# Platforms EOI: Multi-disciplinary Scalable Research Virtual Desktop Platform

**Project title**

Multi-disciplinary Scalable Research Virtual Desktop Platform

**Field of Research code(s)**

- 04 EARTH SCIENCES
- 05 ENVIRONMENTAL SCIENCES
- 06 BIOLOGICAL SCIENCES
- 07 AGRICULTURAL AND VETERINARY SCIENCES
- 08 INFORMATION AND COMPUTING SCIENCES
- 09 ENGINEERING
- 11 MEDICAL AND HEALTH SCIENCES

**EOI Lead Name**

Siddeswara Guru

**EOI lead Research Group**

Terrestrial Ecosystem Research Network

**EOI lead Organisation**

University of Queensland

**EOI lead Email**


## Collaborator details

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**Project description**

Virtual Desktop infrastructure (VDI) are remote workstations with tools and applications that can be accessed via a web browser from anywhere and anytime. These managed platforms enable researchers to access and process data, run collaborative analysis pipelines and access more computational resources than personal computer. The project will create the infrastructure to run a reliable, scalable virtual desktop environment. It will cater to...
multiple disciplines through a single interface and a cost-effective way to maintain and support their Virtual Desktops as a Service (DaaS) that can deploy applications as containers and improved reliability by running on multiple ARDC research cloud nodes (or, if possible, be node agnostic).

The project will coordinate and develop a national Virtual DaaS platform with a robust underlying architecture for authentication, shared storage, shared access to users data, faster transfer of data from local to remote desktop, deployment through containerisation and access to collaborative spaces, open-access collections on data centres, coordinated training, user documentation and monitoring of the infrastructure.

### Existing technology

#### Adopt

The project will adopt and consolidate the CoESRA, and TPAC Virtual Desktop Infrastructure codebase(s), service management, services and application deployment practices. The Strudel web technology will be adopted as a desktop launcher with flexible authentication module. The project ensures the provision of the platform as highly available, responsive service offering and will reuse tools available in containers. The adopted platform will be easily deployable and accessible for multiple research disciplines and applications with an ability to perform collaborative analysis and synthesis.

#### Adapt

The project will enable the adaptation of Virtual DaaS to multiple domains with a suite of managed, readily available tools and applications for analysis and synthesis.

CephFS or other distributed file systems, possibly in conjunction with CloudStor will be investigated as a national solution for distributed research files; working to bring data to compute whenever possible and provide end-users with a seamless experience when working with data across multiple nodes.

#### Build

No new software features will be developed but some development may be required for the adaptation process.

### Anticipated requirements

#### Annual funding

$200,000 - $299,000

#### Proposed length

2 years

### Other information

#### Other information you wish to provide

The Virtual Desktop Infrastructure is currently used in multiple domains as part of CoESRA EcoCloud, Marine Cloud TPAC VDI, Characterisation VL, NCI and the NHMRC funded Centre for Air pollution, energy and health Research (CAR).

The project will have a technical committee to oversee the existing technology adoption to develop a reference implementation of VDI as DaaS. The project will be a co-development in partnership with Monash eResearch centre, TPAC and TERN.

### Terms

#### I agree to the terms

Yes