service

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Background

• Replaces old Funet Router Service
  o CPE routers to connect to Funet network
  o Started in 2012
  o 17 customers 33 routers (Juniper MX)

• Buildout of Funet 2020 core network
  o Capacity increase
    o 100 G backbone
  o Funet PoPs closer to customers
  o New automation tools
    o All router configuration done by Ansible
Funet Kampus service

- Launched in 2019
- 3-person virtual team
- Equipment Juniper MX routers and Huawei S series switches
- Initial small deployments: 7 customers with 7 routers and 4 switches
- Currently two bigger deployments ongoing with 6 routers and 18 switches
Use cases

• Unified and standardized connection to all Funet services
  o Uplinks up to 100 G
  o Internet, L3VPNs and L2VPNs using the same connections
    o Removes e.g. the need for low capacity light paths
    o VPNs to services in Funet data centers

• Customers’ own core from edge routers to access switches
  o Besides the routers switches are also available

• Connecting customers’ separate campus areas
Sample topologies
Service Delivery

- Equipment purchased using CSC’s frame agreements
  - Standardized device types which are also used in Funet core and data centers
  - Cost benefits due to the volumes
  - Customer doesn’t need a separate tender process

- Customer is responsible for the device installation
  - Devices located in customer premises

- Configuration, management and monitoring are done by Funet
  - Shared NOC, tools and processes with Funet network
Configuration and monitoring

• All router configuration is done using Ansible and Jinja2 templates
  o Based on tools developed for Funet 2020
  o Clean, standardized configuration
  o Routers can be pre-configured before sending them to customers
  o Configuration is stored in YAML files

• Routers and switches are added to monitoring using Ansible during the provisioning
  o Same alert and monitoring tools and processes are used as for the rest of the Funet network
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