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The collaborative role of NREN's in the provision of Data Services

Close collaboration with NREN's is a key enabler for the provision of data services and research data management. The Data Intensive Research Initiative of South Africa (DIRISA), as a component of the National Integrated Cyberinfrastructure System (NICIS), provides data services to ensure that research data, including big data, is easy to find, access, use and reuse. The National Integrated Cyberinfrastructure System (NICIS) was established by the South African Department of Science and Technology (DST) to promote scientific and industrial development through three key areas: Data, Networking and Computing. While DIRISA is focused on the data component. The Centre for High Performance Computing (CHPC) is focused on providing processing and computing capabilities which forms the Computing. The South African National Research Network (SANReN) provides high speed connection which forms part of the networking. These three pillars - DIRISA, CHPC and SANReN form NICIS.

Apart from ensuring that data meets the FAIR principles, these data services also supports proper management of big data, and data in general, by providing research data management processes and additional RDM related services. DIRISA promotes a data intensive ecosystem in South Africa by providing services such as the SA Data Management planning tool which can be used by South African researchers to create data management plans to that are now a requirement for some research funders. Other services in collaboration with the Department of Telecommunications and Postal Services (DTPS) include the establishment of a Multi-primary administrator (MPA) in South Africa to assist with the allocation of unique Persistent Identifiers (PID's) for digital objects.

The collaborative role between NREN's and Data Services is seen as vital as data services such as DIRISA sometimes have a requirement to transfer large amounts of data which NREN's can be able to assist with. In turn NREN's can use the data storage capabilities of data services without the need to build their own. Reliable ICT infrastructure is key to enable data sharing.

This presentation provides an overview of the South African National Integrated Cyber Infrastructure System (NICIS). From this background, the role of data services as provided by DIRISA, is outlined. We give some insight into the required interactions with networking and computing services in the provision of data services. NICIS is used as the basis to demonstrate the important role that DIRISA plays in terms of collaborating with SANREN (providing networking services) and CHPC (providing advanced computing services) in enabling FAIR data and sound research data management.

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