VeRTIGO: Network Virtualization in SDN-based infrastructures

CREATE-NET

This demo presents VeRTIGO (Virtual Topologies Generalization in OpenFlow networks), an advanced network virtualization protocol suite for infrastructures composed of Software-Defined Networking (OpenFlow) based devices.

A key feature of the SDN architectural framework is a network-level operating system able to expose a logical map of the entire network to services or control applications implemented on top of a logically centralized control plane. The behavior of an SDN network can then be customized by properly programming the network itself according to the requirements of the services that will be provided on top.

Leveraging on the hardware abstraction provided by SDN, VeRTIGO allows a safe sharing of a single infrastructure among many users in parallel; for example, VeRTIGO can provide one or more experimenters with a fully programmable virtual network to let them test some novel Future Internet services in a controlled testing environment.

The demonstration runs on the island of the EU FIRE facility "OFELIA" hosted by CREATE-NET and it includes a set of scenarios to show the effectiveness of the proposed approach.

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Movie stills are courtesy of DreamWorks