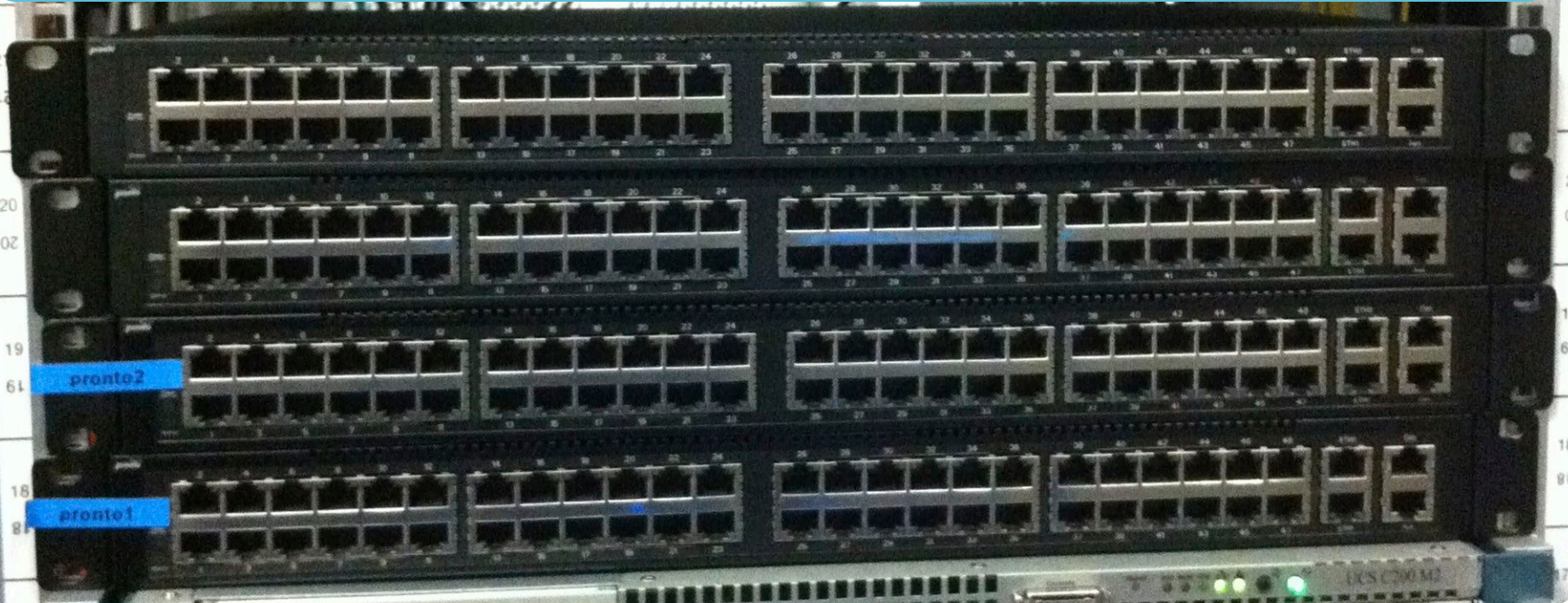


SURFnet OpenFlow Testbed

GLIF TECHNICAL WG MEETING, 19 MARCH 2014, ATLANTA, USA



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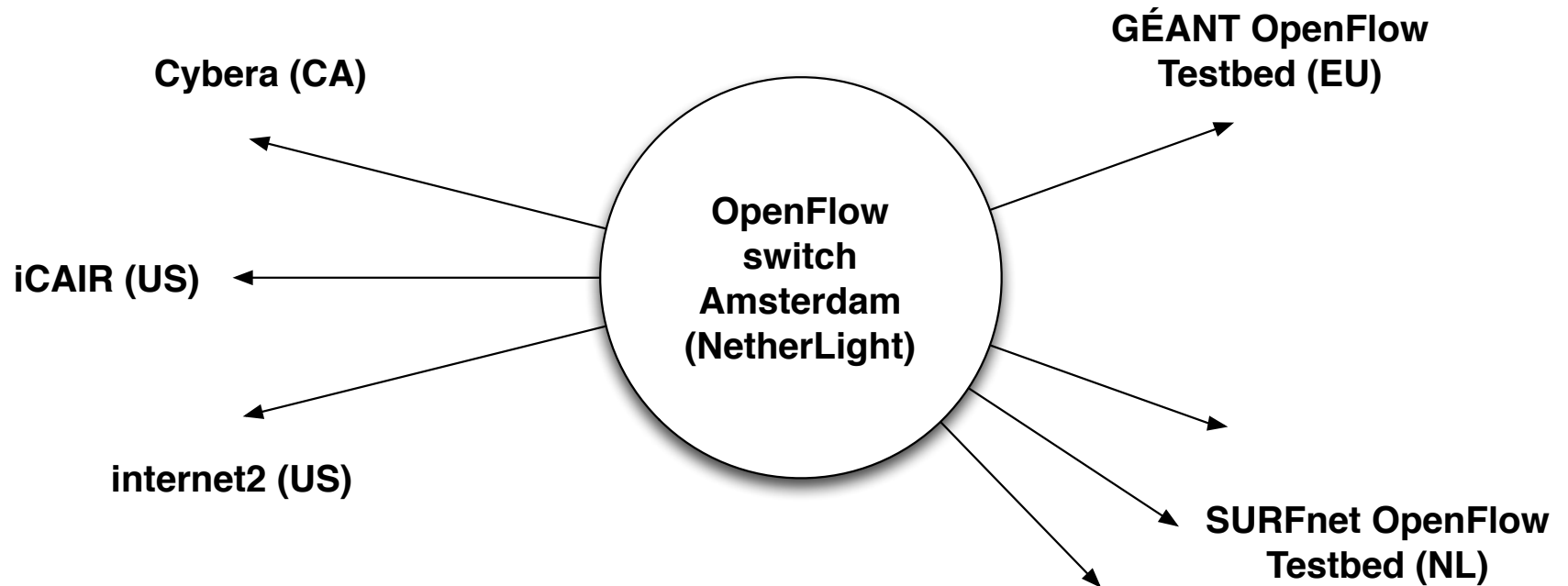


SURFnet OpenFlow Testbed

- 5 sites
- Co-located at SURFnet7 PoPs at major universities
- Interconnected via SURFnet7
- 10GE nearly full mesh
- Each site (probably) co-located with a small OpenStack cloud cluster
- (Probably) OpenDaylight controller (evaluation ongoing with GN3plus partners)
- Initial OF application will offer functionality for IP forwarding and multiple private L2 networks



NetherLight SDN Exchange



Challenges

Multi-tenancy

- FlowVisor is OpenFlow 1.0 only
- Indiana University is working on FlowSpace Firewall (will support OpenFlow 1.3)
- Multiple tables (OF1.3) is a challenge
- What encapsulation to use for separation dataplane traffic?

How to do multi-domain SDN/OpenFlow and what does it mean?

Joint SDN application development

- We think broad uptake (critical mass) is essential
- OpenDaylight seems to get the right momentum
- In GÉANT a couple of NRENs and universities agreed on joint SDN development
- Choose 1 SDN controller framework (OpenDaylight and Ryu are being evaluated)

Get vendors and (OpenDaylight) community interested in WAN, inter-domain and multilayer