

REANNZ

Transforming Networking: current challenges for
R&E networks and directions for the next 3-5 years

WHAT IS THE VALUE OF AN NREN?

WHERE IS THE VALUE?

- REANNZ is a small NREN in a highly regulated, but intensely competitive telco market
 - Regulated wholesale price of US \$260 per month for dark fibre
 - Retail “1Gbps” unlimited fibre at home for US \$80 - \$90 per month
 - 87% of NZ will have fibre to the premise by 2022
- Small proportion of “Superstar” research projects
 - “Yes, that’s very nice for CERN, but we don’t really do big-data.”
- Our value proposition cannot simply revolve around speeds and feeds

WHO DO I COLLABORATE WITH?

- What proportion of researchers will depend on data shipped directly from R&E institution to R&E institution in 5 years?
- R&E traffic is increasingly defined by a single side
 - researcher to Amazon
 - educator to YouTube
- Sometimes not even one side
 - science data stored, processed and exported entirely from “the cloud”
- Are AUP's, conditions of use, architectures etc. keeping up with this change?

SO WHAT DO WE STILL BRING?

- What will make us valuable to the other 95% of our researchers?
- Expertise
 - Make it simple – hide complexity where it is necessary, remove it when not
 - Make it consistent – the same performance every time
 - Make it appropriate – know our community and serve them specifically
- Quality
 - Assemble the same components but in a better way
- How do we build on this to help the whole enterprise?
 - Building a network is not the core competency for our membership

GLIF 17 - TRANSFORMING NETWORKING

KEEPING REANNZ EFFICIENT

✗ NOC

✗ Network Engineers

✗ Software Team

✗ Reactive fault finding

✗ Scale with people

✓ SRE / DevOps

✓ Continuous monitoring & measurement

✓ Scale with software

Thought experiment

COULD YOU STILL PROVIDE VALUE EVEN
IF YOU NO LONGER PROVIDE A NETWORK?

REANNZ