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Overview of Security Program

WISE@DI4R :: Tuesday 27 September 2016

Introduction

Compute Canada is a national not-for-profit organization supporting Advanced Research Computing and charged with advancing Canada's interests and contributions across Canada and around the world.

- Partnered with four regional consortia
- 35 members include 34 universities and one hospital
- 200 staff (sort of)
- www.computecanada.ca

Drew Leske is a software architect but used to be a systems administrator with a primary focus on research computing and an ongoing interest in security.

- Systems administrator at University of Victoria, 2003-2016
- WestGrid site lead, 2010-2016
- Regional representative on National Security Council, 2012, 2015-2016
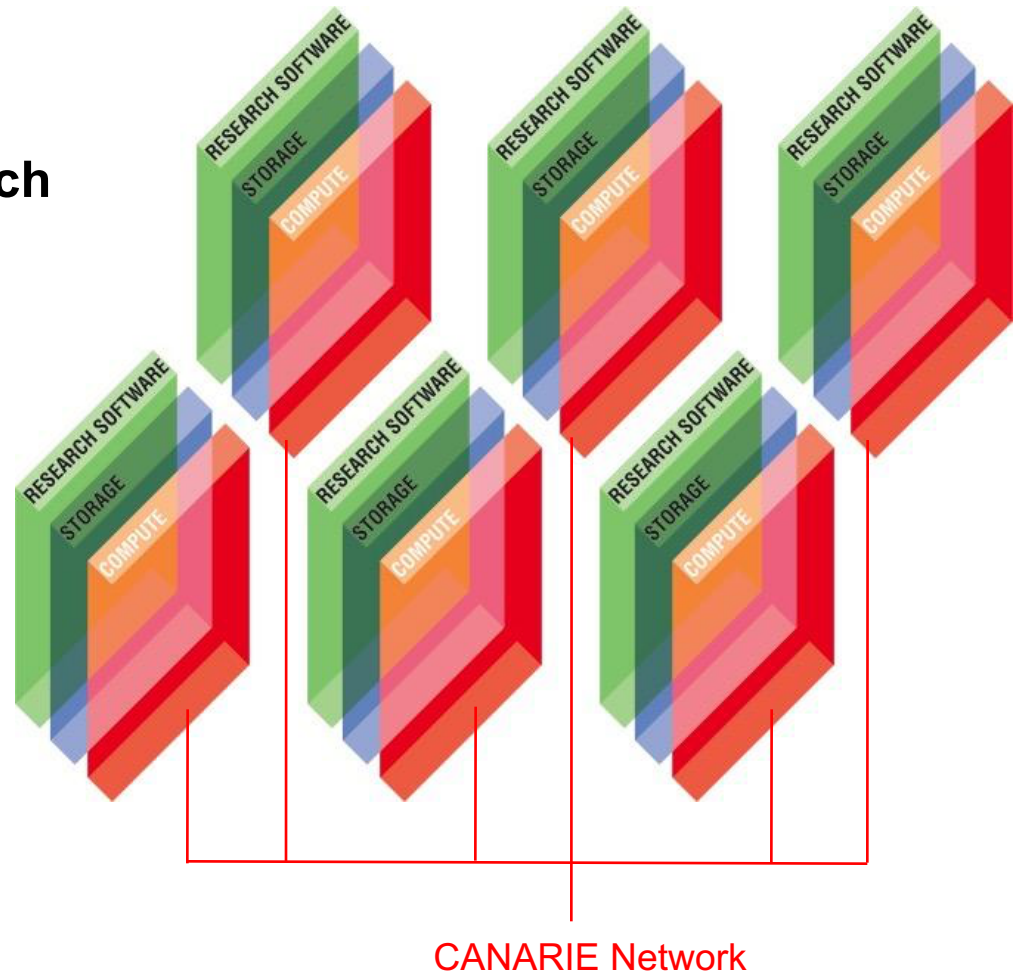- drew.leske@computecanada.ca
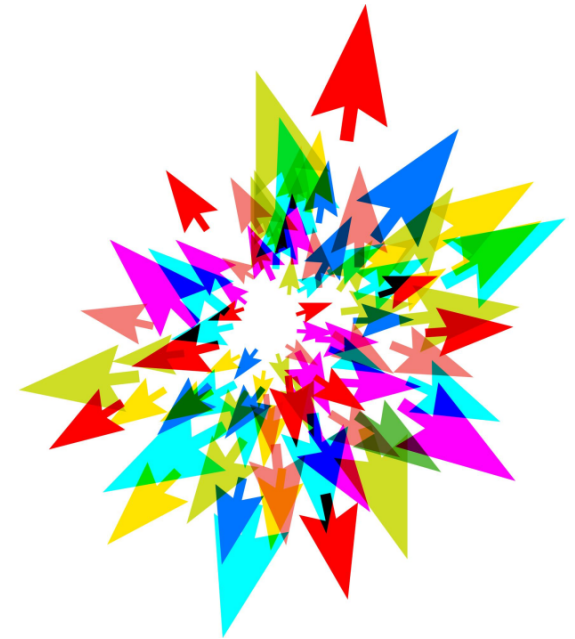
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Our Platform

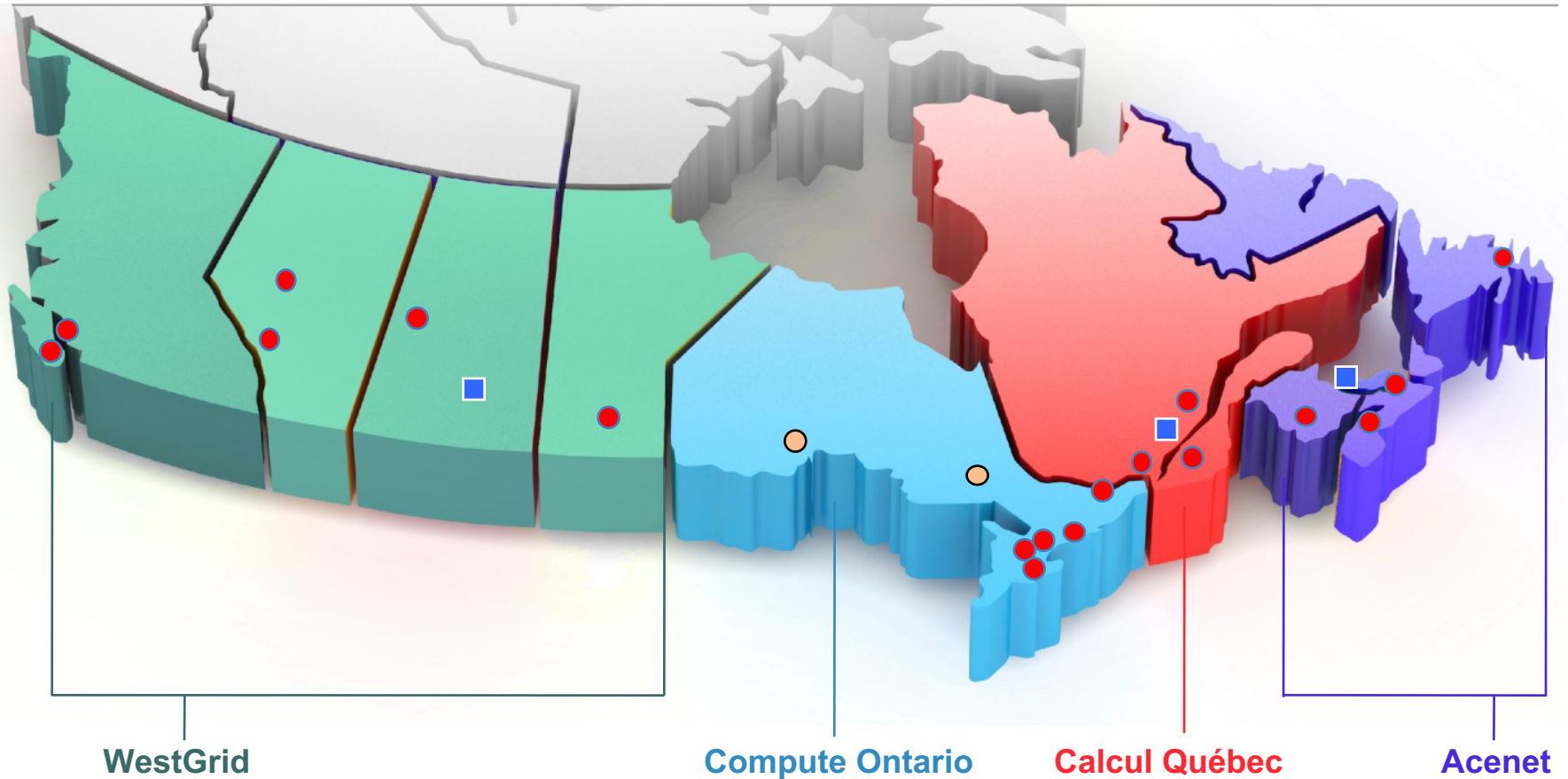**Canada's Advanced Research Computing Platform**

50 Supercomputers (for now)

27 Data Centres (for now)

200 Experts (for now)

Currently renewing the platform, consolidating data centres, expanding our base of expertise.

CANARIE Network

Regions and (Some) Institutions

WestGrid   **Compute Ontario**   **Calcul Québec**   **Acenet**

■ Member University
⬤ Member University + Personnel Site
⬤ Member University, Personnel + Infrastructure Site
Personnel + Infrastructure Site

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1st Gen Security: Institutions

- Systems administrators operating in local teams
- Maybe centralized, maybe not
- Maybe "professional" sysadmins, maybe not
- Following institutional best practices if they exist
- Multiple levels?
  - Campus and physical
  - Infrastructure & central IT
  - Research systems

  How well do these levels interact?
- Information sharing between institutions
  - BCNet, for example
  - How engaged are the front-line troops?
- Research computing: core university concern?

2nd Gen Security: Regions

- Consortia based on research computing where ARC is the core
  - Affinity of platform
  - Affinity of purpose
- More sharing:
  - Experience & wisdom
  - Scriptage
  - Infrastructure
  - Current information
  - Alerts
- Total site independence, but significant peer support.

3rd Gen Security: Interregional

- Technically national, but not centralized
- Again, based on research computing where ARC is the core
  - Affinity of platform
  - Affinity of purpose
- Again, sharing, but limited:
  - Experience & wisdom
  - ~~Scriptage~~
  - ~~Infrastructure~~
  - Current information
  - Alerts
- Total site independence, some peer support, less familiarity and very varied experiences
- Mostly: security mailing list, occasional face-to-face meetings which would be sort of a loosely directed free-for-all

Enter Compute Canada

- National coordinating entity
- Based on research computing where ARC is the core
  - Affinity of platform
  - Affinity of purpose
- Sharing, unlimited:
  - Experience & wisdom
  - Scriptage
  - Infrastructure
  - Current information
  - Alerts
- *Legacy* sites still independent
- Formalizing cooperation, accelerating collaboration, centralizing coordination
  - National functional teams
  - National sites and national site teams

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National Security Council and the Compute Canada Security Program

- Director of Information Security appointed 2015
- National Security Council formed, 2015
- Accomplishments to date:
  - Charter
  - Policies
    - Privacy Policy
    - Acceptable Use Policy
    - Password Policy
  - Approval from CFI on Security Program, its goals, accomplishments
- Governance model:
  - National Security Council: Policy, high-level procedures
  - Security Working Group: Policy applied to current security context; technical procedures
  - Security Notification Centre: Boots on the ground, word on the street

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NSC: Current Efforts

- Continue implementation of the governance model
  - Institutional buy-in of the Security Program and the "Process for cooperation with institutions"
  - Development of Security Working Group and SSNC
- Asset inventory
- Risk analysis and management
- HR norms
- Incident response strategy and reporting procedure
- Security portal
- Continue working on issues of privacy and confidentiality

Thank you & how to contact

Thank you to **Alessandra Scicchitano** and **David Kelsey** for this workshop and inviting me to speak, and to **Magda Haver** for helping with logistics, and of course to **all of you** for listening!
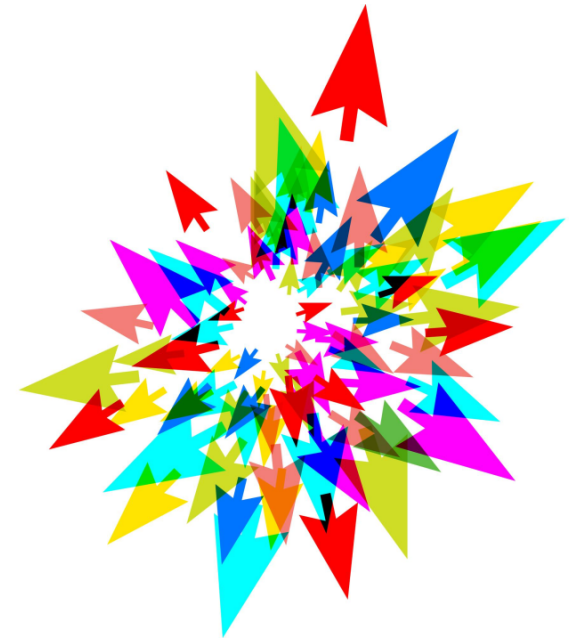
I invite anybody to contact me for any questions about Compute Canada, and I will do my best to answer them, or refer you to the best person.

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For more detail on our security program and initiatives, I invite you to contact our **Director of Information Security** directly.
Jonathan Ferland: jonathan.ferland@computecanada.ca

Our website: www.computecanada.ca

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