Semantic Resource Descriptions in Advanced Cyberinfrastructures

Jeroen van der Ham & Yufeng Xin
vdham@uva.nl & Yufeng Xin yxin@renci.org
Agenda

• Introduction
• Network Description Language
• NDL OWL and implementation
• Implementation in NOVI & Geysers
• Standardisation
• Discussion
Semantic Descriptions

- LinkedIn for infrastructure

- Utilize the Semantic Web graph to express a network graph
Networking innovations over virtualized infrastructures.

Monitoring Architectures
Semantic Resource Description
Virtual Resource Brokering
Federated Virtualization Technologies

Security Aware Access

PlanetLab Europe
FEDERICA GÉANT
Other FI Platforms

FUTURE INTERNET FEDERATION

Monday, 21 November 11
NOVI
NETWORKING INNOVATIONS
OVER VIRTUALIZED INFRASTRUCTURES
You can gain more by take all pieces of the puzzle into account.

1. **describe all** computing resources (networks, computing and storage facilities)
2. **optimize the computing problem**, instead of only its network aspect
GEYSERS Layered Architecture
Discussion

- Advantages/disadvantages of RDF/OWL over XML/DOM
- Advantages disadvantages of hierarchical urn naming
- Implementation strategies in dealing with RDF models -
  - Scalability challenges
- Model persistence