



Challenges of NREN during COVID-19

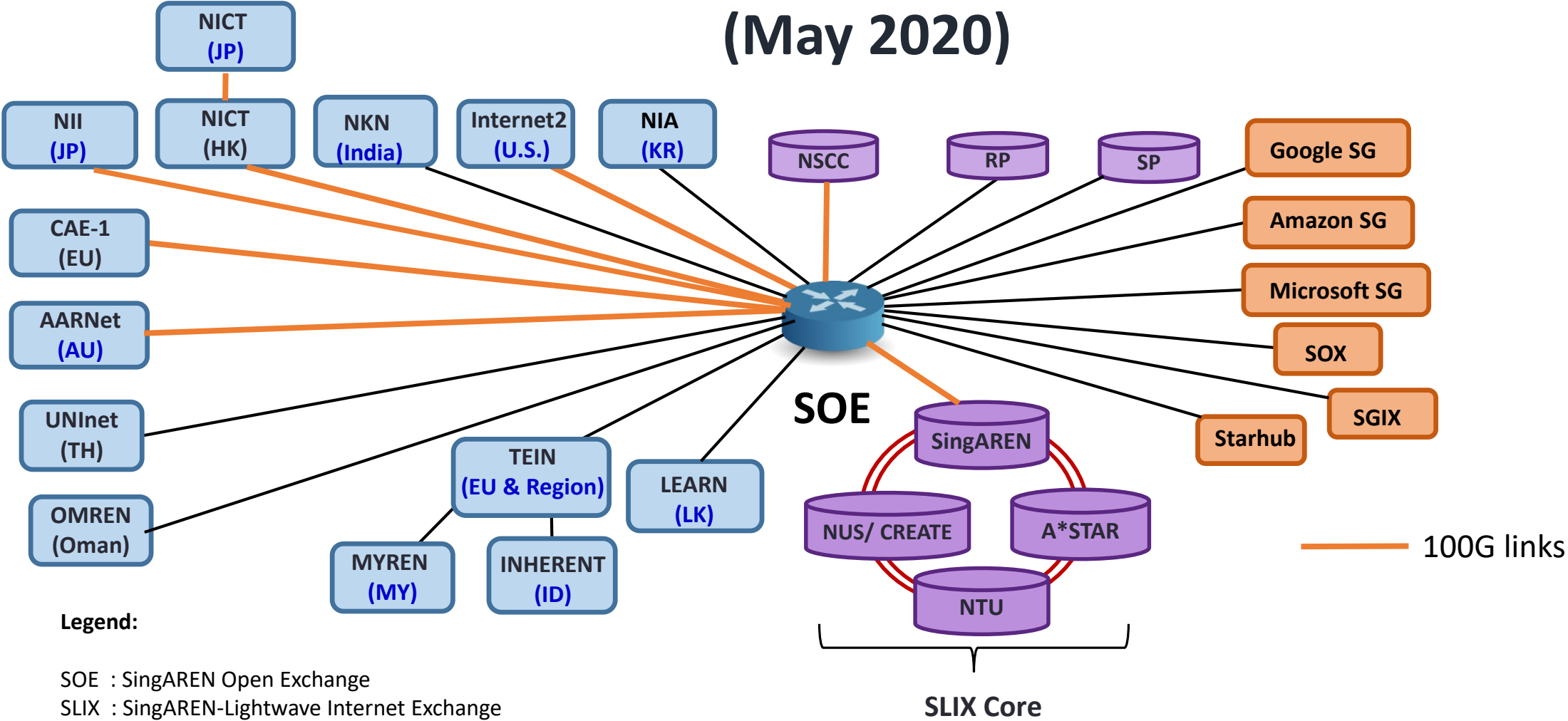
By

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SingAREN



SingAREN Network Infrastructure (May 2020)

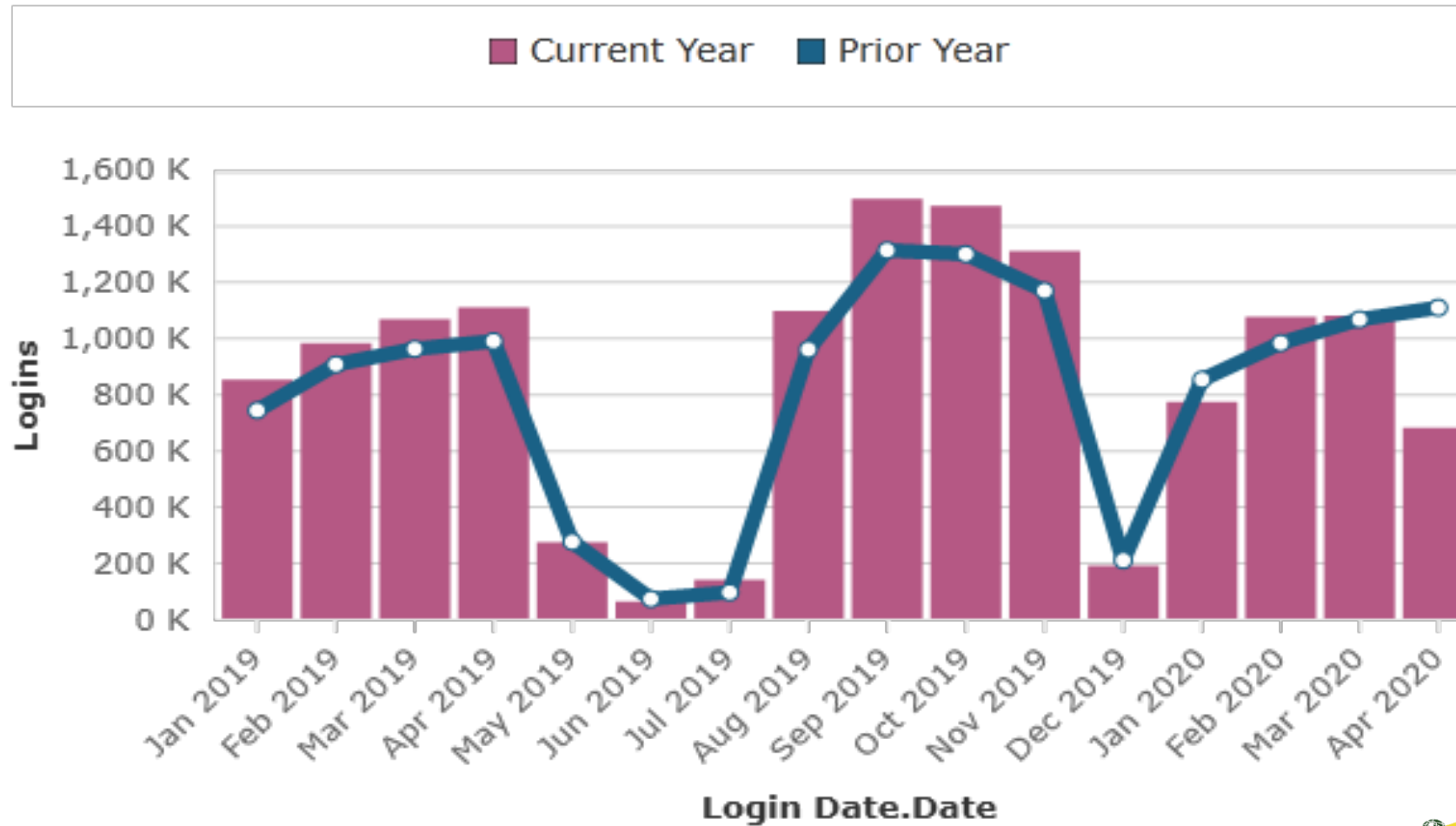


Impact of covid-19

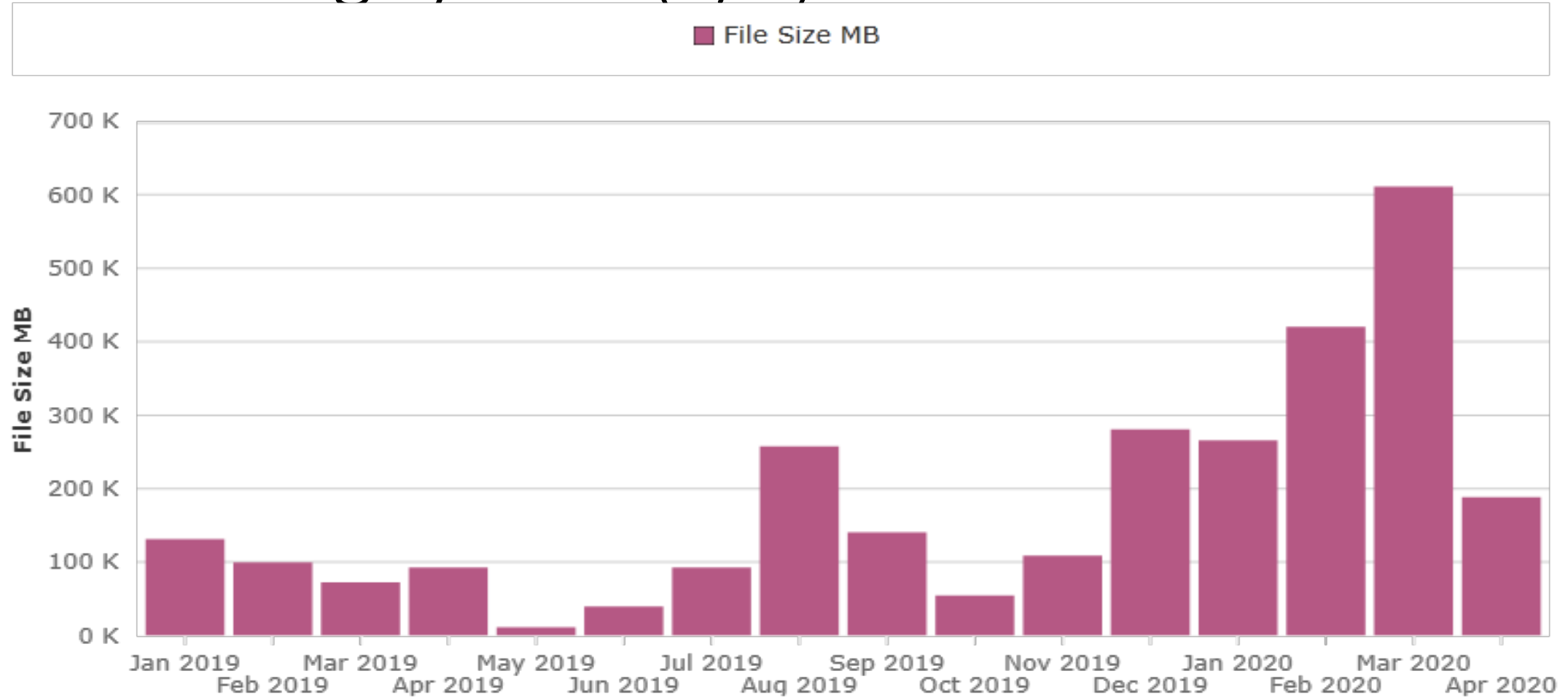
- Globally, almost all country is having a lockdown.
- University and research institute are like a ghost town.
- People start working from home
- Student do online learning
- Internet become a NEED not WANT



E-learning system (2/2)

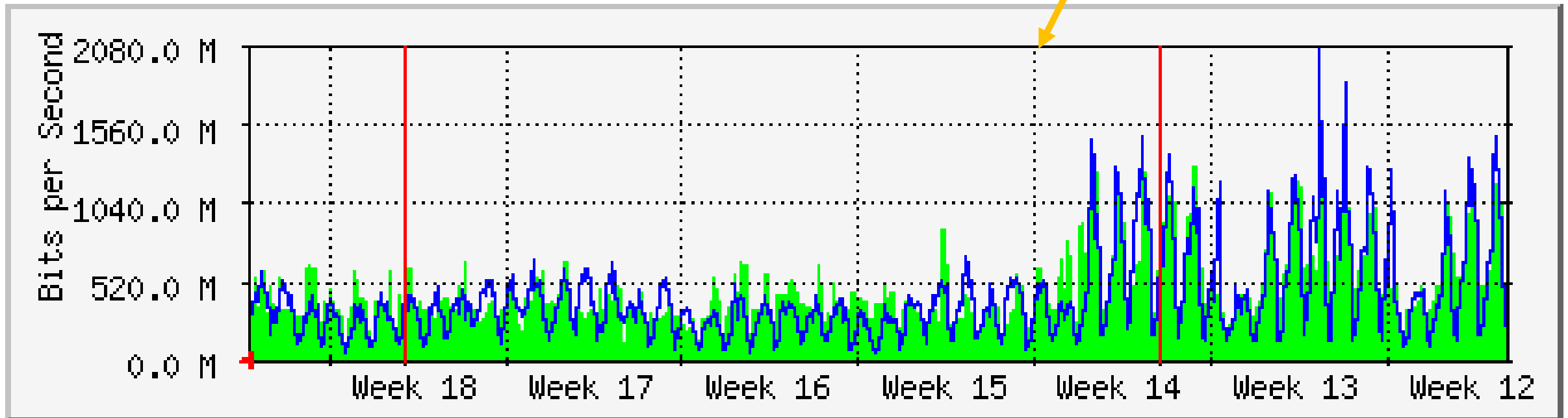


E-learning system (1/2)



University traffic

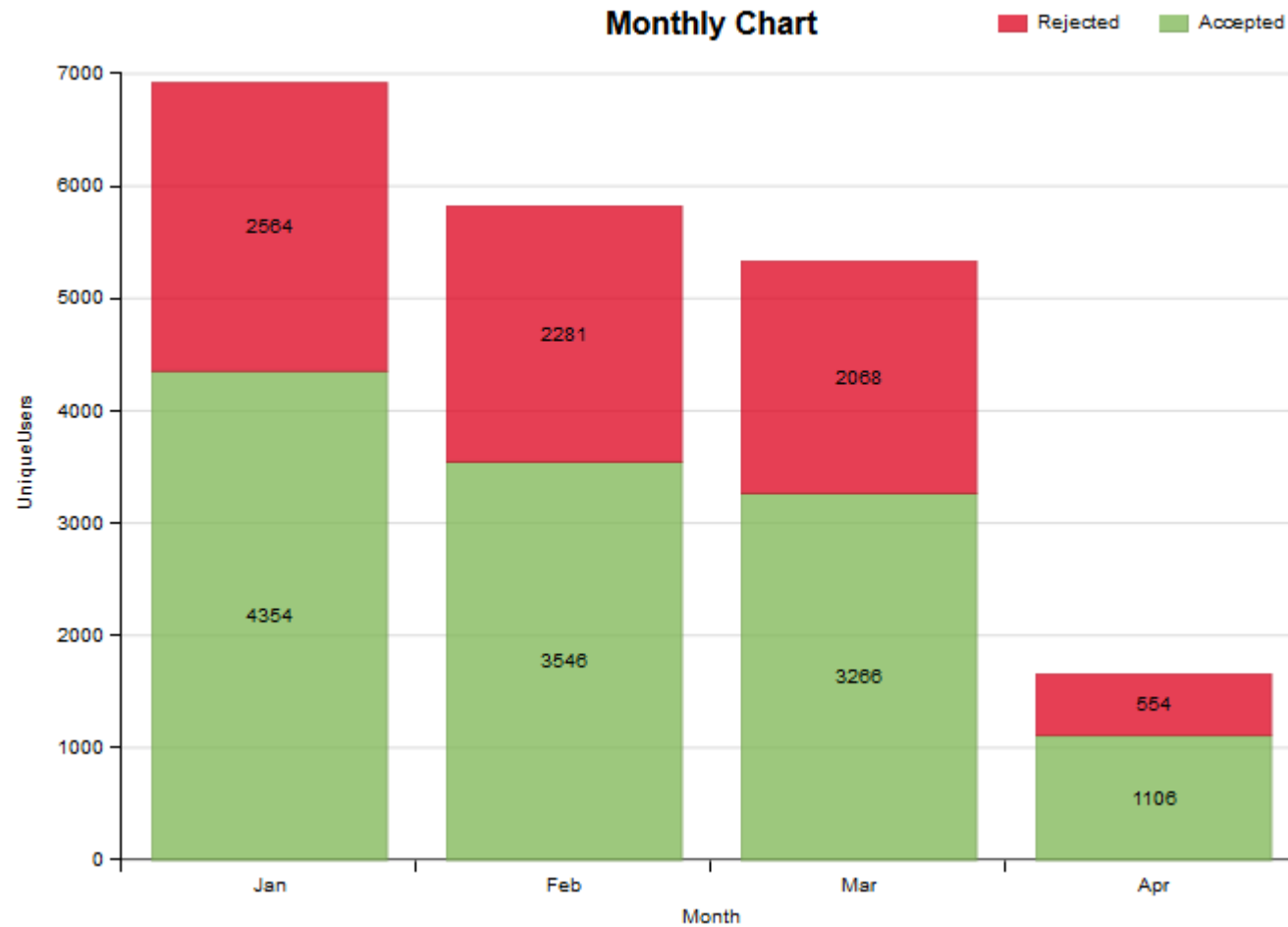
Circuit
breaker



NREN perspective

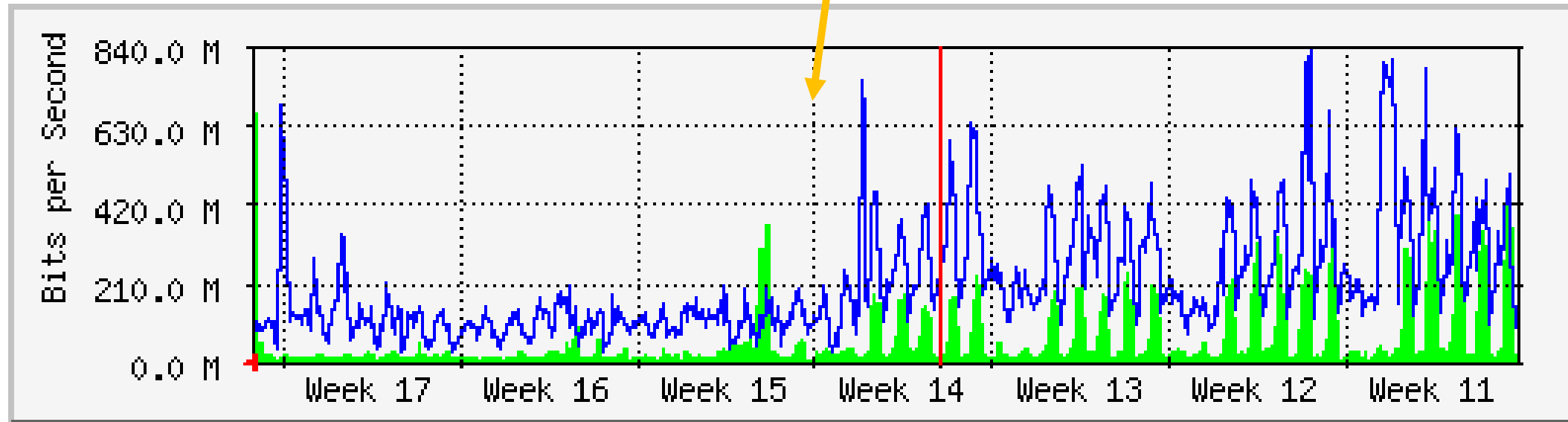


Eduroam traffic

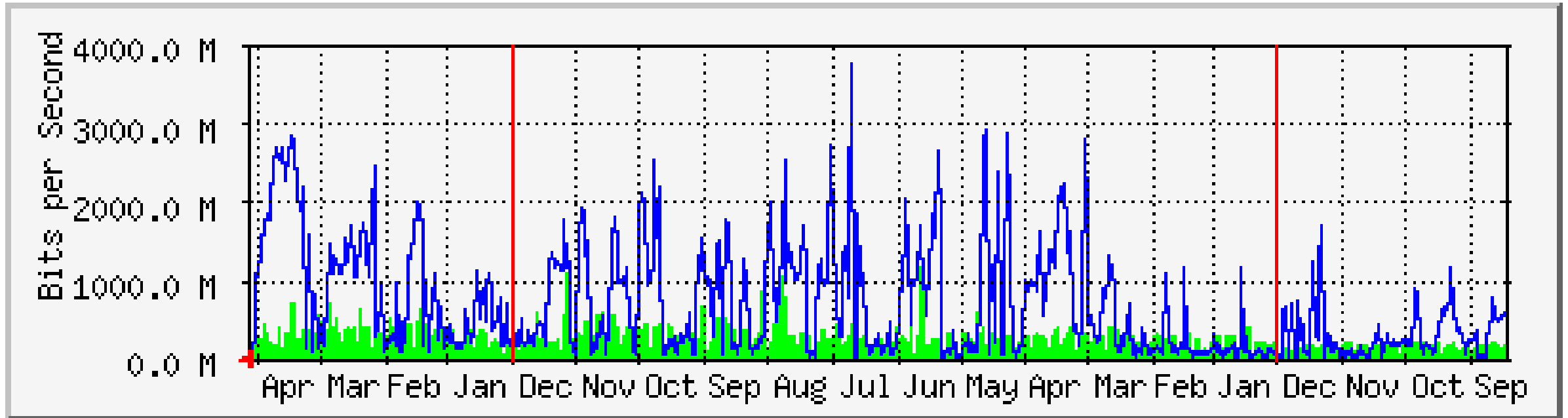


Google traffic

Circuit
breaker

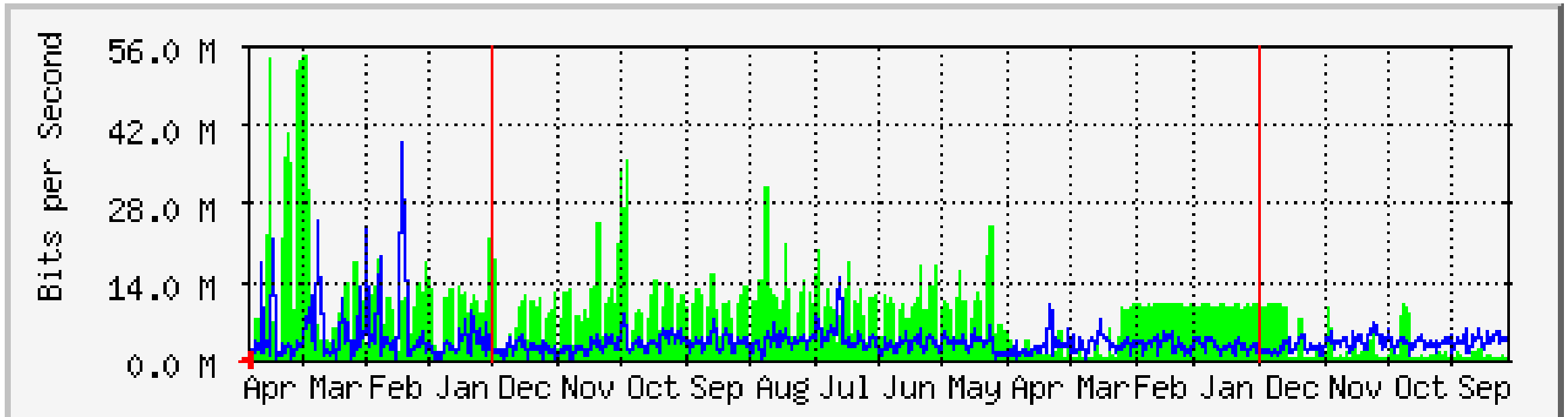


Amazon traffic

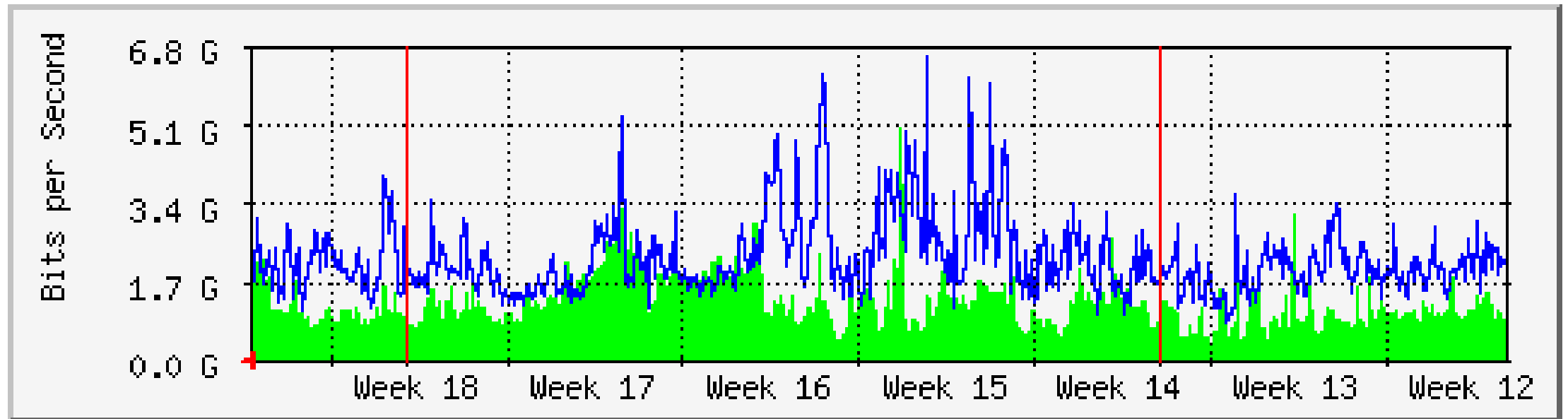


Internet access (SingAREN)

- Mainly used by National SuperComputing Center(Singapore)



Partner X traffic



THE NEW NORMAL



Characteristics

- Virtual Meeting will be prevalent
- E-Learning/Distance Learning
- Remote access to research resources
- Less people on campus ??



Lessons

- Research continues even in a pandemic
- How to do we facilitate that ?
 - Connect to commercial internet
 - Connect to national resources, eg. supercomputer center
 - Can we negotiate for commercial services linked to NREN ,eg. Zoom, Blackboard, etc...
 - How do we provide secure and easy access?
 - **How to secure your network?**



THANK YOU.
Stay safe

