SciNet HPC and Computational Resources in Canada

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https://www.scinethpc.ca



What is SciNet?

- The SciNet High Performance Computing Consortium is the supercomputing centre at the University of Toronto in Canada.
- We host and run massively parallel computers to meet the needs of academic researchers across Canada.





- We support users of national systems.
- We also do a lot of training.

nttps://education.scinet.utoronto.ca



Research Topics

- Astronomy
- Astrophysics
- Material Science
- Particle Physics
- Chemical Physics
- Computational Chemistry
- Bioinformatics
- Medical Science
- Biochemistry
- Forestry
- Climate Science







Training Topics

- Scientific computing
- High-performance computing
- Data science and statistics
- Machine learning and artificial intelligence
- Research data management
- Cybersecurity





SciNet within the Canadian ARC Landscape



Arbutus (2016)

- Cloud system
- 7,640 cores

Cedar (2017)

- General Purpose
- 58,416 CPU cores
- 584 GPU devices

Graham (2017)

- General Purpose
- 33,448 CPU cores
- 320 GPU devices

Béluga (2019)

- General Purpose
- 34,880 CPU cores
- 688 GPU devices

Narval (2021)

- General Purpose
- 80,912 CPU cores
- 192 GPU devices

Mist (2020)

- 1,728 IBM CPU cores
- 108 GPU devices

Niagara (2018)

- Large parallel jobs.
- 80,960 CPU cores
- High-speed network

