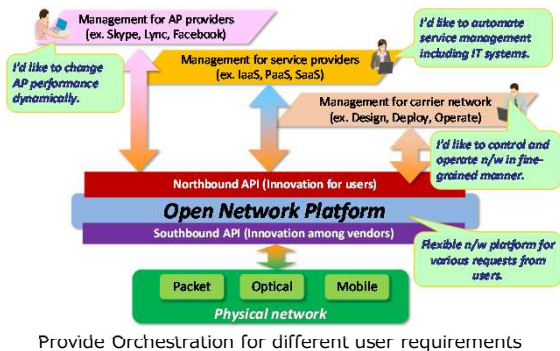


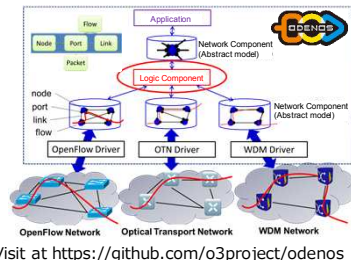
## Getting started with O3 Project deliverables

- Let's create solid SDN solutions with our guideline and OSS (Open Source Software).



## "ODENOS" Object-oriented Network Orchestrator

- Graph-based Powerful Network abstraction**
- Network Component**
  - Abstract network as a graph of node, port, link and flow.
  - Extensible to express the physical device features
- Logic Component**
  - Work on abstracted network objects to provide unified control over them
  - Example: Federator, Aggregator, Slicer and LinkLayerizer

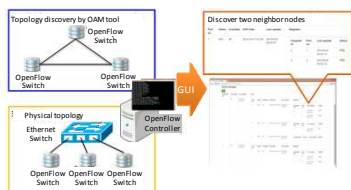


Visit at <https://github.com/o3project/odenos>

## OpenFlow OAM Tools

### Topology tool

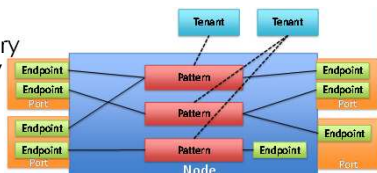
OAM functions for OpenFlow NW is necessary to operate SDN-WAN. To confirm availability of flows, NW topology management and relationship of FlowEntry and flow information is important.



NTT Com developed and evaluated topology discovery tools that works under universal circumstances.

### Entry manage

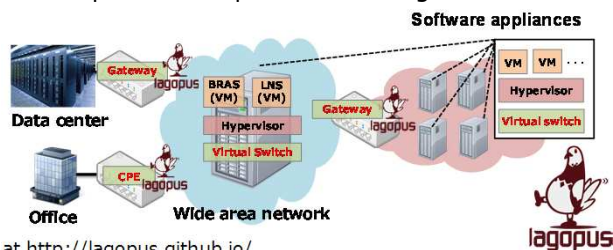
To manage flows, it is necessary to create FlowEntry form highly abstracted flow information such as location information, bandwidth and so on.



We studied data model that describes necessary information manage SDN networks.

### Supported protocols/interfaces

- OpenFlow 1.3.4 (latest stable version)
- WAN protocols (MPLS, PBB, and QinQ)
- OF-CONFIG, OVSDB, CLI, SNMP, and Ethernet OAM
- High-performance packet processing**
  - Large scale 1-M flow entries
  - 10-Gbps software packet switching



Visit at <http://lagopus.github.io/>



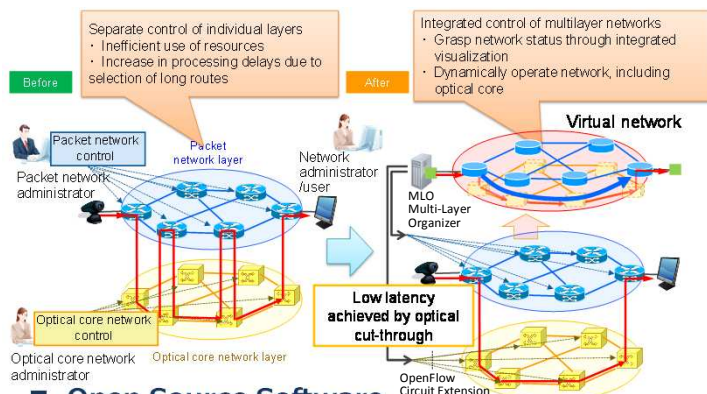
## SDN Transport Network Technology with User Control ~Wide Area Network that can keep up with user's ever-changing demands~

### Purpose

- Provide a simpler method for user to use a wide area network control technology that is becoming more complex
- Satisfy user demand by consolidating management and control of multi-layer network comprised of packet and optics

### Technology content

- Multi-layer management and control (Hitachi, Ltd.) Based on network resource request from an application, resource management and control feature finds a resource from a lower layer resource pool and allocates it to a higher layer traffic
- Optical Cut-through technology (Fujitsu, Ltd.) Provide low latency network to user by configuring an end-to-end optical direct path by using packet and optical core network path



### Open Source Software

- PKT-Transport of O3 Orchestrator & Controller suite & Compatible nodes (MLO) (Hitachi, Ltd.)
- OPT-Transport Apps of O3 Orchestrator & Controller Suite (Fujitsu, Ltd.) Visit at <http://www.o3project.org/ja/fujitsu/>

Visit at "www.o3project.org/en."

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