

Open vSwitch

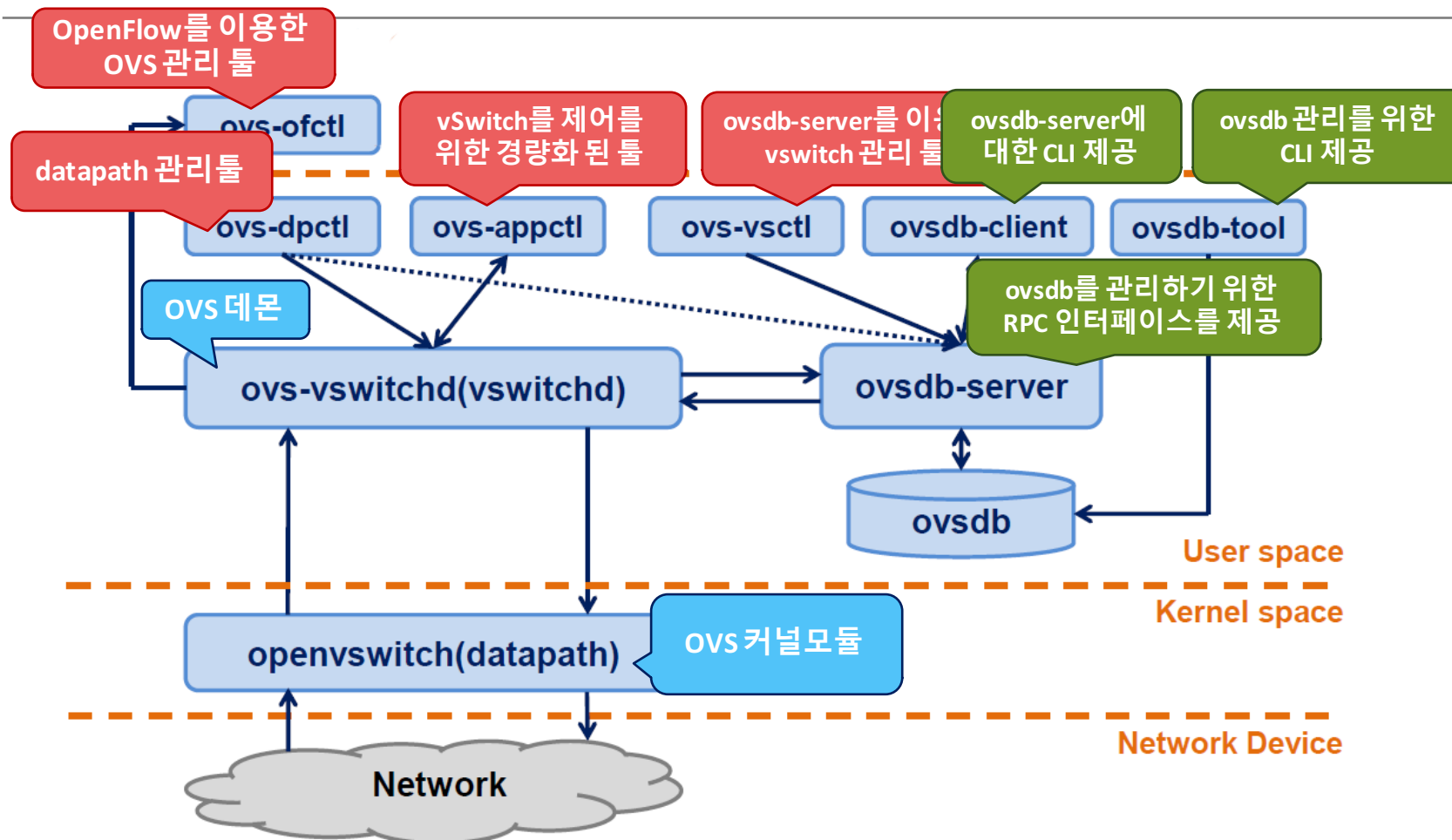
2016.05.12

남 성 식(soninlight@gmail.com)

OVS(Open vSwitch)

- 리눅스 기반의 가상 소프트웨어 스위치
- Open source Apache 2 License
- 네트워크를 추상화하여 동적으로 자원을 제어할 수 있음
- OpenFlow를 지원하여 SDN Switch로 사용 가능
 - 👉 OVSDB 프로토콜 지원
- OVS의 설정 값을 저장한 DB를 관리하기 위한 프로토콜
- 터널링 프로토콜 지원 (GRE, VXLAN, IPsec 등)
- 모니터링 기능 지원 (NetFlow, sFlow, IPFIX, SPAN, RSPAN 등)
- 분산 가상 스위치 기능 제공
 - 👉 다른 물리 서버에 위치한 가상 서버(VM)를 서로 연결
- 최신 버전 : 2.5.0 (2016/2/27)

OVS 구조 및 관리 툴

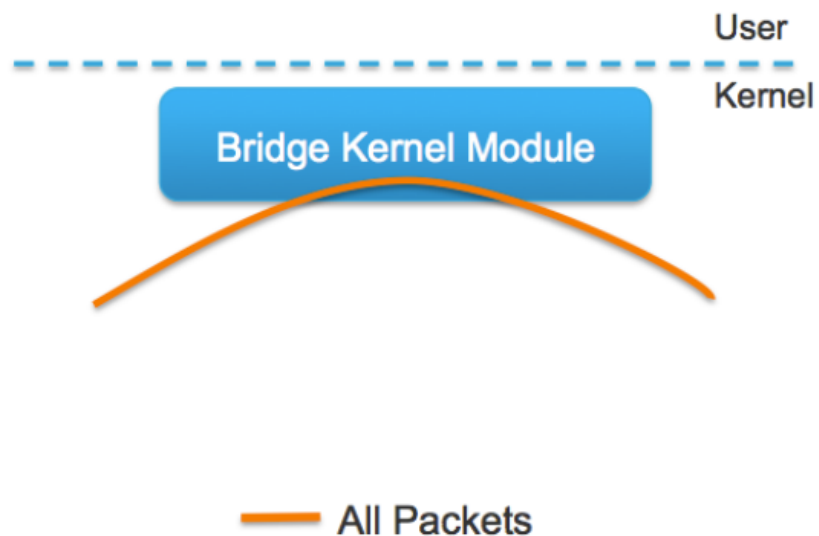


OVS Features

- Visibility into inter-VM communication via NetFlow, sFlow(R), IPFIX, SPAN, RSPAN, and GRE-tunneled mirrors
- LACP (IEEE 802.1AX-2008)
- Standard 802.1Q VLAN model with trunking
- Multicast snooping
- IETF Auto-Attach SPBM and rudimentary required LLDP support
- BFD and 802.1ag link monitoring
- STP (IEEE 802.1D-1998) and RSTP (IEEE 802.1D-2004)
- Fine-grained QoS control
- Support for HFSC qdisc
- Per VM interface traffic policing
- NIC bonding with source-MAC load balancing, active backup, and L4 hashing
- OpenFlow protocol support (including many extensions for virtualization)
- IPv6 support
- Multiple tunneling protocols (GRE, VXLAN, STT, and Geneve, with IPsec support)
- Remote configuration protocol with C and Python bindings
- Kernel and user-space forwarding engine options
- Multi-table forwarding pipeline with flow-caching engine
- Forwarding layer abstraction to ease porting to new software and hardware platforms

Linux Bridge

- Simple forwarding
- Matches destination MAC address and forwards
- Packet never leaves kernel



감사합니다