Apps Support Team

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New Zealand eScience Infrastructure

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NeSI Application Support Team

6:00   wake up

Plan for today

- Access and allocations

- General HPC user support (Slurm, GPFS, Linux, etc)

- Software build, install, testing, tuning/benchmarking, documenting

- Various expertise in scientific domains

- training
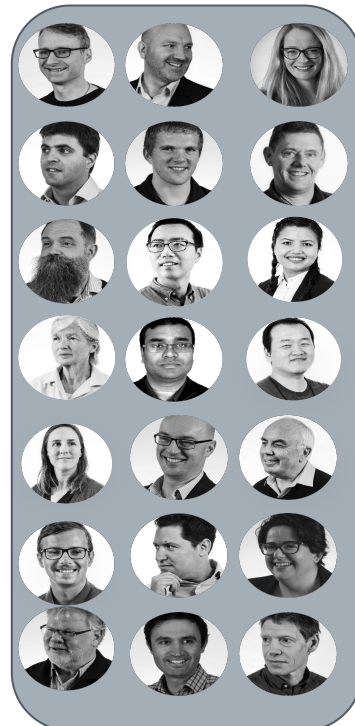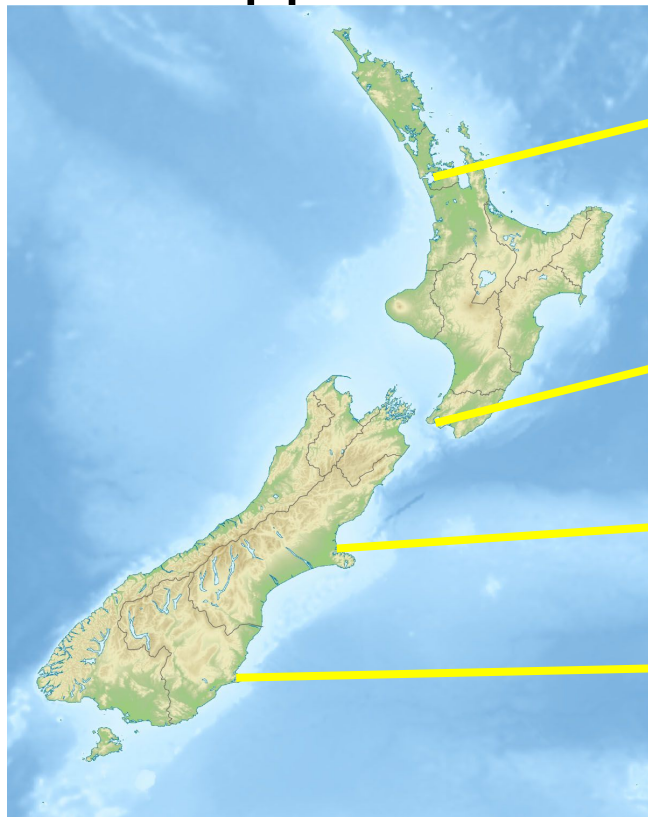
**enable researchers
research outcomes**

8:00 - 9:30 trouble submission tickets

https://**support.nesi.org.nz**/hc/en-gb/requests/new

599	531	239	3,626	99%	49.19 hrs
New Tickets (total)	Solved Tickets (total)	Backlog (current)	Agent Touches (total)	Satisfaction Rating (average)	First Reply Time (average)

Compare key metrics for your Zendesk

18 Jan

New Tickets: 41
Solved Tickets: 28
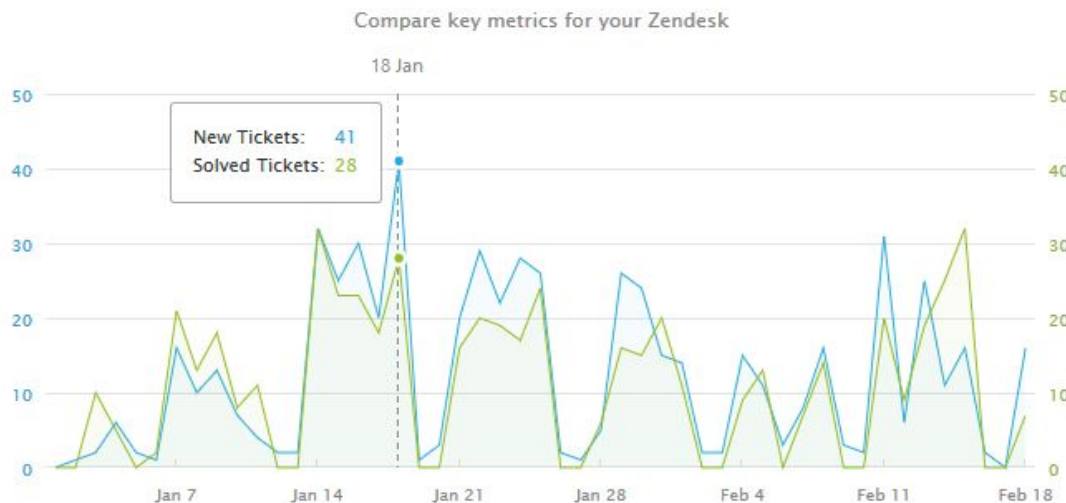
7 weeks of 2019

9:00 - 9:30   trouble submission tickets

"And when I move all the program to the Mahuika and I tried to run the program again, there is an error for the make error."
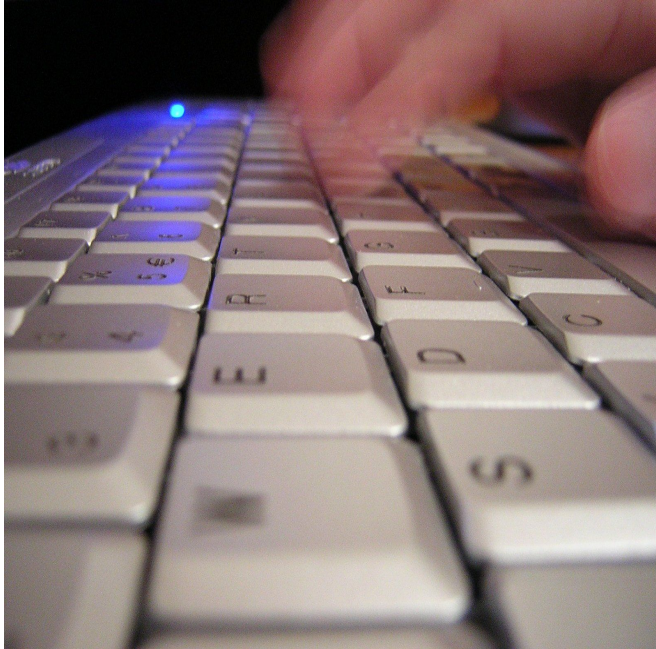
```
make[2]: *** [a.out] Error 1
make[1]: *** [CMakeFiles/a.out.dir/all] Error 2
make: *** [all] Error 2
```

good ticket description includes:

- machine name
- project ID / username
- tried commands and output
- full error messages
- links to files

9:30 - 10:45   ticket follow up

- provision account / projects / allocations / disc space / software / …
- debug
- trigger internal processes
  - work with other teams

10:45 - 11:00 morning tea meeting

Team communication

- distributing / sharing work
- prioritizing
- discussing new projects
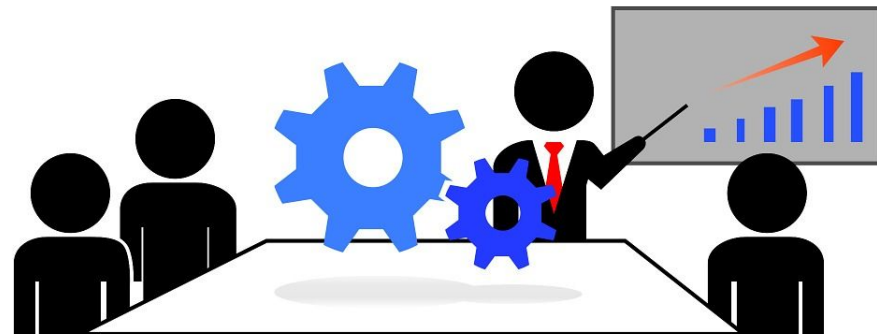- enhancing an agile workflow

11:00 - 12:00 documentation / training

Documentation

- continuous integration methods
- NeSI and HPC intro up to installing and detailed application description
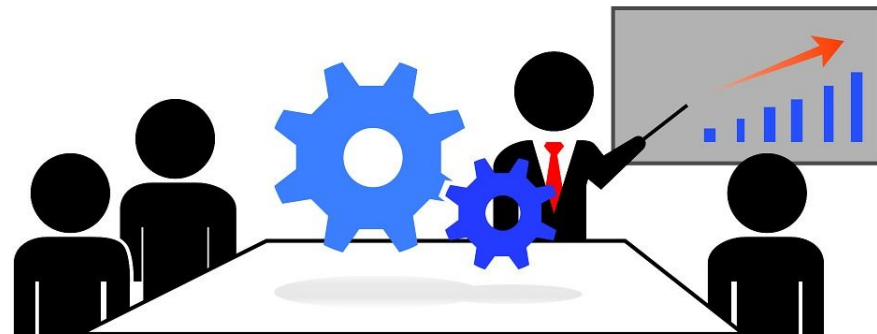
support.nesi.org.nz

12:00 - 13:00 documentation / training

Training

- frequent NeSI introduction
- advanced HPC training (BYOC)
  - profiling
  - optimization / parallelization
  https://github.com/nesi/perf-training
- contributing to Carpentries
  - software and data carpentries

13:00 - 13:30 lunch

ReFrame

- regression test suite
- basic functionality
  - compiler, libraries, scheduler, PrgEnv, IO, tools
- full applications
- monitors: sanity and performance

https://eth-cscs.github.io/reframe/
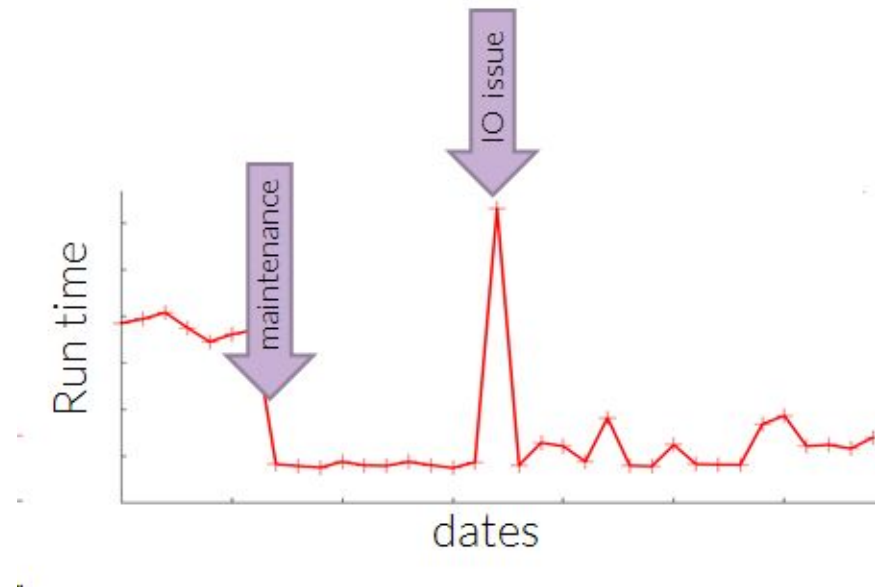
13:30 - 14:30 Application monitoring tools

XALT

- application and library usage monitoring
- statistics by calls, by core-hours or amount of users
- list of most used applications

http://xalt.readthedocs.io

14:30 - 15:30 software stack

Hierarchical SW stack
- 728 NeSI modules
- 308 different NeSI packages
- build with easybuild
- mainly gimkl toolchain

Tier system (in development)
Tier 1:
- wide user base
- globally installed, documented, scaling tests, regression tests, expert knowledge

Tier 2:
- limited user space
- installed, documented, (tested)

Tier 3:
- support for install at user level

15:30 -16:30   tuning and tweaking

- slurm
  - e.g. fair share, mem handling
- top level modules
- containers
  - looking into shifter and singularity
- visualization: ParaView, Nice DCV

The apps support team

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New Zealand eScience Infrastructure

Questions?
Comments?
Suggestions?