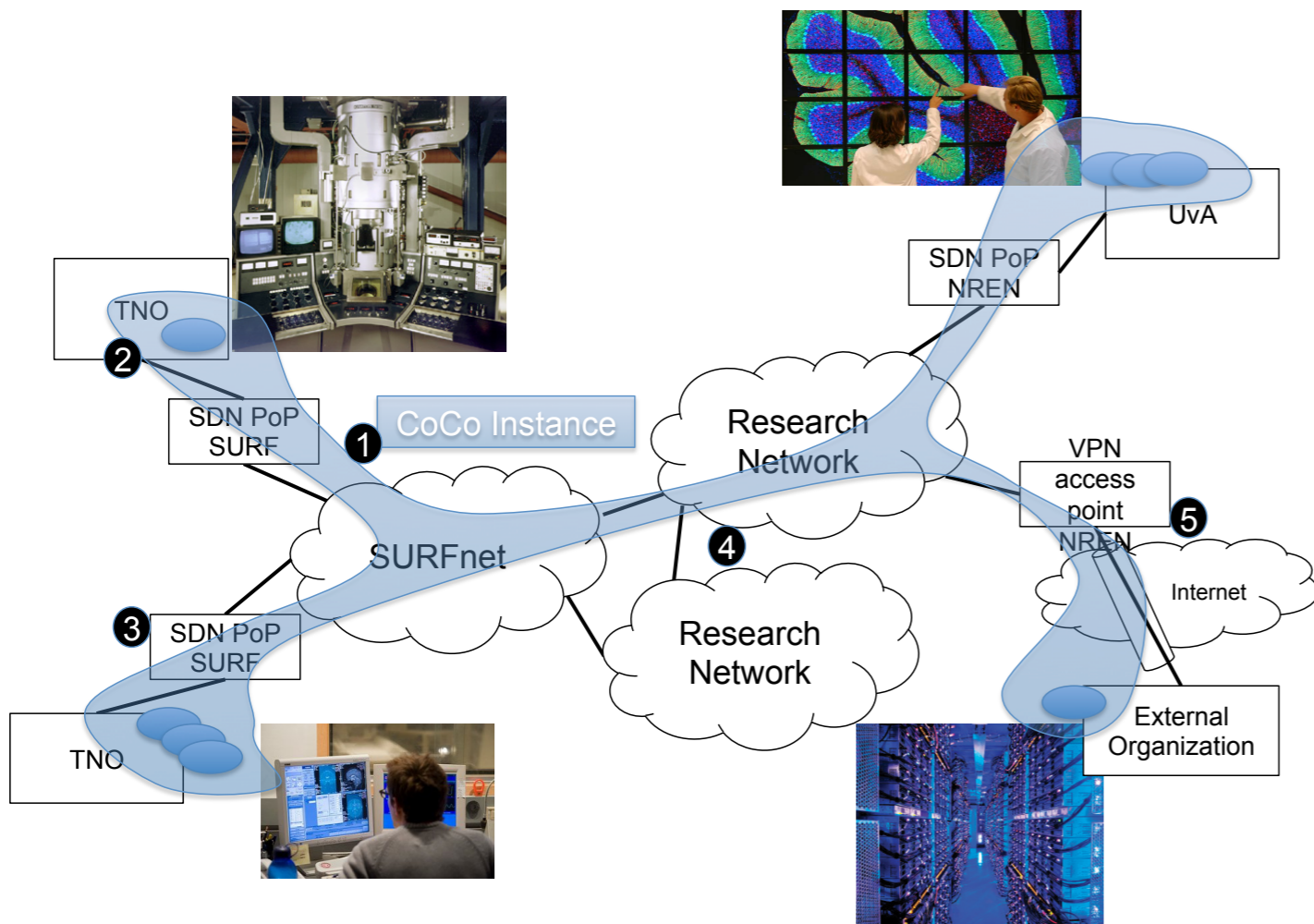


# Community Connection Service for eScience

Ronald van der Pol, Marijke Kaat - SURFnet  
 Bart Gijsen, Rudolf Strijkers, Piotr Zuraniewski, Erik Meeuwissen - TNO



The **Community Connection (CoCo)** service is one of the **GN3plus Open Call** projects running from October 2013 until April 2015.

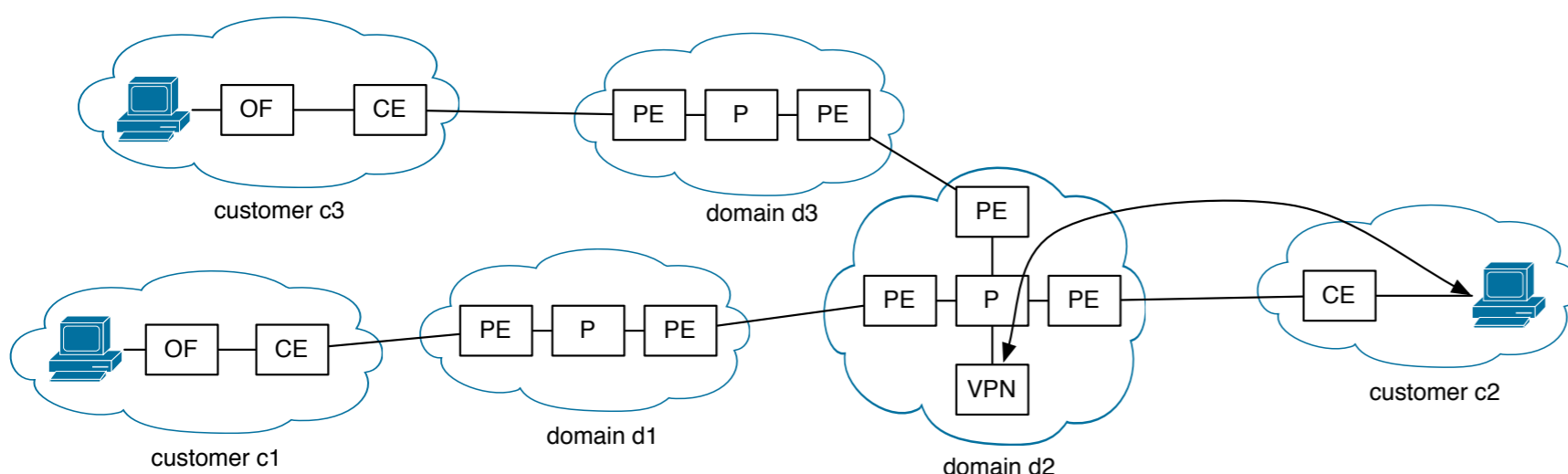
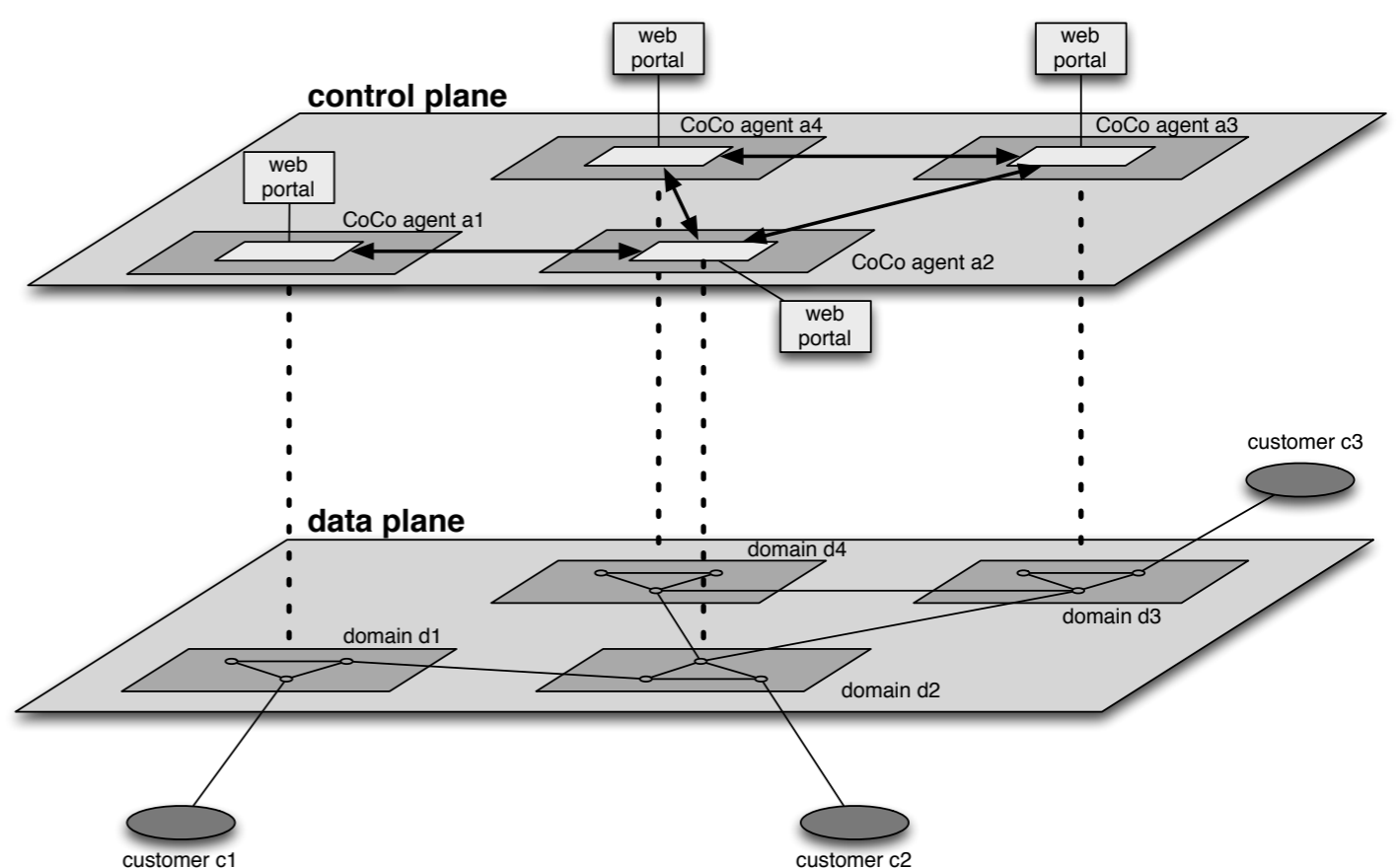
CoCo is a prototype for an on-demand multi-domain, multipoint virtual private network service for eScience communities.

Typical users are research communities that form a closed user group and that want their eScience resources (servers, VMs, laptops, storage, instruments, etc.) interconnected, but reachable for their closed community only.

Scientists will be able to use a simple and easy to use web portal to setup *CoCo instances* over an OpenFlow enabled infrastructure.

The **OpenFlow infrastructure** is controlled by OpenDaylight based CoCo agents. Each domain (NREN) runs its own CoCo agent and CoCo agents exchange information by peering relations between neighbouring domains.

Each domain also runs a web portal on top of its CoCo agent which is used by the users of that NREN to setup and tear down CoCo instances.



Forwarding in the core of the network is done based on MPLS labels. Two labels are used.

The outer label is used to forward to a particular Provider Edge (PE) switch.

The inner MPLS label is used to distinguish between CoCo instances.

Adding and removing MPLS labels is done by the PE switches.

CoCo is presented on Tuesday 14:00 - 15:30

Session 5A: Advanced Networking

Community Connection Service for eScience

Ronald van der Pol (rvdp@surfnet.nl)

