NetIDE Proposal

Name

NetIDE Network Engine and Developer Toolkit

Repo Name

netide

Description

The NetIDE Network Engine enables portability and cooperation inside a single network by using a client/server multi-controller architecture. Separate "Client SDN Controllers" host the various SDN Applications with their access to the actual physical network abstracted and coordinated through a single "Server SDN Controller", in this instance OpenDaylight. This allows applications written for Ryu/Floodlight/Pyretic to execute on OpenDaylight managed infrastructure.

The project also includes an IDE to allow application developers develop and test their applications, including a graphical editor to specify network topologies, a UI for deployment configurations, editors to specify network environments for simulation, as well as a supporting toolsuite (debuggers, profilers, model checkers)

NetIDE Network Engine Architecture

blocked URL

NetIDE Network Topology editor

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Scope

The "Network Engine" is modular by design:

- An OpenDaylight plugin ("shim" in architecture diagram) sends/receives messages to/from subscribed SDN Client Controllers. This consumes the ODL Openflow Plugin
- An initial suite of SDN Client Controller "Backends": Floodlight, Ryu, Pyretic. Further controllers may be added over time as the engine is extensible.

The Developer Toolkit is a suite of Eclipse plugins required for graphical network editing and generation of platform-specific code:

- It has dependencies on VirtualBox and Vagrant. NetIDE deploys network apps on VM's created and managed by Vagrant.

Resources Committed (developers committed to working)

Resources Committed (developers committed to working), Alec Leckey (Intel), Elisa Rojas (Telcaria), Roberto Doriguzzi (Create-Net), Christian Stritzke (Fraunhofer)

Initial Committers

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Vendor Neutral

- No vendor package names in code
- No vendor branding present in code or output of build
- No vendor branding present in documentation

Meets Board Policy (including IPR)

Opensource project currently hosted on Github and released under the Eclipse Public License v1.0:

http:/github.com/fp7-netide

Link For Project Proposal

NetIDE_ODL_proposal.pdf