Early Adopter AARNet - Use case

Early Adopter's Name: Australia's Academic and Research Network (AARNet)

Organisation type:
Not-for-profit organisation, NREN

Organisation size:
Medium-sized enterprise

Organisation Research Field(s):
AARNet is a National Research and Education Network and supports the needs of all fields of research plus cultural heritage collections.

Organisation Profile:
Australia's Academic and Research Network (AARNet) is a not-for-profit National Research and Education Network (NREN), a national resource owned by the Australian universities and Commonwealth Scientific and Industrial Research Organisation (CSIRO) for the greater good. AARNet is widely regarded as the founder of the Internet in Australia and renowned as the architect, builder and operator of world-class high-speed low-latency network infrastructure and an expanding portfolio of products and services, all designed to meet the unique needs of the research and education sector. AARNet interconnects Australian universities, CSIRO and other organisations with a research and education mission, or with whom the education and research sector interacts. These include research institutes, hospitals, vocational training providers, schools, galleries, libraries, archives and museums.

Organisation website URL: www.aarnet.edu.au

Suggested Use case title: Preserving Australia's digital research, education and cultural heritage.

Problem definition:
AARNet is responding to the demand from research, education and cultural heritage institutions to supply secure, cost effective and pain-free archiving and preservation services for digital material. The Archiver Project requirements describe some of the services that AARNet already delivers: the network, storage and the bonus high-level services, including data analytics via an implementation of CERN's SWAN, offered as a part of AARNet's CloudStor.

AARNet's use case is concerned with meeting the requirements for long-term data archiving and addressing digital preservation. This is considered as a both a stand-alone service available for institutional use and the need to support the data curation lifecycle for active data already stored on AARNet's CloudStor.

AARNet offers the CloudStor platform to the Australian research and education community. CloudStor accepts content directly from researchers and other users. Although CloudStor provides vast storage capability, long-term preservation of the data stored is not actively addressed at this time, neither in architecture nor in user facing functionality.

Additionally, AARNet has delivered large-scale object storage to support organisations with a long-term digital preservation responsibility. There is an increasing demand to provide and support preservation workflows and enable fast and secure data movement between storage locations, data packaging capabilities and preservation functions such as file-format identification, integrity checks and persistent identifiers.

Is this use case new for your organisation?
This use case has been under consideration for some time, partly as a result of stakeholder demand and partly because of the future need to prepare active data currently stored on AARNet's systems for ingest into an institutional service for long-term preservation and access.

Data and metadata Characteristics:
AARNet supplies data services to meet the needs of researchers and increasingly institutional archives. The characteristics of the digital material and metadata are as vast and broad as the substantial community of users who depend on AARNet's services.

Cost requirements:
AARNet already delivers some of the services described in the Archive Project requirements. These are offered as a part of member subscriptions or separate services. AARNet is intending to develop a business model for services that can be sustained indefinitely, continuing AARNet's existing three decades long commitment to support Australia's research, education and cultural heritage sectors.

Benefits and expected impact:
AARNet's vision is for a national infrastructure that helps advance research and education while securing our digital legacy through offering services that are well understood and supported by communities of practice. There are expected advantages for delivering a service that is adaptable to requirements across all domains of research plus the preservation responsibilities of major institutions.

AARNet understands the benefit of offering solutions that support a diversity of technologies and allow for migration between infrastructures while protecting data against error and corruption over the very long term. AARNet intends for member institutions to obtain this capability affordably, with long-term commitments and confidence in the integrity and standards compliance of the service. The expected impact is the enduring persistence of institutional memory.

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