

NOTED demonstration at SC21

Edoardo Martelli, Joe Mambretti and others

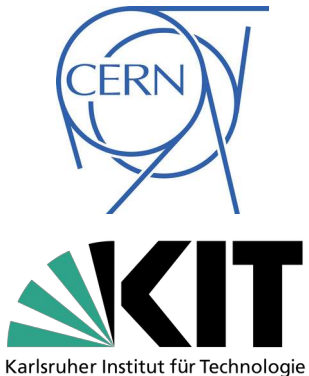
LHCOPN/ONE meeting #47

11th October 2021

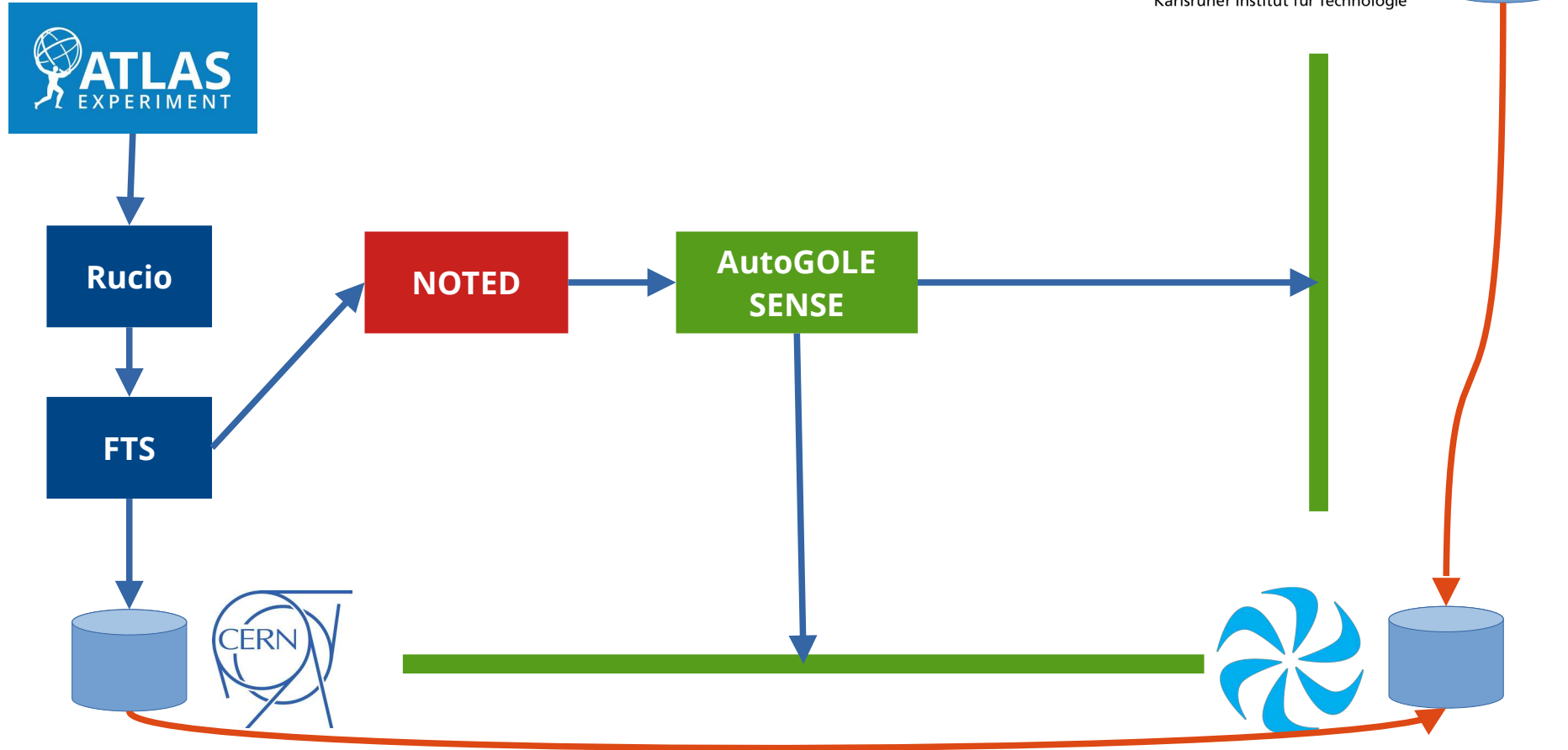
NOTED demo at SC21

Components:

- NOTED controller and FTS at CERN
- Data storage at CERN and TRIUMF
- AutoGOLE/SENSE circuit between CERN-TRIUMF and KIT-TRIUMF provided by SURF, ESnet, CANARIE, STARLIGHT, DFN, GEANT



Components



NOTED demo: CERN-TRIUMF

The NOTED controller will look for large data transfers from CERN to TRIUMF in FTS

Once detected, it will request a circuit from CERN to TRIUMF to the AutoGOLE/SENSE provisioning system

The LHCOPN routers at CERN and TRIUMF will route the data transfer over the new circuit

When the transfer is completed, the circuit is released and the traffic is routed back to the production LHCOPN link

NOTED demo: KIT-TRIUMF

The NOTED controller will look for large data transfers from KIT to TRIUMF in FTS

Once detected, it will request a circuit from KIT to TRIUMF to the AutoGOLE/SENSE provisioning system

The LHCOPN routers at KIT and TRIUMF will route the data transfer over the new circuit

When the transfer is completed, the circuit is released and the traffic is routed back to the production path

Links and interconnections providers

SC21 NOTED dynamic link (vlan2025)



SC21 alternative link (vlan2024 (TBC))



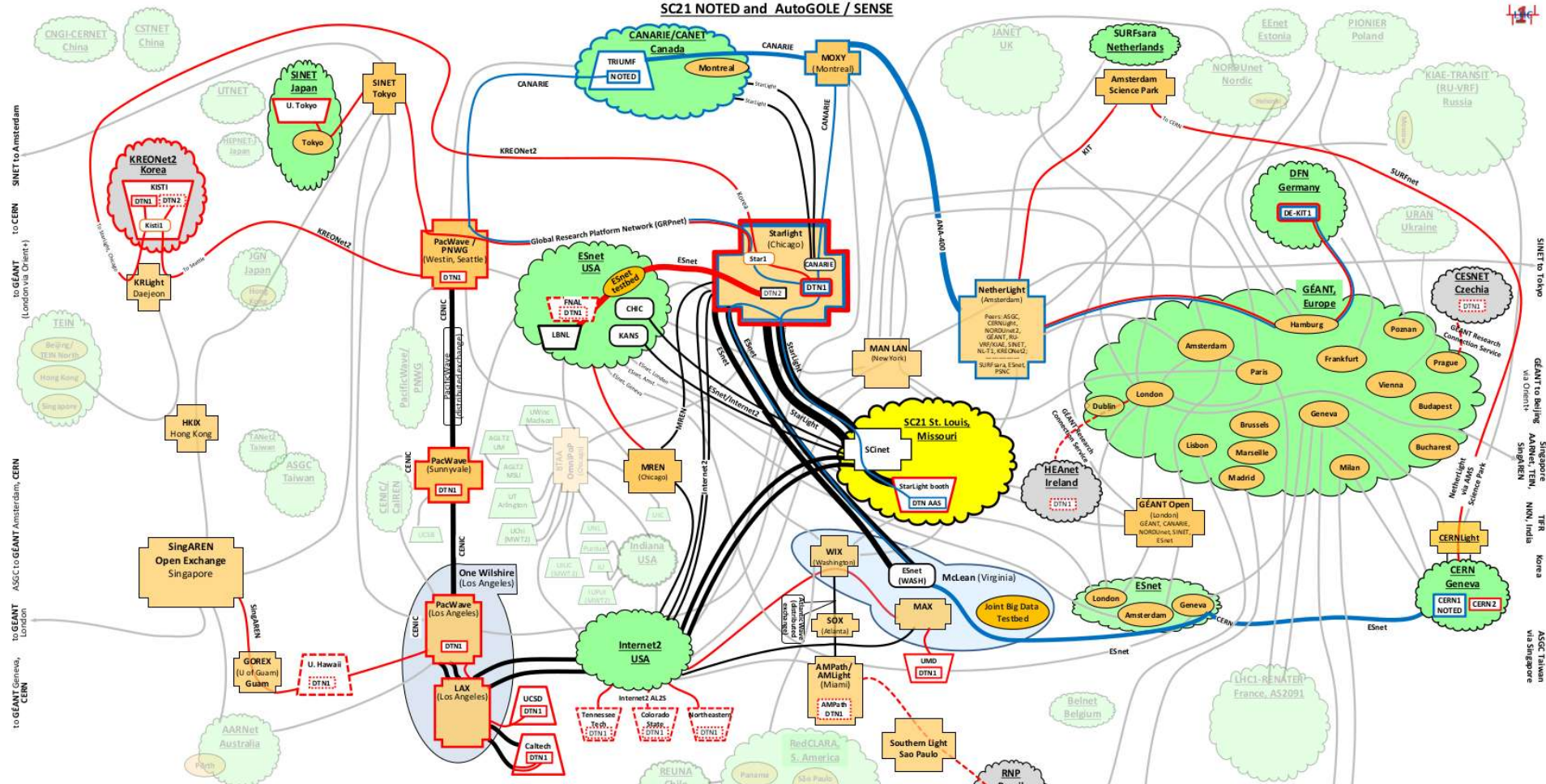
TRIUMF LHCOP link (vlan2128)





















KIT-TRIUMF dynamic link (vlan 3694 (TBC))



SC21 NOTED and AutoGOLE / SENSE



SC21 map v710, Sept. 28, 2021. Based on LHCONE Map Ver. 5.4, September 2020 – WEJohnston, ESnet, wej@es.net

	SC21 NOTED infrastructure is in blue		Catech Sites are represented as trapezoids		100G
	AutoGOLE / SENSE infrastructure is in red		SOX (Atlanta) Exchange points (external or internal to a site) are represented as clipped squares		200G
	Shared or general infrastructure is in black		RNP (Brazil) Cloud bubbles are collections of associated infrastructure		400G
	McLean "Carrier hotels"		ESnet Testbed Ovals are mostly regional infrastructure / test beds		600G
	ESnet Testbed Pattern filled rectangles are computing/storage elements		Catech Solid fill rectangles indicate a DTN		1000G
	CERN1 Individual rectangles are individual switch/router		ESnet Dashed lines indicate planned facility		Multi color lines indicate shared facility

NOTES
 1) Informational infrastructure by provider/collaboration for link attribution see LHCONE map



Questions?

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