

REANNZ

FEBRUARY 24, 2016

SCINET

THE WORLD'S FASTEST
NETWORK TO SHOWCASE
THE WORLD'S FASTEST
COMPUTERS

JAMIE CURTIS

REANNZ



SCINET?

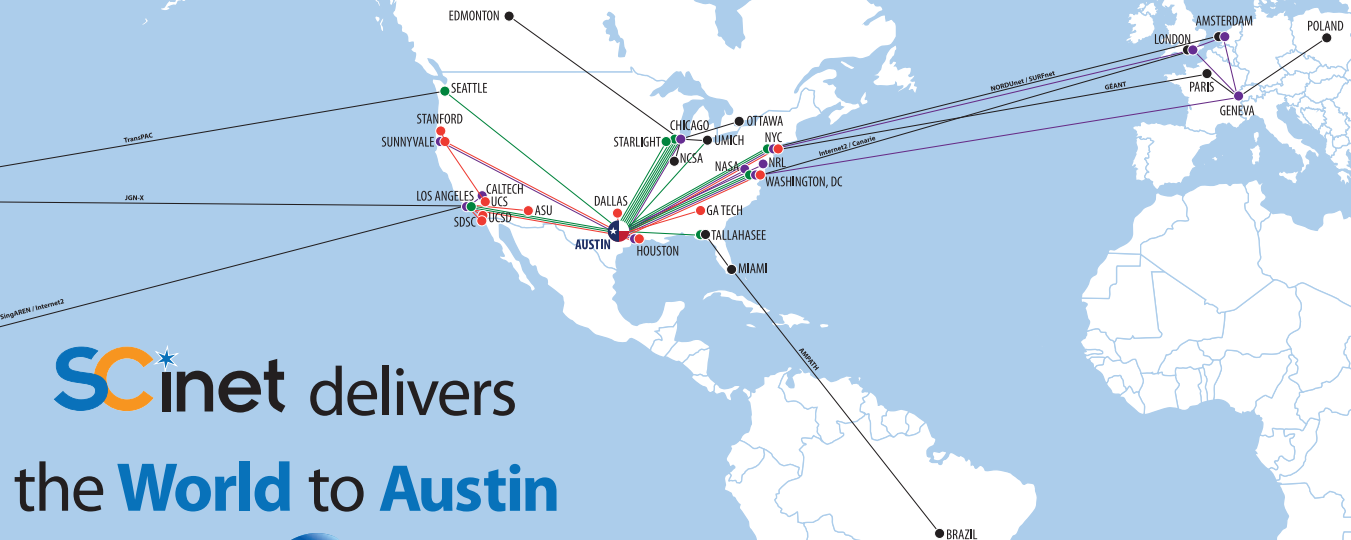
WHAT IS SCINET?

- Built to support SC – the worlds largest HPC and supercomputing conference
- Network allows the demonstration of HPC applications and experiments from across the globe on the conference floor
- Booths may request (multiple) connections at 1, 10 or 100Gbps
- WAN circuits are built to the event from around the US
- R&E networks enable connections to the rest of the world

CenturyLink™

INTERNET

ESnet
ENERGY SCIENCES NETWORK



SCinet delivers
the **World** to **Austin**

for  **SC15**
Austin TX | hpc transforms.

FACTS & FIGURES

- Total bandwidth delivered: 1.63 Tbps
- 143 km of fibre deployed on exhibit floor
- Over USD\$22 million in loaned equipment
- Over 130 international volunteers from over 15 countries
- 337 SCinet wireless access points configured
- 7 Distributed NOCs (DNOC) on exhibit floor
- 39 managed and 73 unmanaged switches



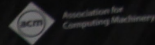


HOW?

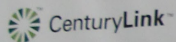




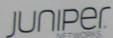
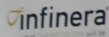
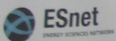
Scinet



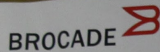
PLATINUM



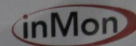
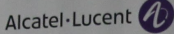
ciena



GOLD



SILVER



Reservoir Labs

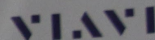
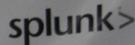
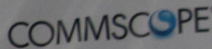


AUSTIN
CONVENTION CENTER

ARISTA

ixia

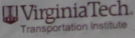
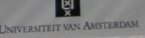
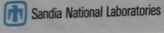
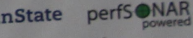
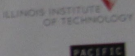
BRONZE



CENIC



Idaho State University

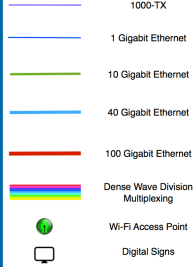


TEAMS

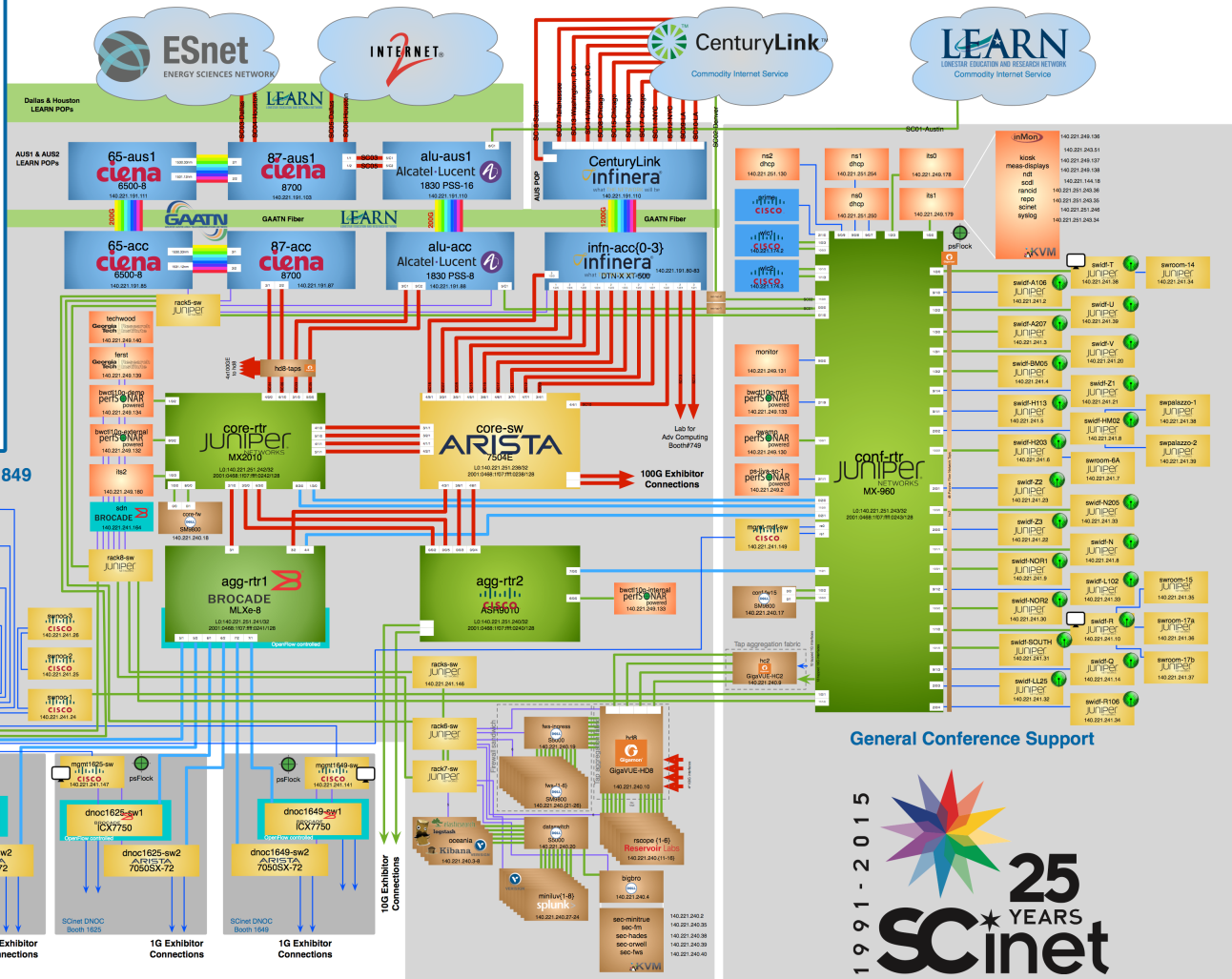
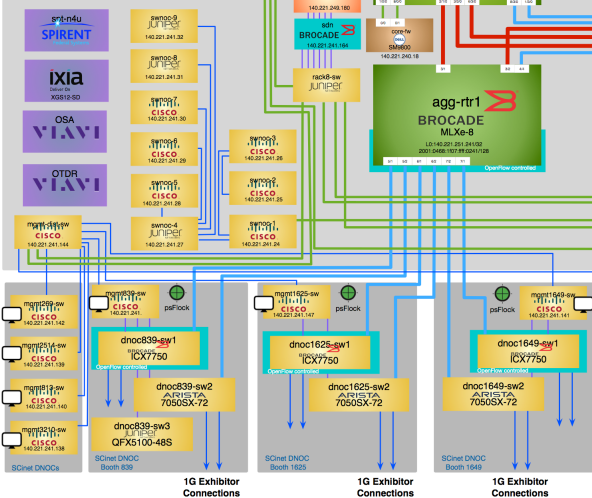
- Architecture
- Commodity
- Communications
- Fiber
- Helpdesk
- Interconnect
- IT
- Logistics
- Management
- Measurement
- Network Security
- Security
- Power
- Routing
- WAN
- Wireless

WHAT?


**Network Architecture
V4.2
Linda Winkler
Nov. 15-20, 2015**



SCinet NOC Booth 849



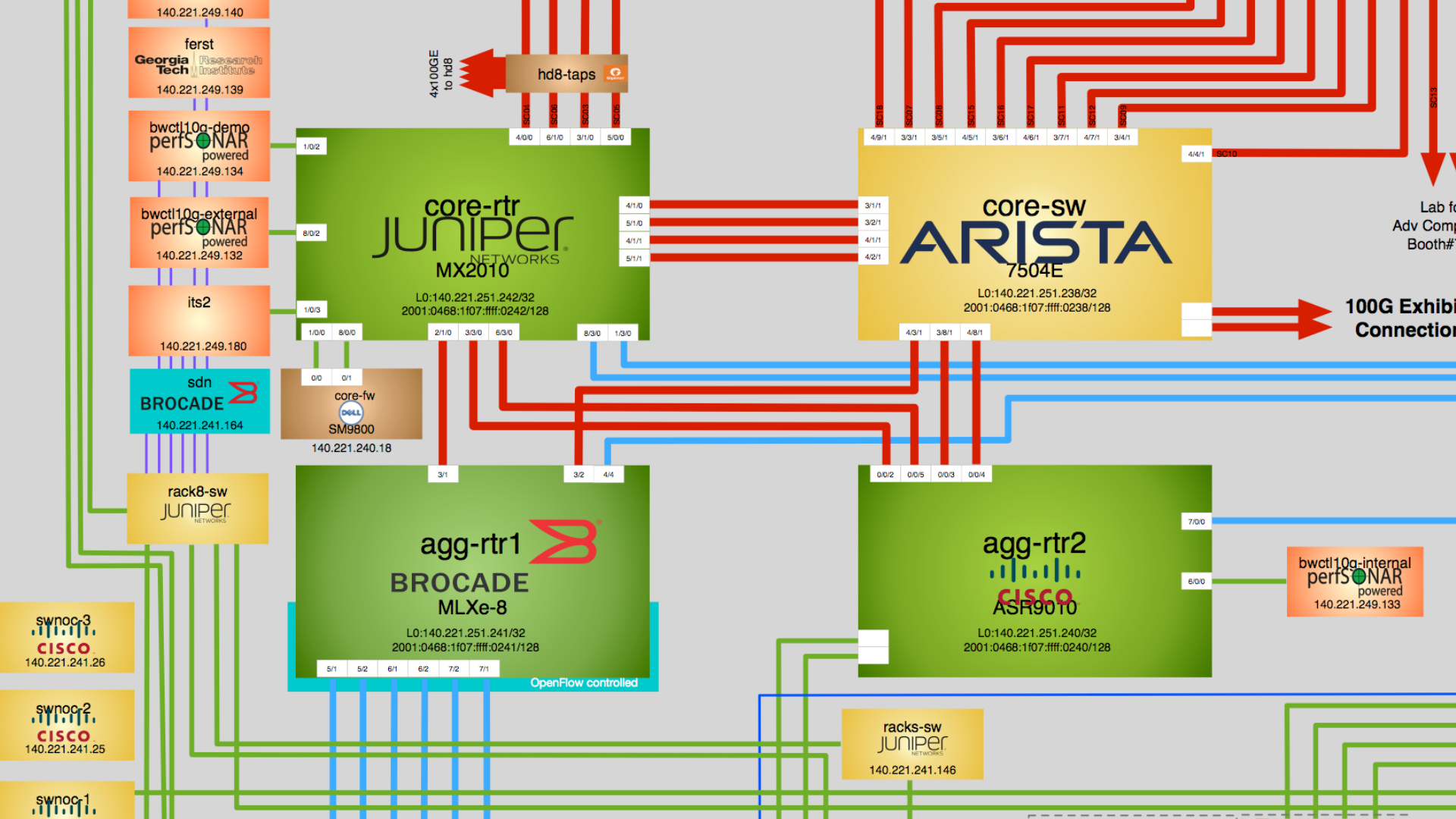
General Conference Support

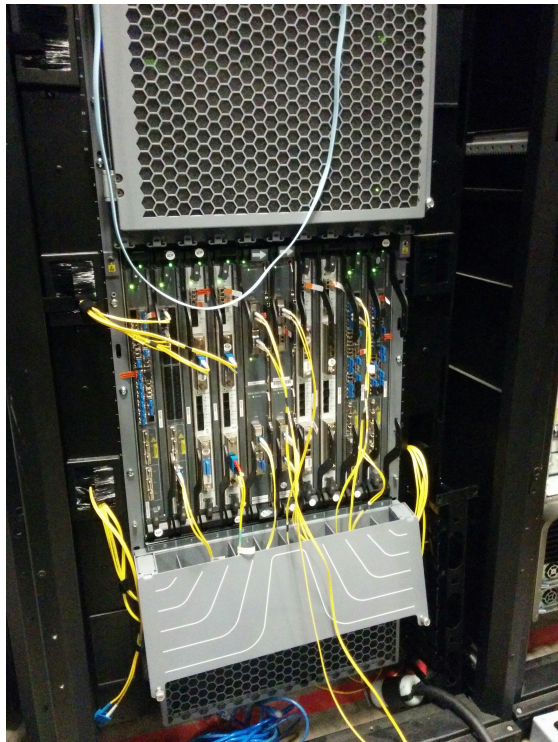


1991 - 2015

25 YEARS

SCinet











COMMScope

JUNIPER
NETWORKS

ARISTA

BROCADE
CISCO

ARISTA BROCADE
CISCO
ixia
JUNIPER
SPIRIT

ciena

infinera

Dell

Reservoir

splunk

ARISTA

ixia

WHY?

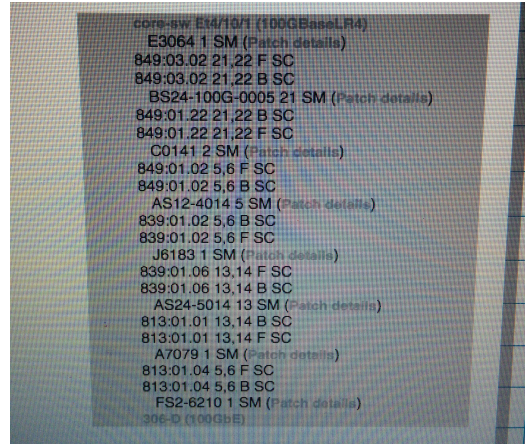
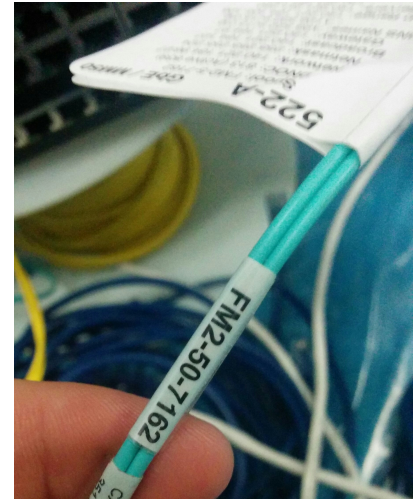
SCINET

WHY?

- Not just about supporting the exhibitors....
- Research & experimentation
- Vendor showcase
- Training
- Collaboration
- Profile

R&D & TRAINING

- SC15 marked the first deployment of SDN in SCinet
 - 50% of 1G connections via switches controlled by OpenFlow
 - Brocade ICX switches with OpenDaylight controller
- Working alongside vendor SE's for multiple weeks on equipment you've never used
- Brand new equipment – Infinera and Arista QSFP28 deployment for SC15



THANKS

- Linda Winkler, David Wheeler – diagrams / slides
- Conan, JP and the other Routerheads
- SCinet & SC teams
- REANNZ!



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