

guifi·net

Making network infrastructure held as open commons sustainable

Cloudy, a cloud stack for community cloud



IETF99 – IRTF GAIA

July 19th 2017

guifi.net Foundation

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- Introduction
- Research plan
- CC vs. guifi.net
- Cloudy

- Commons
 - An acknowledged model for managing natural resources
 - Community-driven
 - A core resource provides a limited quantity of extractable fringe units → *tragedy of the commons*
 - Open commons: open to anyone (universal rules)
- guifi.net
 - A digital infrastructure managed as an open commons
- Community clouds (CC) as open commons
 - Definition: open user-driven clouds formed by community-managed computing resources
 - Q1: are feasible?
 - Q2: can be sustainable?

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Research plan:

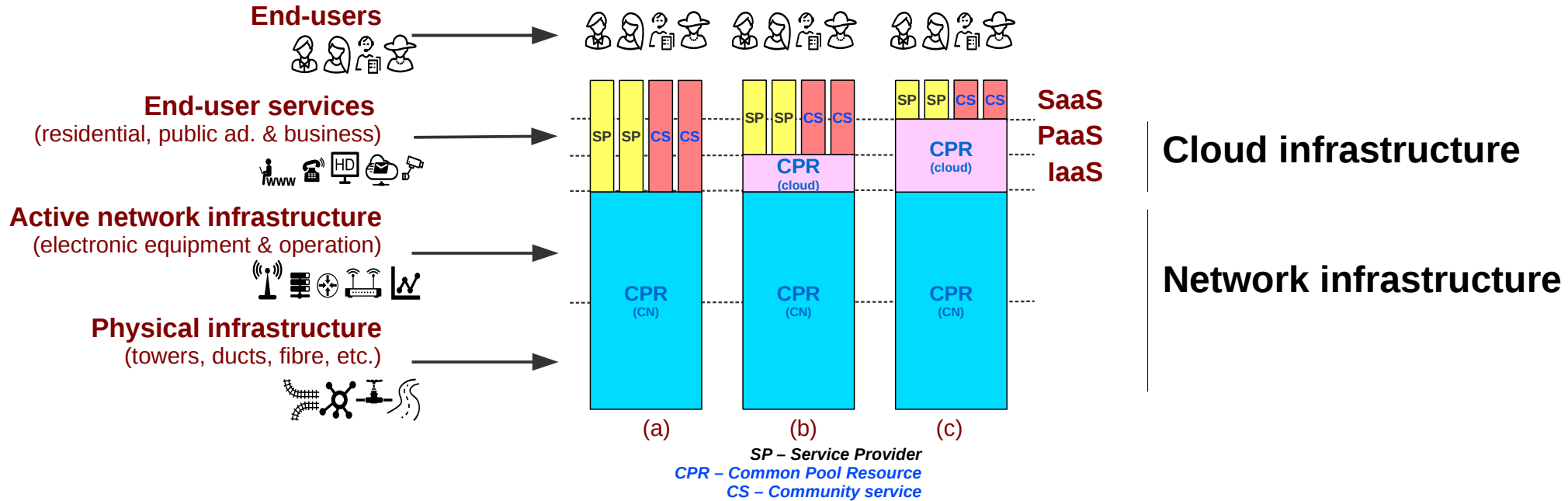
- 1) Guifi.net case study
- 2) A framework for CC as open commons
- 3) Cloudy: CC software stack
- 4) Feasibility analysis
- 5) Sustainability analysis - SaaS file storage case

Research methodology: Action research + exp. SW systems

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Network and service layers

Business models



Similarities

- Stakeholders
- Participation framework
- Socio-economic tools
- Communication and coordination tools
- Common key enablers

Differences

- CPR boundaries
- Interrelations
 - External: OTT
 - Internal: +layers
+components
- Specific key enablers
 - Cloud SW stack

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- IaaS
 - Vms
 - Docker
- PaaS
 - Distributed announcement and discovery service (DADS)
 - Serf
 - User Authentication
 - Third party LDAP
 - Service deployment and activation
 - Docker compose
 - guifi.net specific
 - Proxy (Squid), Graph Server (SNMP+DDRtool), DNS (BIND)
- SaaS
 - Syncthing
 - PeerStreamer
 - etc.

10.1.24.151:7000

Cloudy System Language Search Guifi.net Community cloud Personal cloud Enterprise cloud

Cloudy

A Community Network Cloud in a box

Device information

Address and port: 10.1.24.151:7000
Device name: cloudy2061a
Processor: model name : Common KVM processor
RAM memory: 4.7GB (4972352 kB)
Storage: 20GB free / 31GB total

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