GÉANT Cloud update
GÉANT updates session

Maria Ristkok
GÉANT Cloud Team, Adoption Support, Task Leader

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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
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
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
<table>
<thead>
<tr>
<th>Ensure even better cloud service delivery</th>
<th>Utilize and scale up the delivery system we have set up to provide more services</th>
<th>Explore new areas</th>
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<tr>
<td>• Hybrid cloud delivery platforms</td>
<td>• Community cloud services</td>
<td>• Machine learning</td>
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<td>• Cloud security</td>
<td>• Learning management, educational tools</td>
<td>• Artificial intelligence</td>
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<td>• Connectivity and easy access</td>
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<td>• Container-based virtualization</td>
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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!
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
Thank you!

maria.ristkok@eenet.ee