ACCESS Infrastructure

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Ambition

• All users (COE and CAWCR) have the same modelling environment
• Seamless across organisations
• Documentation and support
• Efficient workflows
• Reproducibility and traceability
• Testing and release management

• Capability to do the same wide range of experiments
  • NWP, seasonal, climate, ESM
  • Global, regional, idealised
  • Availability of observations and initial conditions
Ambition

• Encourage and streamline collaboration across Australian community and with international partners
  • Shared UM repository, problem ticketing etc with Met Office

• Contributing to wider model development communities
  • UM, MOM etc
Opportunities

• Shared computing infrastructure
  • HPC (raijin), storage (NCI/RDSI) and software (acccessdev)
• NeCTAR Climate and Weather System Lab
• History of good collaboration on ACCESS infrastructure
• Met Office Technical Infrastructure Development Group
• Fujitsu collaboration
Resources

• Usability requires sufficient compute and data resources
• We need to do more than just keep up with model versions
• Staff resources are required to make model system improvements
  • NeCTAR has helped
• TIDG is promising but resourcing the 4 FTE will be a challenge
Challenges

• Supporting a larger user community
  • Can we support everything anyone might want to do?

• Managing priorities – CMIP6, ACCESS NWP, COE research

• NCI support of new infrastructure is a current issue

• Keeping up to date with collaborator code releases
  • Local testing etc

• Growth in system complexity with ESM

• Growth in data volumes
  • Storing and indexing so it can be found again

• Scalability of codes and future machines
  • We're not involved in UM Gung Ho or the international ECS (Enabling Climate Simulations at Extreme Scale) projects