

TEAM QUOKKA

Our Team

Where We're From:

Murdoch University, Western Australia. Murdoch University, founded in 1973, boasts one of the strongest Information Technology courses in the state.

Our Name

Quokkas are very small (very cute) marsupials found only on islands off the coast of Western Australia.

Who We Are

We're all passionate Information Technology students interested in learning more about High-Performance Computing.



Our System

Homogenous and hybrid compute nodes.

Variants of Cray's "GreenBlades"

Two types of nodes:

- . Cray GB522X (CPU nodes) x7
- . Cray GB522X/GB522N expansion blade (GPU nodes) x2

Using the following CPUs & GPUs:

- . Intel E5-2695V3 x 14 (CPU nodes)
- . Intel E5-2698V3 x 4 (GPU nodes)
- . NVIDIA Tesla K40 x4

Each node has 128 GB of DDR4-2133 memory.

Nodes are connected to two switches, an Infiniband switch to handle communication and an Ethernet switch for management connections:

- . 36-port Mellanox FDR Infiniband switch
- . 48-port Brocade 6450 GbE switch

ALL nodes are housed in two Cray SR5110 chassis, each with three fan modules for cooling.

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Our Strategy/ Why We'll Win

Preparation:

.The team had remote access to Magnus; the most powerful supercomputer in the southern hemisphere provided by the Pawsey Supercomputing Centre.

.Weekly team meetings were held to discuss the high-performance computing concepts and to work on building and running the applications.

Our Machine:

. Multi-use machine; a cluster that can perform well with CPU and GPU nodes



PAWSEY
supercomputing centre



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