

HELMHOLTZ

RESEARCH FOR  
GRAND CHALLENGES



**HIFIS**

HELMHOLTZ  
FEDERATED  
IT SERVICES

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DESY

HIFIS Conference, Hamburg, Oct. 17./18. 2019

[www.helmholtz.de](http://www.helmholtz.de)

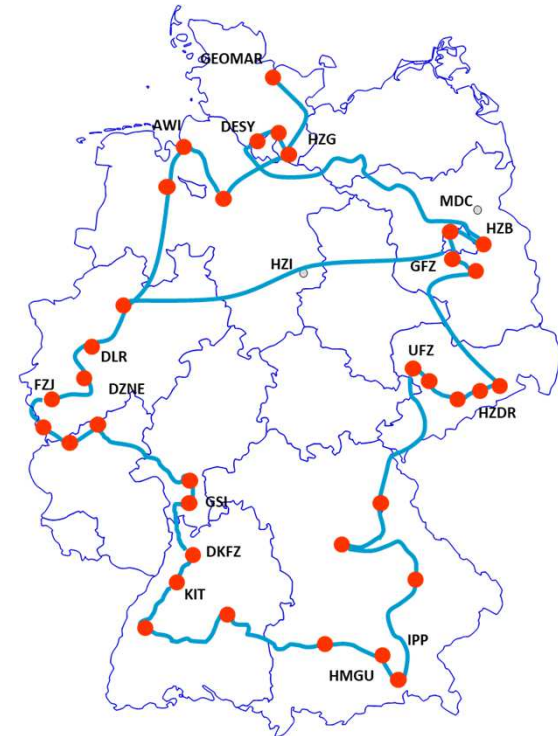
# HIFIS: Helmholtz Backbone Services



The network of the individual Helmholtz Centres is to be interconnected on the basis of a high bandwidth network with mutual trust and increased overall security

- **Benefits**

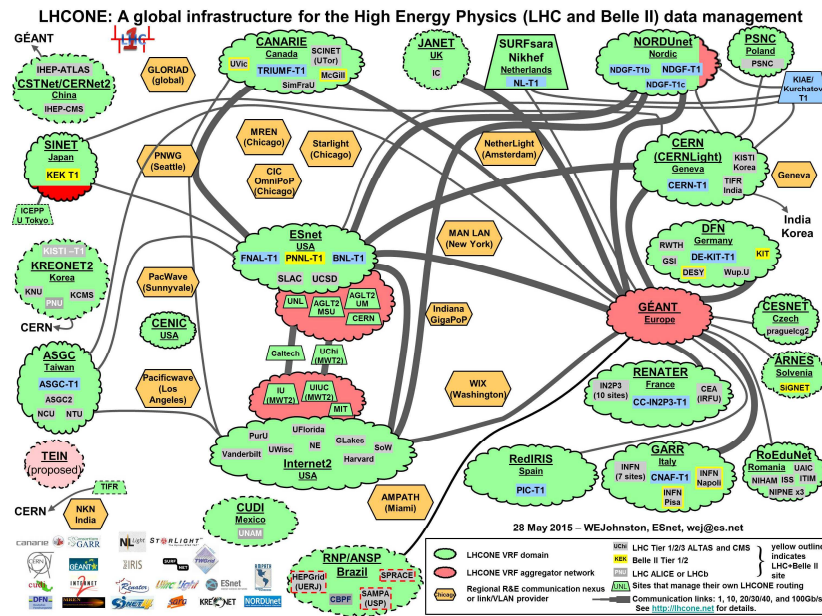
- Trust and secure relationship  
-> less strict ACLs or firewall rules
- Higher bandwidth  
-> e.g. Firewall bypass
- E. g. realtime services via QoS



# LHCONE: A Blueprint for an HGF Backbone



- Worldwide overlay network for analysis of LHC data on the infrastructures of the respective NRENs
- Routing protocols allow for high scalability and redundancy
- High trust level through coordinated routing policies
- Scalable connection via point-to-point lines or packet tagging on existing access ports



# Organizational and Technical Preparations



- Status Recruitment
  - DESY: Position is advertised, bad applicant situation
  - DKFZ: Position has been filled
  - AWI: Position has been filled
  - HMGU: Position is advertised
  - FZJ: Position planned



# Organizational and Technical Preparations



- Discussions with DFN, draft of „Dienstvereinbarung“ has been prepared
- Survey of existing connections underway
- Suggestion: Signed „Dienstvereinbarung“ will be submitted to DFN via DESY
- Implementation should be done on a site per site basis
- First informative talk with T-Systems
- Discussion about future cost models for the Helmholtz backbone infrastructure with the DFN during pilot phase

## Dienstvereinbarung

zwischen

dem Verein zur Förderung eines Deutschen Forschungsnetzes e. V.  
Alexanderplatz 1, 10178 Berlin,  
– in der Folge als „DFN-Verein“ bezeichnet –

und



## Next Steps



- Setup of the prototype installation as agreed on at the Kick-off-Meeting
  - Focus is not on bandwidth etc. but about the logical layout
- Realization as an overlay in the X-WiN
- Proof of concept for
  - Routing policies
  - Possible hardware issues
  - Firewall bypassing
  - ...
- Adapt growth as required e.g. with dedicated lines

