JRA4 Application Services Delivery

A collective approach for the delivery and adoption of cloud services

Bastian Kemmler (GÉANT/DFN/LRZ)
Mission

Meeting user needs through a community effort, adding value in the process
40 European National Research and Education Networks (NRENs)

GÉANT Project collaborates on:
Network, Identity Management, Clouds

Community of 10,000 organisations with 50 million users
1 digital single market

Hybrid Service Delivery
EXTERNAL: Jointly procure public clouds from commercial suppliers
INTERNAL: Share sector specific community clouds

Together, establish right conditions of use:
services that are safe and easy to use, accessible, affordable and interoperable
We do not build application services ourselves.

GÉANT is delivery vehicle for application services from other organisations (both providers within the R&E community and commercial suppliers).

Make these services fit the requirements of the R&E community, integrate them with the community’s infrastructure and support NRENs to offer them to their institutions and users.

Best value; most favorable conditions of use. Only able to get those through a collective approach.
Need for the IaaS services by the Research & Education Community

- Maximizing limited resources and personnel by moving in-house operations to cloud
- Collaboration environments becoming cloud-based
- Managed IaaS services
- Virtual machines for testing
- Cloud computing classes
- Secure data sharing and data security solutions (no need for handing over passwords)
- Storage - running out of space, steady increase in use and file size
- Disaster Recovery, incl backup and storage (duplicate copies of all data and emails)
- Researchers: shadow IT and on-demand research computing
- Student virtual machines (not always studying at campus)
There is community demand for cloud
But it is important to ensure that ...

GET IN
Assure data is handled safely and meets European and national regulations
Acquire and use services through the institutions’ structures:
• Affordable and predictable cost and purchasing models (prevent bill shock)
• Limit network traffic costs and provide network integration
• Log in with institutional account

GET OUT
Be able to move data (to another provider)
Meeting user needs: Providing the right choices

• Faster and easier access to a range of useful cloud services by creating the right legal, procurement and technical environments.

• Creating a strong community voice, based on the aggregation of demand across GÉANT members, to get the optimum technical and commercial solutions from vendors.

• Adapted to common community requirements and standards such as federation.
IaaS tender
IaaS tender
Legal basis for joint NREN procurement activity

EC Procurement Directive (2014/24/EU)
New Directive sets out key provisions; key to the success of the planned GEANT IaaS tender and Frameworks:

- Framework Agreement use
- Cross-border procurements
- Centralised Purchasing Bodies

Member State Procurement Legislation
To be implemented by Member States no later than 18th April 2016
Legal and procurement issues

- Call-Off is made under UK regulation – guides will be made available
- EU/EEA countries: if Directive 2014/24/EU on public procurement is properly adopted, NRENs who are subject to public procurement are free to use GÉANT as a centralised purchasing body
- EU/EEA countries: if Directive 2014/24/EU on public procurement is not properly adopted, NRENs can use centralised purchasing activities of GEANT by invoking direct application of the Directive
- Non-EU: some states in the pre-accession or accession process have undertaken to implement EU directives; check your laws!
The supply chain

GÉANT Application Services Delivery

1. ENGAGE WITH PROVIDERS
   ENABLE PROVIDER READINESS

2. CREATE DELIVERY FRAMEWORK
   ESTABLISH AGREEMENTS

3. ENGAGE WITH NRENs
   ENABLE COMMUNITY ADOPTION

4. APPLY SERVICE DELIVERY COMPONENTS, TO OFFER AVAILABLE SERVICES

5. CONSUME SERVICES

Supply chain components:
- Supply side
- Demand side

Handovers:
- NRENs to INSTITUTIONS
- Supply to Demand

Institutions:
- GÉANT
- NRENs
- INSTITUTIONS

www.geant.org
Framework
Joint NREN IaaS tender in GÉANT

IaaS in high demand by community
36 NRENs establishing framework agreements with suitable suppliers

Not winner takes all, but provide choice

NRENs bring the agreements to institutions for consumption
Infrastructure as a Service (IaaS) in high demand

Pan-European tender, conducted in 2016

Through GÉANT as cross-border, central purchasing body

GÉANT --> member NRENs --> member institutions

Using EC Procurement Directive (2014/24/EU)

Results: framework agreements with suitable suppliers

Not winner takes all, but provide choice

11 different IaaS solutions, over 20 supplier

4 year framework agreements starting January 2017

NRENs bring the agreements to institutions for consumption
IaaS Framework Vendors for Austria 2017
Some benefits

- Procurement compliant in EU & EEA
- Legal compliance (EU data protection law)
- Invoice billing, no creditcard needed
- Aggregate use discounts (10,000 institutions)
- Mandatory SAML support (some eduGAIN)
- Direct peering with GÉANT network
  - no extra data transport charges
NREN Cloud Service Delivery Manager

- Coordinate national activities – make it happen – key role, needs NREN commitment
- Setup NREN role – Reseller, Referrer, Underwriter
- On-boarding pack provided by GN4-2 JRA4
- Marketing & communication activities with vendors
- Enabling institutions and feedback on needs
Roles per service, vendor or client sector

Referrer

- Facilitator making the Framework Agreements (FWA) available
- Consolidating users requirements
- Arranges Terms & Conditions with vendors when needed
- Contracts and payments between the institution and the provider
Framework delivery organisation
Adoption
GÉANT, the NRENs and their Institutions that are part of this tender can use its outcomes without additional procurement required.

There is no obligation whatsoever on the Customers to purchase, and they are entitled to run their own procurement to purchase any products covered within this contract.

The participating countries, NRENs and Institutions are as follows:

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NREN</th>
<th>INSTITUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Albania</td>
<td>ANA, Intercollegiate Services Center and Telematic Network</td>
<td><a href="https://wiki.geant.org/display/gn41sa7/laa5+tender+institutions%3A+ANA">https://wiki.geant.org/display/gn41sa7/laa5+tender+institutions%3A+ANA</a></td>
</tr>
<tr>
<td>3. Austria</td>
<td>ACONet</td>
<td><a href="https://www.aco.net/teilnehmer.html?L=1">https://www.aco.net/teilnehmer.html?L=1</a></td>
</tr>
<tr>
<td>4. Azerbaijan</td>
<td>ANAS</td>
<td><a href="https://wiki.geant.org/display/gn41sa7/laa5+tender+institutions%3A+ANAS">https://wiki.geant.org/display/gn41sa7/laa5+tender+institutions%3A+ANAS</a></td>
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ACOnet Participants

ACOnet participants include universities, colleges, schools, dormitories, libraries, research institutions, arts and cultural organizations, health institutions, and public administration institutions.

If you are interested in becoming a participant of ACOnet and using its services, please read the section on ACOnet Participation Request.

Jump to: A B C D E F G H I J K L M N O P R S T U V W

ACOnet Participant

A
  - Academy of Fine Arts Vienna
  - ACR - Austrian Cooperative Research
  - Agency for Quality Assurance and Accreditation Austria
  - AI4M Austrian Institute of Management GmbH
  - Akademie Burgenland GmbH
  - Akademiehilfe Studentenunterstützungsgesellschaft
  - Anton Bruckner Privatuniversität
  - APA-IT Information Technology GmbH
  - Austrian Academy of Sciences
  - Austrian Computer Society
  - Austrian Economic Chamber Styria
  - Austrian Exchange Service
  - Austrian Gallery Belvedere
  - Austrian Marketing University of Applied Sciences
  - Austrian Museum of Applied Arts / Contemporary Art
  - Austrian National Library
On-boarding the institution

• Selecting Providers
  • After SAML2 compliance is announced
  • MS Azure call-offs can be made within 4 years from 1 Jan 2017 (contract signed between GÉANT and MS), for other suppliers using FW agreement that goes beyond the end date of the FW itself
  • Providers can be directly selected if GÉANT template solution is used (otherwise a mini-competition)

• Setting up the Institution as an Organisation at the Cloud Provider
  • Contact names, billing details, new cloud accounts or migrating existing ones etc

• Ensuring appropriate policies and controls are in place

• Managing costs and resource usage

• Using value added services
  • Participating in additional trainings
  • Security consultancy
  • Education grants for cloud
Online Material

- Website
  - https://clouds.geant.org
- IaaS Service Matrix
  - https://catalogue.geant.org
Online cloud catalogue ‘IaaS service matrix’ to display results
# IaaS Service Matrix – view with the requirements legend

<table>
<thead>
<tr>
<th>MR</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Exceeds the stated requirements</td>
<td>Response provides a clear and comprehensive solution to GEANT’s requirements and brings significant added value and benefit, which is supported by evidence (where relevant) and which presents no concerns in relation to deliverability and/or performance and/or transfer of risk to GEANT.</td>
</tr>
<tr>
<td>5</td>
<td>Fully meets the stated requirements</td>
<td>Response provides a clear and comprehensive solution to GEANT’s requirements, which is supported by evidence (where relevant) and which presents no concerns in relation to deliverability and/or performance and/or transfer of risk to GEANT.</td>
</tr>
<tr>
<td>3</td>
<td>Minor Reservations</td>
<td>Response provides a clear and comprehensive solution to GEANT’s requirements but there are minor deficiencies in the evidence provided (where relevant) and minor concerns in relation to deliverability and/or performance and/or transfer of risk to GEANT.</td>
</tr>
<tr>
<td>1</td>
<td>Significant Reservations</td>
<td>Response provides a solution to GEANT’s requirements but there are major deficiencies in the evidence provided (where relevant) and major concerns in relation to deliverability and/or performance and/or transfer of risk to GEANT.</td>
</tr>
<tr>
<td>0</td>
<td>Not Answered / Unacceptable</td>
<td>The response does not meet requirements.</td>
</tr>
</tbody>
</table>

**Sort by**
- Name of supplier

**Filters**
- Only Show Microsoft resellers
- Portugal
- Show all capabilities
AC8 – General Data Security (Awarding Criteria)

R. Providers need to ensure secure, reliable and a legally compliant treatment of customer's data.

Q. Please describe in detail the policies and processes to ensure data security and data privacy in relation to the proposed services.

Response Guidance

- “Describe mechanisms to protect data at rest and in transit.”

- Describe how customer data transiting networks (Internet, inside your network, connection to 3rd parties) is protected against tampering and eavesdropping (e.g. network protection, use of SSL, etc.)
Cloud Services Central Repository

- Framework agreements
- URL
  - [https://intranet.geant.org/cloud_services_repository/Pages/default.aspx](https://intranet.geant.org/cloud_services_repository/Pages/default.aspx)
- Cloud Service Delivery Managers will be able to give access to the repository.
Communication and support

- Document Repository
- Newsletter
- Webinars, showcases, tutorials, workshops
- IaaS Forum for NREN Cloud Managers every Friday @10 CET
- Use cases, best practices
- Presentations at meetings & user conferences (e.g. TNC17 in Linz)
What can I buy?

• IaaS: The provision of compute, storage, network and related services as a public cloud service. The services should be standardized, highly automated, available on-demand, elastic and on a pay per use basis. Access should be via a web-based self-service portal or API and support multi-tenancy.
How much can I buy?

- Unlimited
  - IaaS
  - Onboarding
  - Architecture supports
  - Related support services

- Limited
  - Managed Services
  - Implementation services
  - License based services (e.g. VMs with applications pre-installed from a vendor's cloud "marketplace")
  - 50% of the contract value
What can I NOT buy

• Private Cloud
• Co-location
• SaaS
• BUT
  • You can tender for SaaS and possibly bring your own IaaS
  • Just like you did with servers and software licensing
How can my institution participate/benefit?

Talk to your NREN or find out more at https://clouds.geant.org/
LET’S GET READY

Prepare and execute adoption, together

https://clouds.geant.org  clouds@geant.org