

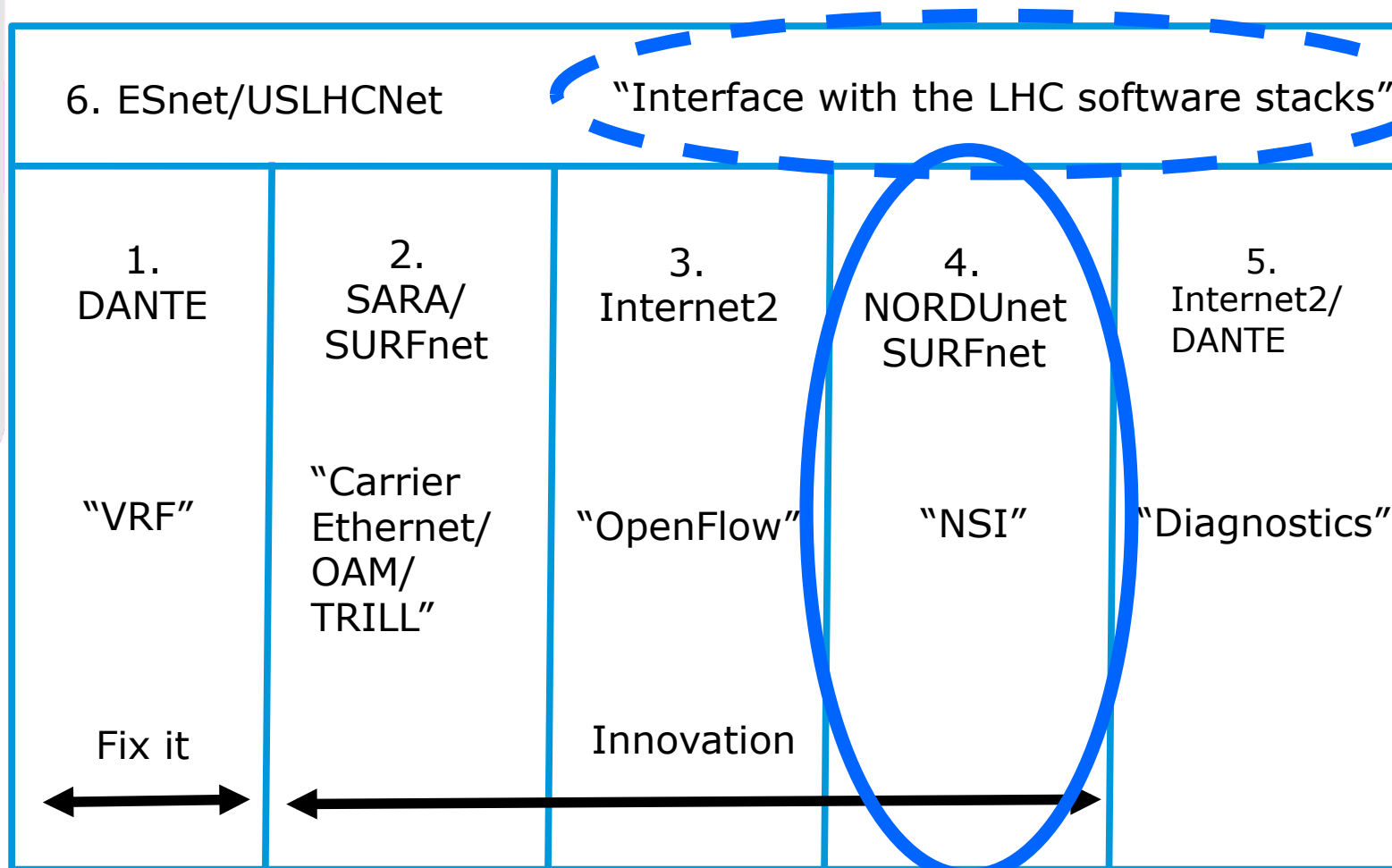
LHCONE Point-to-Point Service

The Whitepaper

Lars Fischer
LHCONE Meeting

Washington, D.C., 01 February 2013





Result of the LHCONE meeting in Amsterdam, December 1&2, 2011



- Whitepaper
 - Workflow
 - Usecases
 - Experiment / Network Collaboration
- Highlevel Roadmap
 - Identify goals that will make a difference
 - Driven by experiments, w/ input from Network team
 - Requires whitepaper to progress.
- FTT Trial
 - Driven by Artur

- Vision and ambition
- Status of Work
 - Status of Point-to-Point technology by the NRENs
 - Status of the Systems that use the Network
 - Status of Network Access and Usage by LHC Experiments
- Requirements and expectations
- A high-level Architecture for point-to-point Services in LHCONE
- Onwards, to implementation

- High level vision for LHCONe point-to-point service
 - Service outline
 - Performance
 - Usability
 - Predictability
 - Timeline
 - ...
- Much of this is in my presentation from Day 1 of the Geneva meeting
- Reiterate that this is joint work of the NRENs, the WLCG software community and LHC end-sites
- **Writer: Lars Fischer, Erik-Jan Bos**



- *Status of Point-to-Point technology by the NRENs*
 - Current and near term possibilities of a multi-domain point-to-point system
 - Standards
 - Services
 - Implementations
 - Benefits for the LHC community
- Part of the text for this is in Jerry's presentation for the Geneva meeting and the document distributed.
- **Writer: Jerry Sobieski**

- *Status of the Systems that use the Network*
 - Based on workflows, what components use the network when and for what, and how
 - Differences and similarities among the experiments
- This is to a large extent a summary of the presentations in the second half of Day 2 of the Geneva workshop
- **Writer: Michael Ernst, Kaushik De, Daniele Bonacorsi**



- *Status of Network Access and Usage by LHC Experiments*
 - Current and near term possibilities from the experiments in advanced network usage and signaling
 - Current usecases
 - How is the network used now
 - Wish-list items to improve performance
- **Writers: Artur Barczyk, Harvey Newman, Bill Johnston**

- Inventory of requirements
 - From the experiments side (from the experiment software)
 - From the NREN side
- Lessons learned on Day 1 at the Geneva workshop
 - How experiments look to use the network in improved ways
 - What information do experiments' software stacks want from the network
 - Type of point-to-point services are the experiments looking for (predictable bandwidth)
 - What can be engineered by NRENs
 - How do experiments expect to integrate into workflow
- Future usecases, as a guide for architecture and design
- **Writer: Richard Hughes-Jones, Inder Monga, Bill Johnston**
(+ someone from the experiments?)

- Putting it all together
 - What will the final set-up look
 - Artist impression of the LHCONE Point-to-Point Services Architecture
- Some of this work has been done, i.e., Service Definition
- Writers: **Group**

- Whitepaper
 - Publish by next LHCONE meeting
 - Small working group, regular calls
 - Input from LHCONE group, drafts circulated to lhcone list.
- Roadmap
 - Draft for discussion by next LHCONE meeting
- 2nd Geneva PtP workshop
 - Presentation of Whitepaper
 - Initiate roadmap
 - Date? 2nd half April?