GÉANT Cloud update

GÉANT updates session

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Intro

- GÉANT Clouds throughout the years
- Adoption and communications so far
  - GÉANT summary
  - NRENs: JISC, FCT
- General issues and obstacles to work on
- Future: GÉANT clouds in 2019-2022
- Adoption and comms work in 2019

GÉANT clouds throughout the years (1): before 2016

NRENs developing their private clouds

Preparing public cloud preferential offers through GÉANT

Creating GÉANT cloud portfolio

GÉANT clouds throughout the years (2): 2016-2018

- Cloud as one of the main 3 activities in the GÉANT project

- Framework (FW) and adoption support for public IaaS services for R&E community

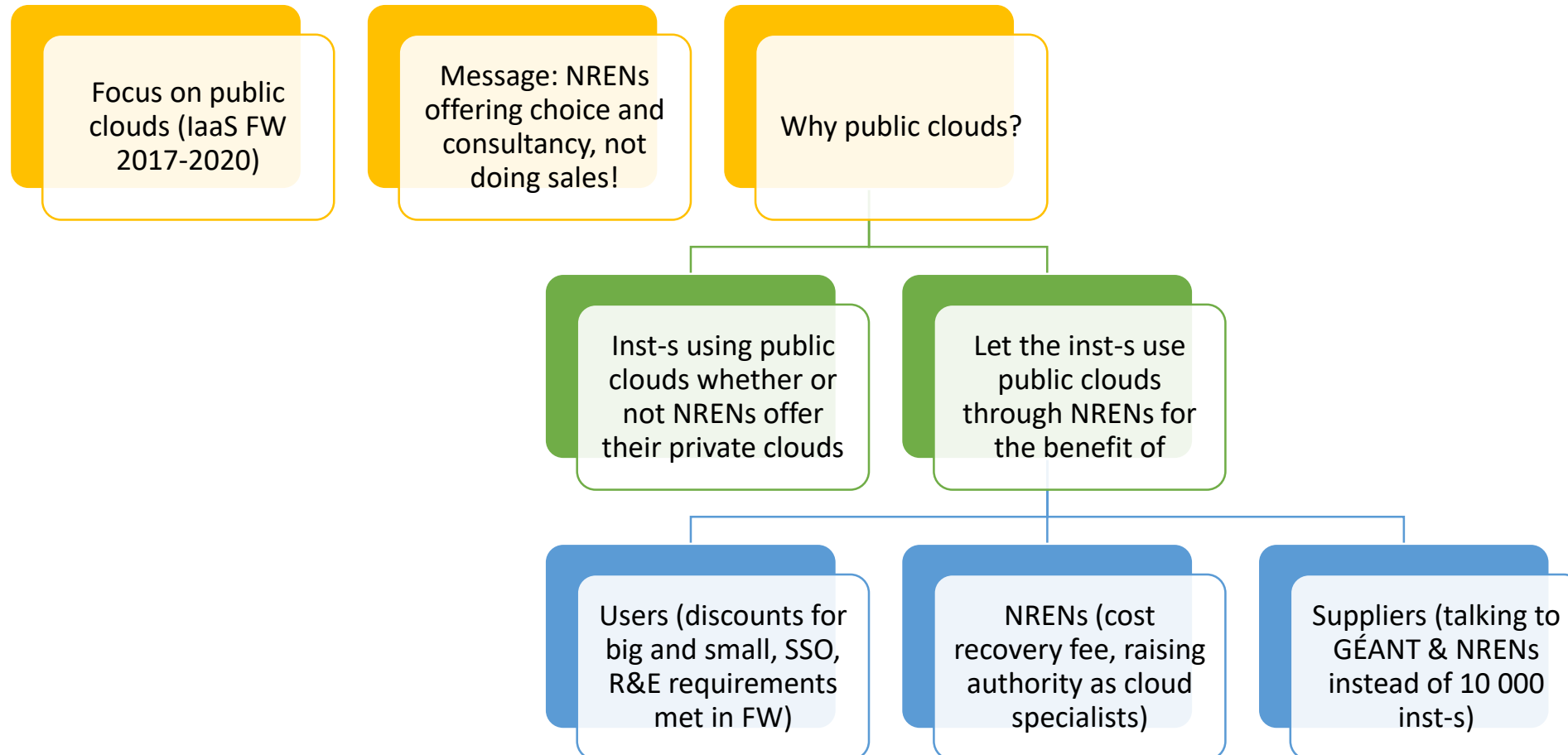- FW of videoconferencing services for NRENs

- Implementation of infrastructure services

Virtual machines, backup, storage

- Preferential offers:

Dropbox, Enter, Wire, Google Cloud, Paldesk

Cloud adoption and communications in 2016-2018 (1)

Focus on public clouds (IaaS FW 2017-2020)

Message: NRENs offering choice and consultancy, not doing sales!

Why public clouds?

Inst-s using public clouds whether or not NRENs offer their private clouds

Let the inst-s use public clouds through NRENs for the benefit of

Users (discounts for big and small, SSO, R&E requirements met in FW)

NRENs (cost recovery fee, raising authority as cloud specialists)

Suppliers (talking to GÉANT & NRENs instead of 10 000 inst-s)

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Cloud adoption and communications in 2016-2018 (2)

Creating CSDM community and supporting NRENs

Weekly Cloud Forums (20-30 participants)

Mailing list

Internal BOX site for sharing material + GÉANT Repository

IaaS Framework Cookbook

Raising awareness in the R & E community

Website, newsletter, articles

Guidelines and tools (Data Classification Tool)

Recorded webinars, use cases

Presentations, meetings

Trainings & workshops

✔ Comms work and numbers (2016-2018)

135 events organised/participated, reaching 6631 participants

325 subscribers to cloud newsletter

140 specialists from 34 NRENs supported

298 inst-s consuming IaaS services in 18 countries

47 weekly Forums, incl presentations by suppliers & cloud team

Workshops:

- 40 participants at AWS & Azure for institutions
- 19 participants at GÉANT cloud workshop at EAPEC18 for CEE countries
- 50 participants at Google machine learning workshop at TNC18

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NREN presentations

Jessica Wu, JISC

Salome Branco, FCT

Results of the cloud survey for European institutions (1)

173 responses (IT staff, procurement, legal, researchers, etc)

 Almost all use clouds: collaboration & clouds, file storage, VMs

 More than half intend to buy clouds in next 2 years

 Public clouds little more use than private (responses 80/58)

 Majority has heard the offers from NRENs or suppliers (106/73)

Why they offer clouds to their end users?

 For more services, be more agile, reduce costs

Results of the cloud survey for European institutions (2)

Obstacles:

    concerns about privacy and security

    cost uncertainty

    lack of expertise

Help needed:

    Technical information & training

    Information on contractual and legal aspects

    Contact with institutions in similar position

¾ need training: workshops on use cases

Digital divide in cloud usage

Consumption in public clouds higher in N & W Europe

NREN cloud portfolios developed rather in N & W Europe

E & S rather relying on EU funding than its own business models

Change of paradigm needed:
"Free" services by NRENs aren't actually free
Commercial clouds are safe through GÉANT Frameworks

Ensure

Ensure even better cloud service delivery

- Hybrid cloud delivery platforms
- Cloud security
- Connectivity and easy access

Utilize and scale up

Utilize and scale up the delivery system we have set up to provide more services

- Community cloud services
- Learning management, educational tools

Explore

Explore new areas

- Machine learning
- Artificial intelligence
- Container-based virtualization

What waits ahead in 2019-2022 (GN4-3 and OCRE)

What waits ahead in OCRE (2019-2021)

Public clouds available through GÉANT FW

      IaaS (compute, storage, network)

      PaaS

      SaaS (file sync & share, online collaboration, simulation & virtualisation tools)

Commercial Earth Observation services

Making use of Copernicus Data Information Access Services (DIAS)

Focus on research!

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What waits ahead in GN4-3 (2019-2022)

Hybrid multi-clouds for R & E

Community clouds (sharing NRENs clouds)

Learning Management Systems and educational tools

Trainings and workshops!

Cloud adoption and communications in 2019

NRENs as cloud competency centres

- Training NRENs:
  - 7-8 May 2019, Dublin
  - GÉANT Clouds, Azure & AWS technical workshops

Evolve the cloud and service usage skills and capabilities of the NRENs and their institutions

- Topics:
- cloud strategy, sourcing decisions, contracting, legal, implementations, workload migrations, machine learning and artificial intelligence, security, cost management

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Thank you!

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Discussion (10 min)
Results (2x5 min)

Group 1:

How to best reach decision makers of **research institutions** for getting participants to the cloud trainings and technical workshops?

> Research institutes, universities, (archives & libraries?)

Group 2:

How to best reach decision makers of **education institutions** for getting participants to the cloud trainings and technical workshops?

> Vocational schools and colleges, schools of general education