Cancer Computer

Computing for the Cure

A social enterprise dedicated to accelerating cancer research with high performance computing
“The front line in the global war on cancer is being fought and will be won inside a computer.”

David Agus, Professor of Medicine and Engineering at the University of Southern California
“The cure for cancer will be found in the mountains....mountains of big data.”

Eric Schadt, Chair, Department of Genetics and Genomic Sciences at Mount Sinai School of Medicine
“As a biologist and as a supercomputing expert, I salute the work of Cancer Computer and look forward to the results of their work.”

Craig Stewart, Associate Dean, Research Technologies, Indiana University, Executive Director, Pervasive Technology Institute

http://www.cancercomputer.com
Info, email: hope@cancercomputer.com. ©2018 Cancer Computer
Computing for the Cure

• Cancer Computer is a social enterprise.

• We lever charitable goodwill of individuals, corporations, foundations, and volunteers, to provide much needed computing resources, to aid cancer research.
Canadian Registered Charity

• We help cancer researchers who may have limited
  • Funding
  • HPC resources
  • HPC expertise
  • are waiting on institutional resources to become available
  • have no other alternative

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Idea to Processing in 4 Years

- Non-profit corp established in May 2015
- Charitable registration with Canada Revenue Agency, March 2017
- 10 volunteers
- 2 industry advisors
Installed Infrastructure

• Approx. 660 servers comprising 12,000 x86 cores in

• 10 collocation facilities currently, 12 by end of 2019

• 3 in U.S. Universities: U of Illinois, Indiana U, and U of Utah

• 2 in Canadian Universities: Queens and McGill
Current Research Supported

• Direct support of campus projects on collocated sites: For example, at U of Illinois, supporting the Urbana Cancer Center, Carle Hospital, etc.

• 11 Projects on the Open Science Grid (OSG)

• 8 Projects on XSEDE

• 4 Projects on BOINC (opportunistic)
A Social Enterprise:
Volunteered Time and Run on Donated Hardware
Cancer Computer Operational Clusters – Summer 2019

Supporting projects the following Research institutes:

Collocated
University of Illinois
McGill University
Queens University
Lady Davis Institute for Medical Research
Indiana University Medical School
University of Utah Health (HCI)

Supported
Harvard University Medical School
Princess Margaret Cancer Centre
University of Illinois at Urbana-Champaign
University of Washington
Clemson University
University of Nebraska Medical School
University of California at San Francisco
Sage-Ken Medical Centre Koseikan

Supported projects via:
Open Science Grid (OSG)
Extreme Science and Engineering Discovery Environment (XSEDE)
Looking Forward

• Expanding our service provider status with XSEDE

• Scaling-up our ‘compute cloud’ for graphical instances

• Expanding into Europe in 2020, and Asia in 2021
How You Can Help – In-Kind Donations

• Donation of evergreened hardware

• Donation of collocation services / rackspace

• Donation of cloud credits to private or public

• Discounts on hardware and services
Corp. & Employee-Matched Donations

• One-time and scheduled corporate donations

• Employer-matched donations by employees on Benevity

• Individual donations

• Donations to name servers in memory of a soul lost to cancer
Support Us

Working together, you can be our partners supporting our social enterprise to cure this dread disease
Cancer Computer: Thank You

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