Established by AARNet in collaboration with nine universities and CSIRO Data61, the Australia Wide-Area SDN Testbed is an innovation platform for developing high-speed technologies.

Software Defined Networking (SDN) is an emerging technology with the potential to revolutionise the way networks are provisioned and managed. SDN offers solutions for improving network flexibility and reducing costs via software-based management and control.

The programmability of SDN promises to make networks more dynamic, for example, able to respond to changing conditions such as congestion or link failure.

At its core, SDN is about abstracting lower level networking functionality (hardware and control) from higher level applications and operating systems. This abstraction enables smarter application design and better integration across cloud service providers, while those applications and service providers remain agnostic to the hardware running the network underneath them.

Based on open standards, the Testbed infrastructure consists of a core of four interconnected NoviFlow OpenFlow-enabled switches at AARNet backbone sites in Sydney, Melbourne, Perth and Seattle controlled by virtual machines in Sydney and Melbourne.

SDN equipment installed at CSIRO Data 61 and participating universities (University of New South Wales, University of Technology Sydney, Macquarie University, University of Adelaide, RMIT, Swinburne, University of Queensland, University of Wollongong and Australian National University) is interconnected by AARNet to create a national wide-area SDN testbed environment with the ability to peer with similar testbeds in the USA and Europe.

About AARNet

About AARNetAustralia’s Academic and Research Network (AARNet) is the not-for-profit company that operates Australia’s National Research and Education Network (NREN). Its shareholders are 38 Australian universities and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

AARNet provides high-capacity, leading-edge Internet and other advanced communications services to the nation’s universities, health and other research organisations, as well as schools, vocational training providers and cultural institutions. AARNet serves over one million end users who access the network and services through shareholder and other customer institutions.