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CHINA DAY

June 25th
2019
Beijing

Innovations of the Network Infrastructure at Alibaba

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Alibaba Network Infrastructure Highlights

阿里的网络遍及全球

- IDC分布在亚洲、美洲、欧洲、大洋洲
- 高带宽、低延时的网络连接
- 为全球用户提供可靠、高性能的服务

Hyper scale data center network

- Scale-out architecture supporting 100,000 server ports cluster
- Massive 25G/100G deployment
- Low latency network with RDMA technology
- Enable next generation high performance compute and storage architecture

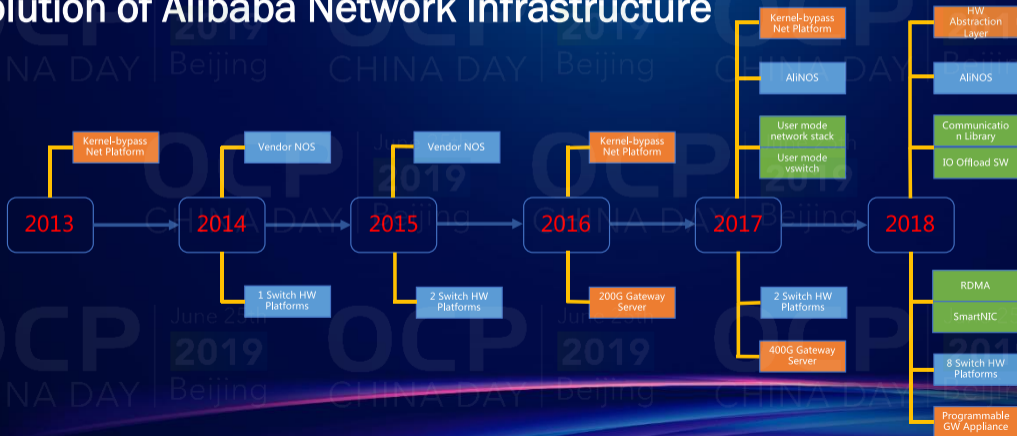
Network Automation

- Fine-grained, network-wide telemetry
- Full control of network software stack
- Machine learning algorithm-driven

Global network orchestration

- Software-defined WAN and DCI traffic engineering
- Performance and cost-aware edge network orchestration

Evolution of Alibaba Network Infrastructure

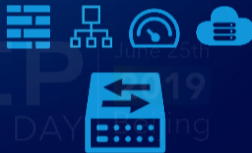
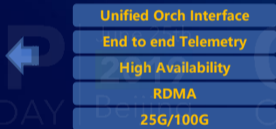


Network Infrastructure at Alibaba



Switch based device

- SONiC
- High density single chip switch
- Hyper scale



Server based device

- Hardware offload SW
- SmartNIC/Programmable ASIC
- Hyper flexibility & performance

SONiC Adoption in Production

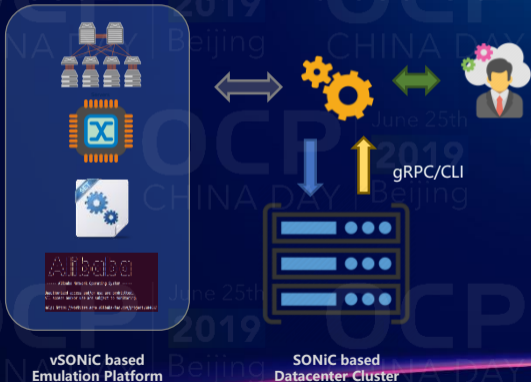


Alibaba joined SONiC community in 2017

Active participation and contributions

- TACACS
- VLAN Trunk
- SONiC Telemetry
- SWSS Warm Reboot
- SysDB and routing performance optimization

Operation Driven Innovations on SONiC



- Unified gRPC Northbound Interface
- Structured API based Configuration
- Event-based Control State Monitoring
- Emulation based Operation Model
- Customized protocol for graceful operation

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Thank you

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