How Scientific Programmers at NeSI are growing researcher capability
Delivering value through eScience services

The Power Behind Researchers

Growing the computing capability of New Zealand researchers to ensure our future prosperity

- High Performance Computing – computation and analytics
- Consultancy
- Training
- Data transfer
Computing capability for future prosperity

- ENERGY
- HIGH VALUE MANUFACTURING
- WEATHER & CLIMATE
- PRIMARY INDUSTRIES
- HUMAN HEALTH
- BIO SECURITY
- NATURAL HAZARDS

NATIONAL SCIENCE CHALLENGES
CENTRES OF RESEARCH EXCELLENCE (CoREs)
ONGOING RESEARCH
HPC utilisation by discipline

Earth Science (corrected)
Chemistry
Physics
Engineering
Biology
Computer Science
Mathematics
Astronomy
Medical Science
Social Science
Unclassified

Core hours
Growing the computing capability of NZ researchers
NeSI’s Scientific Programmers

+ Data Science Specialist

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+ Data Science Specialist
Delivering value through eScience services

- High Performance Computing – computation and analytics
- Consultancy
- Training
- Data sharing and transfer
Need to run better/faster on NeSI platforms?
Are you currently developing custom software for your research needs?
Do you think you could be using NeSI more efficiently or the code you are using could be running faster?
Could you benefit from custom visualisation for extra impact in your research outputs?

Consultancy
Consultancy Service

- A service offered to NeSI platform users, generally at no cost to the researcher
- Research group granted access to one or more of NeSI's Scientific Programmers
- Projects offered ~90h over 3 months
- Goal is raise the capability of the research group so emphasis is on transferring skills

Challenge – identifying projects which would benefit from a Consultancy Project
“Without NeSI’s supercomputer, we cannot run the software with a sufficient resolution for the research problem.”
- Yoshi Kaneko, Seismologist, GNS Science

Understanding earthquake processes and aftermath effects...
Priorities for conservation of NZ’s ecosystem

“Through this project, we’ve begun to see the benefits of using the NeSI platform for other projects we would like to get underway in the future.”
- David Burlace, Technical Advisor at the Department of Conservation
Water conservation applies to weather models too.

“NeSI provided a robust solution that runs faster than expected and is easy to use.”

- Celine Cattoen-Gilbert, NIWA
Training

https://www.nesi.org.nz/services/training/overview/training-strategy
Enabling researchers to do better research...

by supporting communities: digital skills and capability building

Plant and Food: Software Carpentry

NeSI at University of Otago Day

Scion: Software Carpentry

CRI Coding Conference 2016

Winter bootcamp: University of Auckland Software Carpentry workshop
SAVE THE DATE

eResearch NZ 2019
18 - 20 February // Heritage Hotel Auckland, New Zealand