Introduction: Why Orchestration, Automation and Virtualisation (OAV)?

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WP6-T2 / Consensus Building

GÉANT Infosshare - Orchestration, Automation and Virtualisation in the NRENs. Ready, Steady, Go!
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www.geant.org
OAV: Orchestration, Automation and Virtualisation

- Faster service delivery
- Reduce the number of human errors
- Decrease the amount of manual work
- Lower the costs of service delivery
- Ensure configuration consistency
- Increase efficiency
- Provide better reporting

Our aim is to promote wider adoption of general OAV principles within the NREN community.
OAV Survey - Sections

- Existing Network and Services Platform
- Current OAV Use Cases and Services
- OAV Challenges and Priorities
- Future OAV Use Cases and Services
- How can the GÉANT Community / the GÉANT Project help?

Existing Network and Services Platform

- At least some degree of automation/orchestration: 37%
- Integrated OSS/BSS: 20%
- Open-source: 27%
- In-house developed: 47%
- No OSS/BSS or just a few components: 47%

OSS/BSS Components
Current OAV Use Cases and Services

Currently in Production

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<th>10</th>
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Test/Under Development

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MULTI-DOMAIN USE CASES

- Your NREN and a cloud provider 23%
- An institution / campus and your NREN 42%
- Your NREN and GÉANT 35%
OAV Challenges and Priorities

- Software development skills
- Software development and networking skills
- Additional personnel
Future OAV Use Cases and Services

Within two years:
- No plans: 23%
- Some plans: 77%

Beyond two years:
- No plans: 43%
- Some plans: 57%
### How can the GÉANT Community / the GÉANT Project help?

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Providing data model(s)</td>
<td>40%</td>
</tr>
<tr>
<td>Providing methodology</td>
<td>30%</td>
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<tr>
<td>GEANT should organize workshop &amp; training</td>
<td>70%</td>
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<tr>
<td>Developing software</td>
<td>50%</td>
</tr>
<tr>
<td>Providing tools/automation repository</td>
<td>20%</td>
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<tr>
<td>Other ways - provide practice guide</td>
<td>10%</td>
</tr>
<tr>
<td>Other ways - Demonstrate technology in a working/real/use case/production environment</td>
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<tr>
<td>Other ways - need OAV architecture blueprint combined with API</td>
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</table>
Collaborative approach to OAV in the GÉANT Community

- Strong need for collaboration and exchange of knowledge and expertise
- Knowledge as a gap
- We speak different languages
- A generally accepted architecture blueprint needed
- NRENs are willing to share experiences and learn from others
Consensus Building – OAV focus groups

- Terminology
- Architecture
- OAV public wiki
- CNaaS (use case)
- OAV Training
- DTN
Today’s agenda:

• "Orchestration, Automation and Virtualisation: Architectures" - Sonja Filiposka (UKIM - MARNET) → Susanne Naegele-Jackson (FAU - DFN)

• "Mapping NRENs' architectures to a Blueprint" - Sonja Filiposka (UKIM - MARNET) → Roman Łapacz (PSNC), Iacovos Ioannou (CYNET)

• "Everything you Wanted to Ask About Orchestration, Automation and Virtualisation: Time to Ask" - Maria Isabel Gandia Carriedo (CSUC-RedIRIS), Susanne Naegele-Jackson (FAU - DFN)

• Wrap-up and open discussion
  • Your input is very valuable to us – is there more work to be done? If so, what?
Thank you

Any questions?

Email us:

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