01 Intro to ARCC Services

YouTube: https://youtu.be/B0RAfrKhtpU

Hi, and welcome to ARCC.

This is the first in a series of short videos to introduce you to ARCC detailing who we are, what we do, and the services we offer. There is a lot we offer, and as you work through these videos we'll introduce the names of our services as well as concepts and terminology, and provide a high-level overview that will help you to effectively use us within your research, whatever that may be.

ARCC stands for the **Advanced Research Computing Center** and is a department that sits under the Office for Research and Economic Development, or **ORED** for short.

Our core mission is to provide support for research computing which includes:

- high performance computing,
- large research data storage,
- and consulting

to further the University of Wyoming and State of Wyoming's strategic priorities by enabling researchers with the necessary computational needs.

By being the primary research computing facility for the University of Wyoming, we support this mission by providing centralized scientific computing resources, underpinned by a robust cyber-infrastructure, supported by technical services, documentation and training, and on-hand personnel.

All with an emphasis on making it easier for researchers to perform research.

There are three core services that ARCC provide:

First, **High Performance Computing** (known as H P C): where we maintain a number of clusters for the purpose of allowing researchers to perform a variety of use cases such as computation-intensive analysis on large datasets, running long large scale simulations and/or running 10s/100s even 1000s of small short tasks - nothing is too small. If you have research that typically can't

be performed on a desktop/laptop, such as it may be too slow and takes too long to run, you don't have enough memory to hold your data, or you simply have too many things to calculate, then HPC is for you.
Second is **Research Data Storage** which facilitates the safe and secure storage and transfer of data that researchers can share and collaborate on with others within UW, and other institutions across the world.

This comes in two flavors:

The **Alcova** service is a high performance data storage service geared toward project-oriented data. This service allows researchers to reliably store and exchange data with anyone located anywhere in the world. Additionally, Alcova provides storage for published research data.

Pathfinder is a low-cost storage solution that enables a Cloud-like presence for research data hosted by ARCC. The system is built to be expandable and provides data protection. Its core functionality is hosting onsite backups as well as enabling data sharing and collaboration.

Our third core service we offer is **End-User Support** which is available to all researchers at UW, regardless of whether you use the HPC and/or Research Data Storage services.

This comes in a variety of forms, including documentation via our website and wiki with examples and suggested best practices; zoom office hours; one-on-one consultation; scheduled in-person and online training.

Whichever form is most appropriate to the type of support and your needs.
We also provide a number of other best effort services, such as:

- SouthPass, which is our web based access to the clusters.
- Linux Desktop Support.
- Hosting of services, such as R Shiny application.
- and Proposal Development.

As the needs of research grows, so will the services we offer.

If you have a research need, an issue, come and talk to us and we'll see where we can help.
In this short introduction, we have introduced our core services, as well as names and terms that you might not have heard of before, nor understand.

As this series goes on, we will have videos that go into all these services in more detail and start to explain what these terms mean, and how they relate to research, and how you might us all, or just some of them, within your work.

In the meantime, to find out more, how to contact us and to start exploring, visit our website and wiki.