



Canadian NREN Overview (CANARIE)

Thomas Tam | November 9, 2015 | SIG-NOC

Agenda

- > CANARIE
- > Network Infrastructure and Services
- > Engineering and Network Operation

A quick overview of CANARIE...

> CANARIE

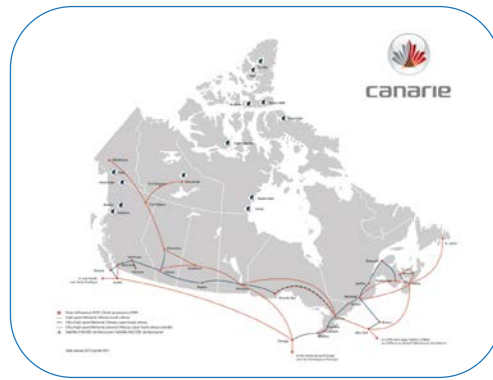
- A Canadian Government-supported non-profit corporation, founded in 1993.

> Mission

- CANARIE designs and delivers digital infrastructure, and drives its adoption for research, education and innovation.

> Objectives

- ***Network Operations*** – Operate the CANARIE Network as essential research infrastructure.
- ***Technology Innovation*** – Develop, demonstrate, and implement next-generation technologies.
- ***Private Sector Innovation*** – Advance innovation and commercialization of products and services to bolster Canada's technology innovation capabilities.



Network

CANARIE Key Activities



Identity Management



Research Software

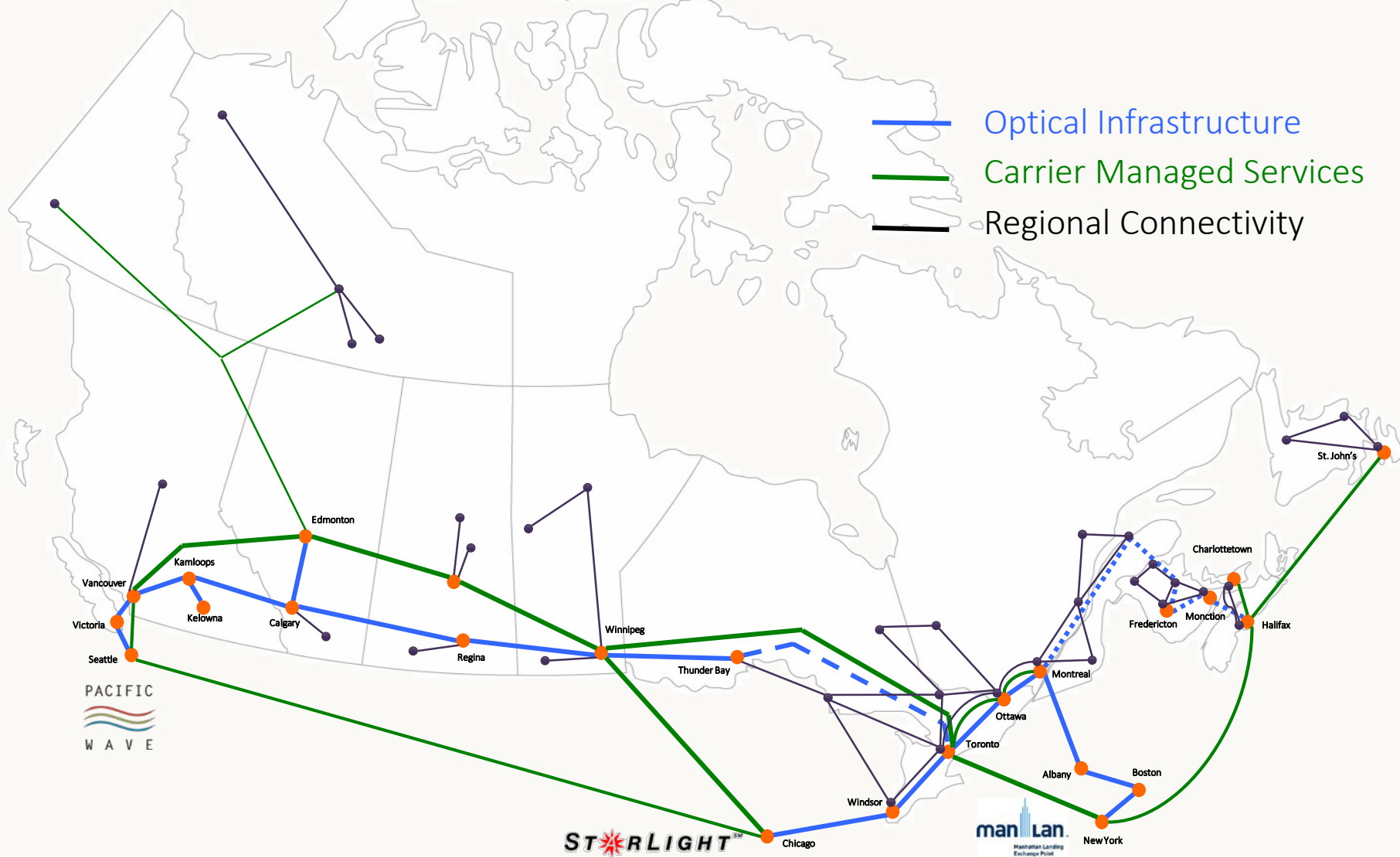


Cloud

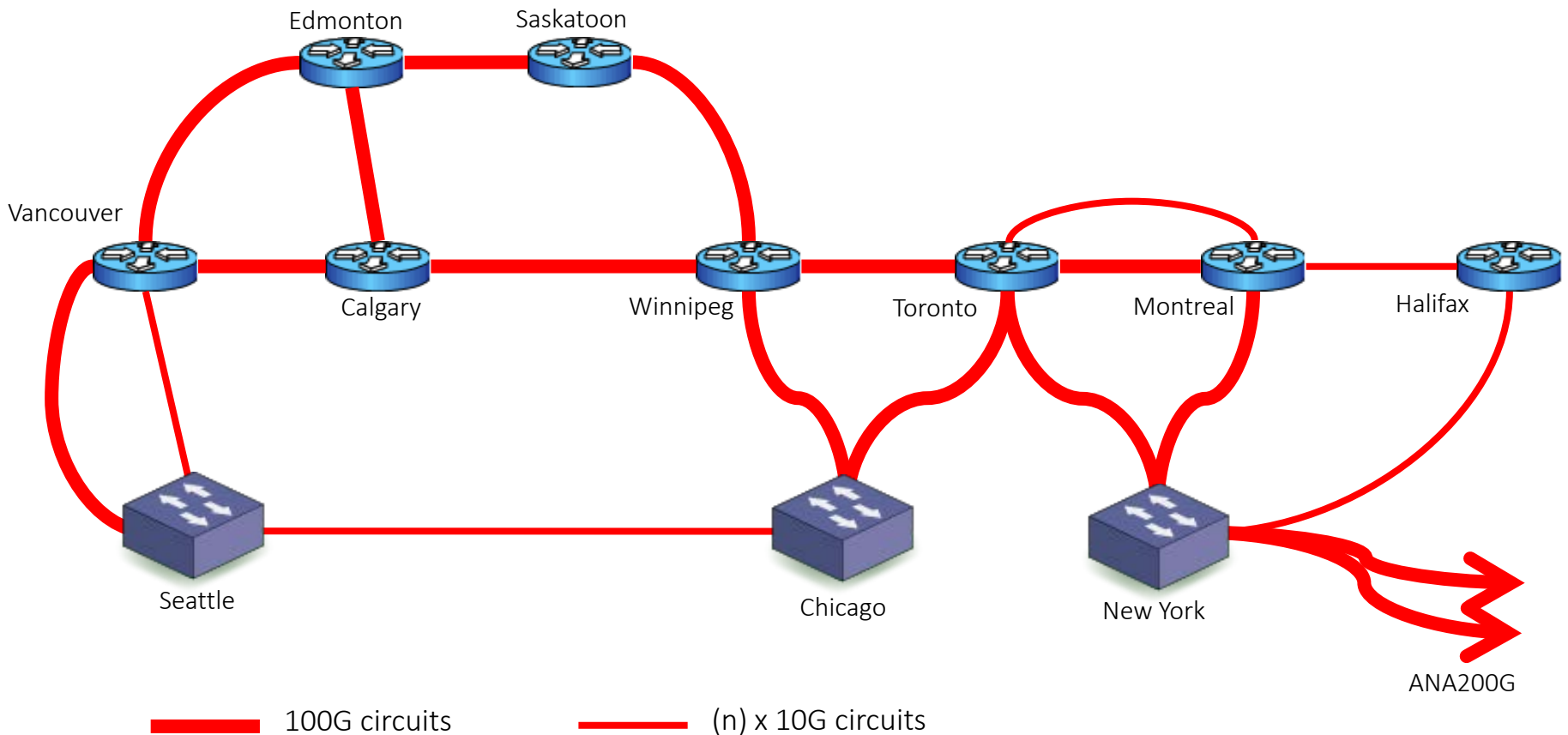
Network Infrastructure

Network Services

CANARIE Network Infrastructure



IP Core Infrastructure



ANA200G

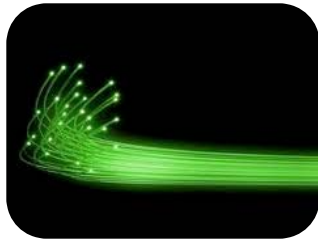


Network Services



CANARIE Research and Education (R&E) Internet Service

- General IP traffic
- Available to R&E community



CANARIE Connection Service (Lightpath Service)

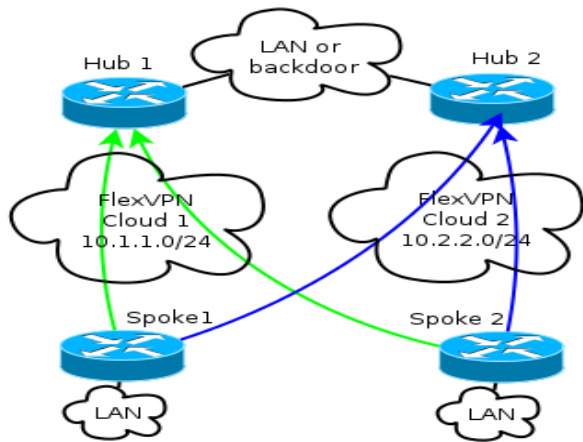
- Users require dedicated service
 - Capacity and/or privacy and Security
- High Performance Computing
- High Energy Physics



Content Delivery Service

- High-speed access to content providers – Google, Yahoo, Youtube
- Cloud computing providers – Amazon

Engineering & Network Operation



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Engineering

Network Operation

Engineering and Operation Team

> Staffs

- 5 engineers
- 1 software developers

> Responsibility

- Network Engineering
- Network Upgrade
- Network Operation Support
- Management tools maintenance
- Eduroam Service Support

NOC Service Support

> Network Management Tools

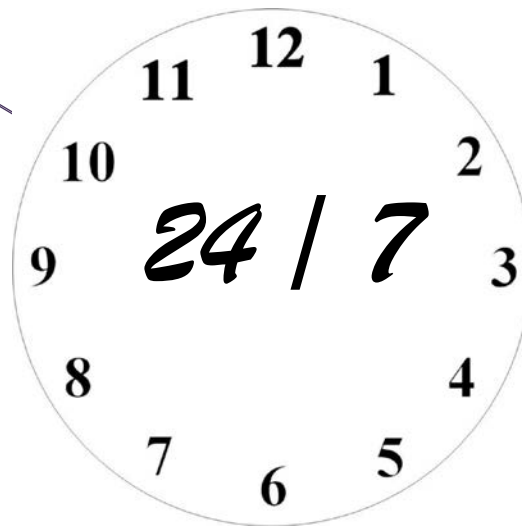
- Nagios
- Splunk
- Weathermaps, IPv4, IPv6, CDS
- Router Proxy
- MRTG, collecting links utilization
- RRDtool
- Flow Collection
- Traps Collector
- Vendors specific management tools
- Custom Scripts

> Network Operation Portal – in process

- NOC Personnel and users

NOC Operating Hours

Weekdays 8:00 am – 5:00pm Eastern Time



Weekdays 5:00pm – 8:00am Eastern Time
Weekends and Holidays



canarie

canarie.ca |
@canarie_inc