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**SANReN's 100 Gbps Data Transfer Service: Transferring data fast!**

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This paper presents the new 100Gbps large data transfer infrastructure of the South African National Research Network (SANReN). In 2018, SANReN piloted the deployment of 10 Gbps capable Data Transfer Nodes (DTNs) in an effort to increase the transfer speeds and reliability for the movement of large datasets. The pilot result showed that there was a need to have national infrastructure available to support large data transfers for use by South African researchers and scientists. The initial pilot evolved to committing resources towards implementing the SANReN Data Transfer Service (DTS). With the national upgrade of the core SANReN backbone network capacity, 100 Gbps DTNs have been implemented in Cape Town and Johannesburg, South Africa, with Globus data transfer software installed. Traditionally, the DTNs and perfSONAR nodes are implemented as two separate devices, which leads to increased hardware cost and maintenance and becomes more difficult to implement at locations with limited rack space, or high rack space costs. The SANReN Performance Enhancement and Response Team have been novel in their approach to implementing shared infrastructure for South African researchers, as it is costly in the South African research and education context for institutions to implement on their own infrastructure. SANReN is also one of the first National Research and Education Networks (NRENs) to implement the combined DTN/perfSONAR node successfully. Several