

# GTS Tech + Futures Workshop

Copenhagen, Thursday, Oct. 22, 2015

# GTS Three Year Roadmap (2019) – (I)

- (Standardized of resources) (non-trivial and important issue)
- Standard API, a common canonical model
- Monitoring, measurements (active, passive) and performance verification
- Underlying infrastructure
- Support continued innovation
- Virtualization stacking (and performance: on which layer did problem occur) and visibility; we need protocols to inform other layers
- Automated Fault Uncovery (AFU); fault localization as part of performance verification

# GTS Three Year Roadmap (2019) (II)

- Cost recovery and cost/benefit analysis (CBA)
- Admin tools
- Better AAI
- Security, Privacy (protection of proprietary information)
- Weathermap monitoring (pulse); what is possible?
- Path selection and resource negotiation, orchestration issues
- Measurement tools inside testbeds
- performance measuring service testbed

# GTS Three Year Roadmap (2019) – (III)

- Experiment/application maturity
- History data of projects for accounting aspects
- Snapshot/checkpoint/restart an entire testbed
- Comprehensive support (automated, distributed, scales)
- Multipoint VC resources (broadcast domain)
- Capacity growth, number of projects, number of used resources,
- 10 Gig circuits (by spring break)
- IP addresses and how to scale for IAGW; every project also needs a VM

# GTS Three Year Roadmap (2019) – (IV)

- Capacity? (wireless? mobile?)
- High performance examples (of virtual networks)
- Role?
  - GTS as a binding fabric for cloud data centers
  - GTS as a research focused Open Fabric (less threatening)
- Internet of Things (IoT)
- Where are domain scientists? Application
- GVM over GNA as a possible solution
- Campus evolution to virtual Cyber Infrastructure (can we find or create a case study?)

# GTS Three Year Roadmap (2019) – (V)

- Where is the data? Implications (legal, logistical, security)
- 400 Gig and implications to virtualization service?
- Logistical networking (ballistic flows)