



Intro To WestGrid

WestGrid Seminar Series

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Access Grid / Webcast

<http://www.westgrid.ca>

Seminar Overview

- Webcast viewers
 - Webcast link: <http://www.westgrid.ca/live>
 - Presentation server: vnc.cybera.ca
 - Questions: questions@westgrid.ca
- Local questions
- Site Introductions

Today's Seminar

- WestGrid today
- WestGrid tomorrow
- Compute Canada update
- Questions/discussion

About WestGrid

- Operates HPC, collaboration and visualization infrastructure across western Canada.
- Spans 14 institutions across 4 provinces.
- One of 7 HPC consortia in Canada – part of Compute/Calcul Canada.

What does WestGrid provide?

- High performance computers (HPC)
- Mass storage (disk and tape)
- Visualization resources
- High capacity networking
- Software
- Collaboration facilities
- Support personnel

WestGrid the Virtual Organization

- Member Council – appoints the Executive
- Executive Committee, Non–majors committee
- Planning committees: SPC, UNC, TPC, Networking Committee, Collab/Vis
- Staff
- Day to day operations: Siteleads, support team, AGTechs
- Other operations: website, training...

Three distinct uses

- High performance computing
- Collaboration Facilities
 - Currently: SFU, UBC, UofC, UofA, USask, UofM, UofL,
 - Future: UVic, UBC–O, UNBC, Banff Centre, Athabasca, UofR, Brandon, UofW
 - Seminar Nov. 19
- Tools and support for scientific visualization
 - Central visualization server
 - Local resources
 - Seminar Nov. 5

Access to WestGrid

- Who can use WestGrid resources?
 - Canadian researchers

http://www.westgrid.ca/support/accounts/conditions_of_use
- How much does it cost to use WestGrid?
 - Access to compute resources is free
 - Collaboration facilities – site by site basis
- How do I access WestGrid resources?
 - Compute resources – apply for an account
 - Collaboration facilities – email local site or WestGrid Collaboration Specialist (todd.zimmerman@ubc.ca)

Applying for an Account

- Two ways to get an account on WestGrid
 1. Lead Researcher
 - Apply for an account for your ‘project’
 2. Join an existing project
 - PDFs, grad students, research assistants
 - Need to provide a project ID

http://www.westgrid.ca/support/accounts/applying_for_an_account

WestGrid Support

- Website: www.westgrid.ca
- Support team: support@westgrid.ca
- Seminars: Introduction to HPC – Oct. 8
- Suggestions? Email us: info@westgrid.ca

WestGrid's current resources

- Cluster
 - Glacier (UBC), Robson (SFU), Snowpatch (SFU)*
- Shared memory
 - Nexus & Cortex (UofA)
- Clusters with high speed interconnect
 - Lattice & Matrix (UofC), Tantalus (SFU), Terminus (UofC)*
- Visualization
 - Hydra (SFU)
- Storage facility
 - Gridstore & Blackhole (SFU)

Resource Allocation Committee (RAC)

- For users who require more than the “default” allocation.
- Must submit a short proposal in the fall.
- Proposals are evaluated based on scientific merit, need and available resources.
- Committee – researchers across western Canada.

<https://westgrid.ca/support/accounts/rac>

<http://westgrid.ca/support/accounts/rac/application>

RAC Proposals

- Must be completed by Principal Investigator
- Project details:
 - Title, PI(s), brief CV for each PI
- Research proposal:
 - short description of research and scientific merit with references if available
- Technical issues
 - Amount of compute requirement, on which system, justification
 - How requirements will vary throughout the year (if applicable)

WestGrid tomorrow...

- Various committees working on plans over the past year.
- Surveyed researchers.
- Renovations at all major sites are either done, in-process, or in the planning stages.

Request for Proposals

- University of Saskatchewan
 - Large storage facility. RFP released in June.
 - This will be the first WestGrid system to come online (from second round of funding).
- 4 RFPs currently out:
 - UofA, UBC, SFU and UVic
 - Deadlines at the end of September.

WestGrid Purchase Plan (Year 1)

Immediately	Storage	USask SFU
	Capacity Systems	UofA UBC SFU
	Capability System	UVic
Early 2009	Capability System Storage	UofC UVic

WestGrid Purchase Plan (Year 2)

Storage	USask SFU UVic
Capacity Systems	UVic Alberta (UofL)
Capability Systems	UofM UofC

WestGrid Purchase Plan (Year 3)

Storage	USask SFU UVic
Capacity Systems	UBC UVic SFU UofA
Capability Systems	UofM UofC
New Architecture (TBC)	UofC

Collaboration & Visualization

- Collaboration rooms will be upgraded or installed throughout the fall 2008.
- Visualization infrastructure will be purchased in the fall of 2008 or early 2009.

Software Policy

- Increasing the amount we are spending on software from the first round of funding.
- Creating/maintain a program library.
- Provide support for existing application software.
- Support new software acquisition.

New Software

- Proposals will need to provide clear justification.
- Significant number of researchers should require the software, and be distributed across WestGrid sites.
- Draft Evaluation factors:
 - Demand and usage
 - Cost
 - Worthiness
 - Not rigid criteria.
- Each proposal is considered on a case-by-case basis.
- Shared-cost agreements will be considered on a case-by-case basis.

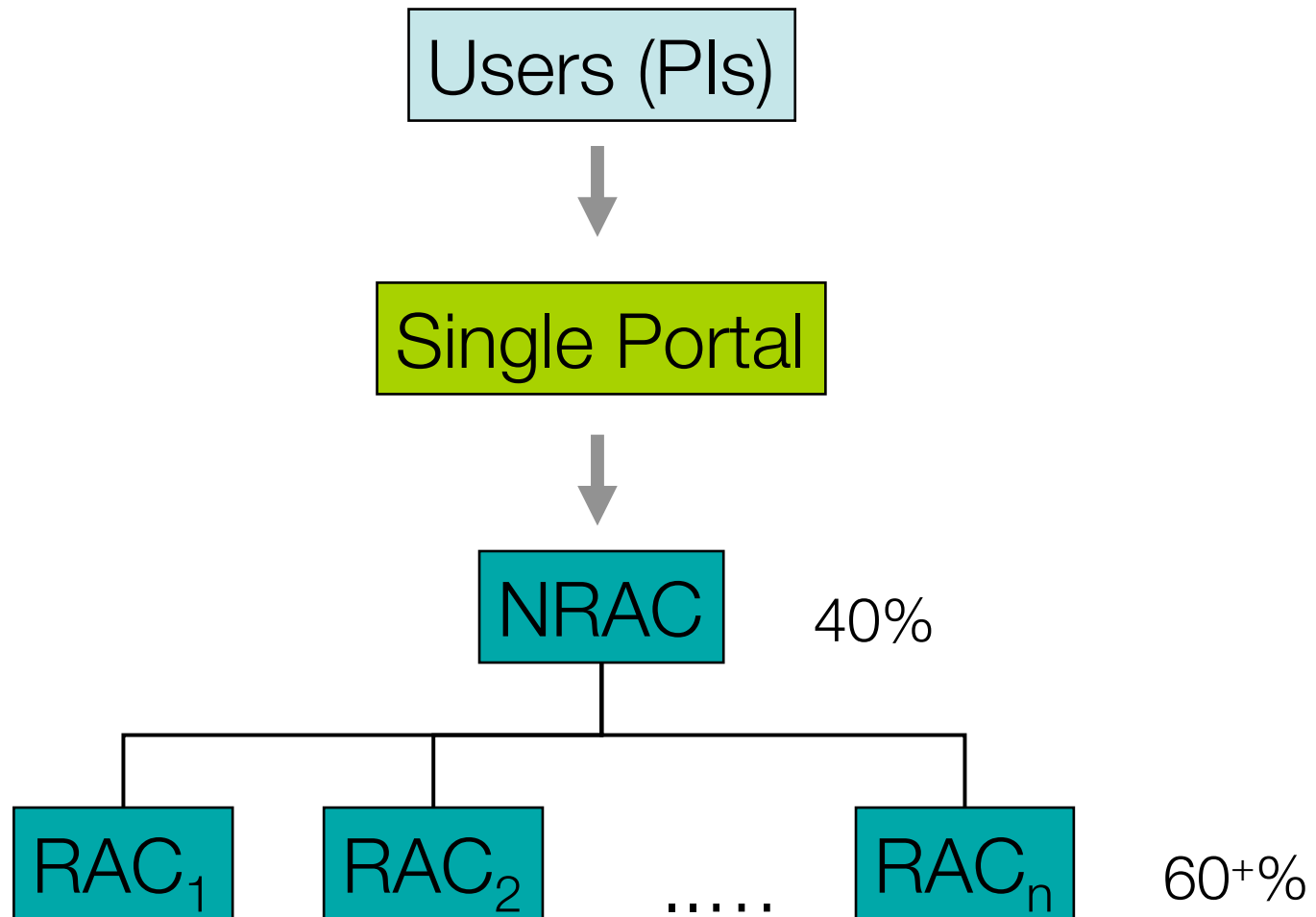
Compute Canada Update

- National Administrative Committee (NAC) created (fall 2007).
- Executive Director: Susan Baldwin
 - Started September 1
- WestGrid's 14 institutions joined 53 other institutions across Canada in signing IIA's which help form Compute Canada.
- Submission of Phase 1 budget to CFI
 - Includes USask storage and renovations at a number of WestGrid sites.
 - Expect money for Phase 1 to flow shortly.
- Working on Phase 2 budget.

TECC

- Technical representatives from across Canada
- Various working groups – a number of which are chaired by WestGrid representatives
- Annual Summit
 - Hosted by WestGrid in October
- Developed benchmarking suites, working on national user database...

National RAC



Architecture Map (Compute Canada)

Type of facility	Site	Year
FGP	UofT*	1
SMP/capability	UofA	2
	U de Montréal	3
Capability clusters <i>Distributed memory with high-performance interconnect</i>	Dalhousie	2
	UofC	1, 2, 3
	UofM	2 & 3
	UVic	1
	Laval	1
	McGill	1 & 3
	U de Sherbrooke	1
	UofT*	1 & 2
Capacity clusters <i>Distributed memory with lo-cost/standard interconnect</i>	SFU	1 & 3
	UBC	1 & 3
	UVic	2 & 3
	UofT*	1 & 2
	UofA	1 & 3
	Alberta (UofL - TBC)	2
	Concordia	1
New Architecture	Calgary (TBC)	3
	SHARCNET	2
Major storage	USask	1, 2, 3
	SFU	1, 2, 3
	UVic	1, 2, 3
	UofT	1, 2, 3
	McGill	1, 2, 3

Questions / Discussion / Comments

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