

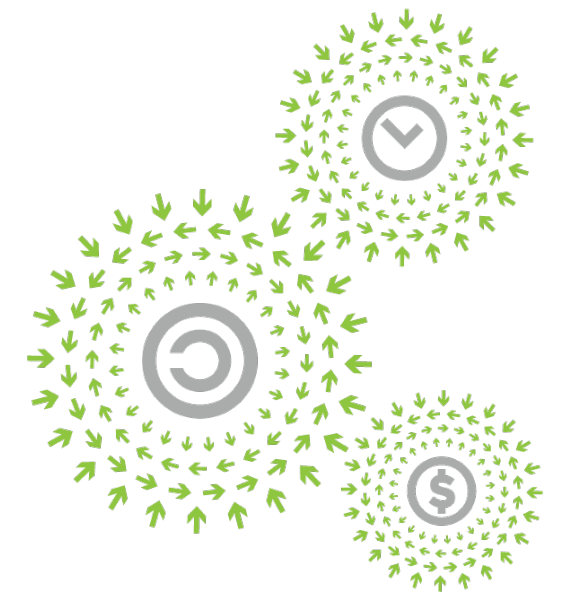
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OCP
SUMMIT

SONiC+ Adding Application Logic to Open NOS

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OPEN
PLATINUM™

What is SONiC+?

An application running in SONiC NOS, solving specific use case



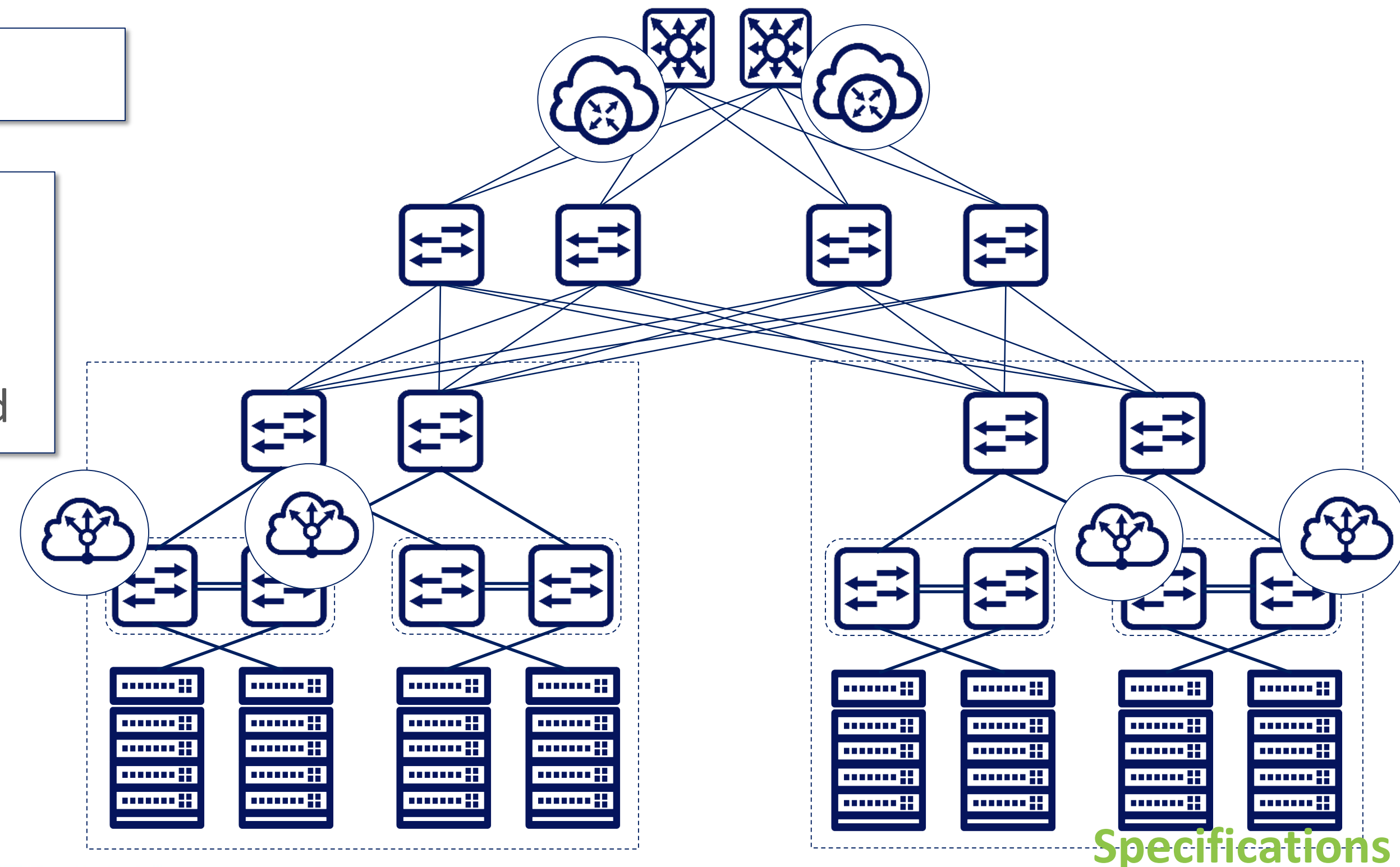
Combination of application need and dataplane capabilities

A 'plus' application is containerized for modularity

Integrate with SONiC infrastructure i.e. SAI, Redis DB

- No impact on SONiC - Using SAI flex interface + REDIS DB
- All enhancements over SONiC are automated & auto generated

NETWORKING

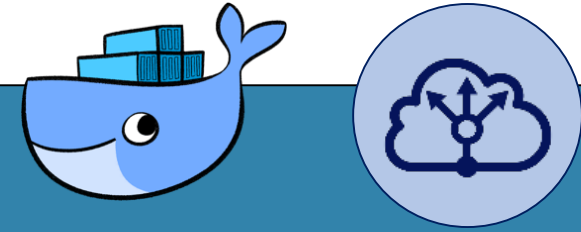


SONiC+ Load Balancer

Making use of the SAI Flex APIs

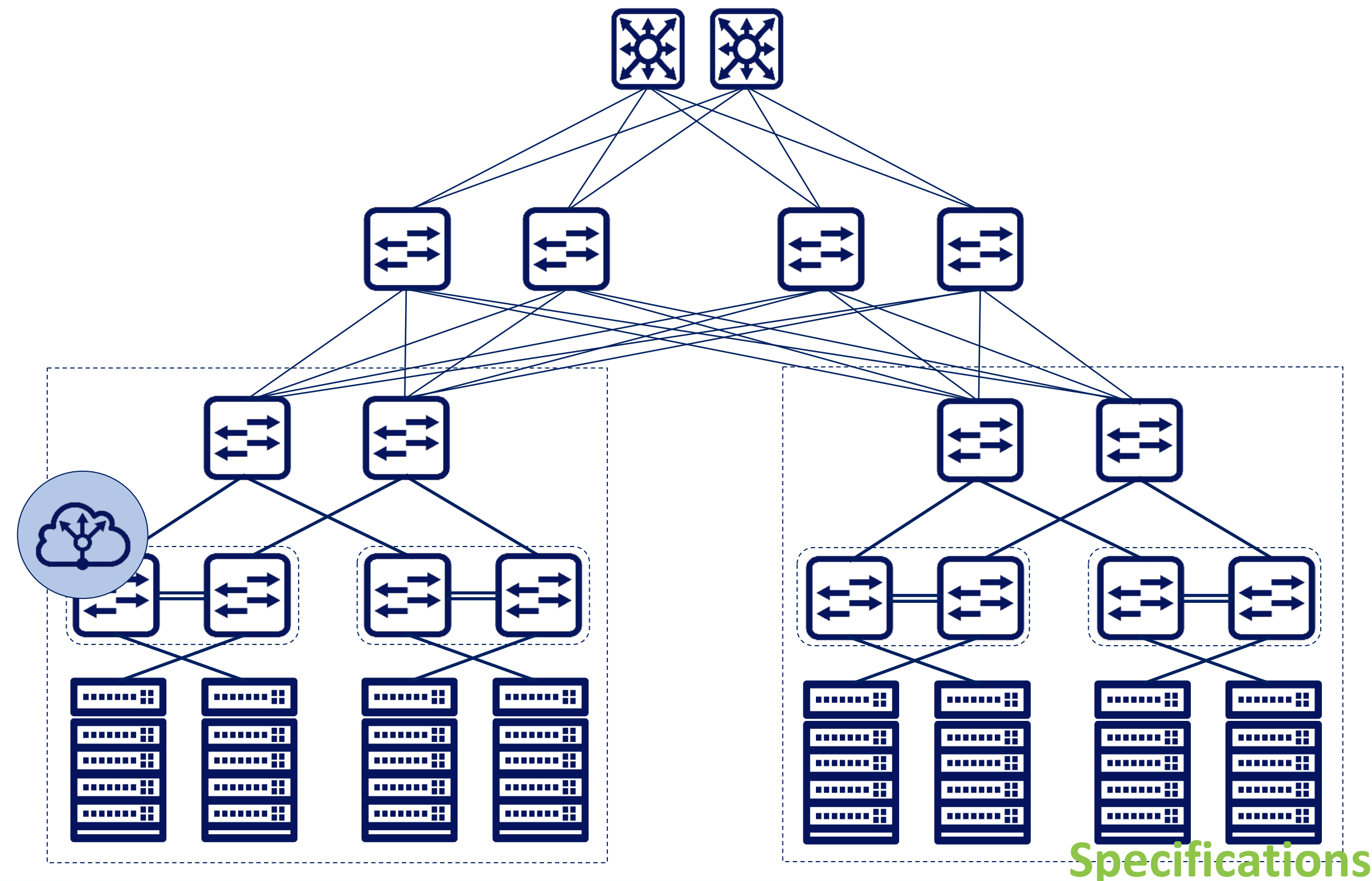


SONiC+ Load Balancer



- Load balancing @ switch line rate
- Can run on existing ToR switch excluding the extra load balancer servers hop
- can run in addition to all sonic functionality

NETWORKING

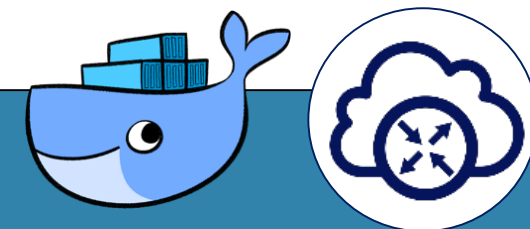


SONiC+ Tunnel

Making use of the SAI Flex APIs

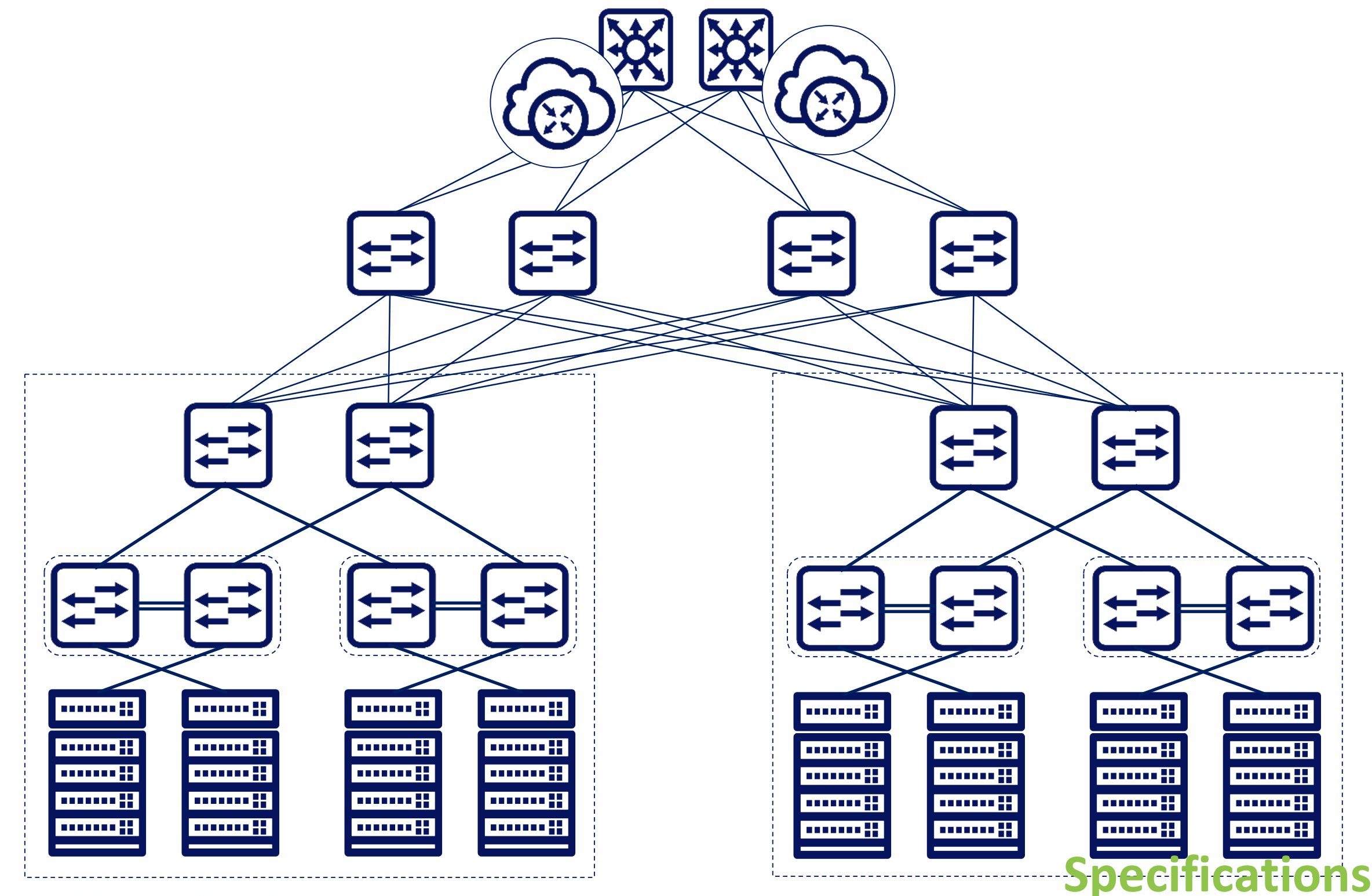


SONiC+ Tunnel

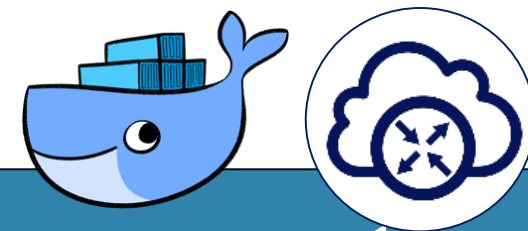


- Support tunnel mapping to overlay networks
- Support VRF peering to increase routing scale
- Use cases:
 - Connect bare metal servers to overlay networks
 - Map Customer Tunnel to tenant network

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SONiC+ Security



SONiC+ You cannot fight what you cannot see

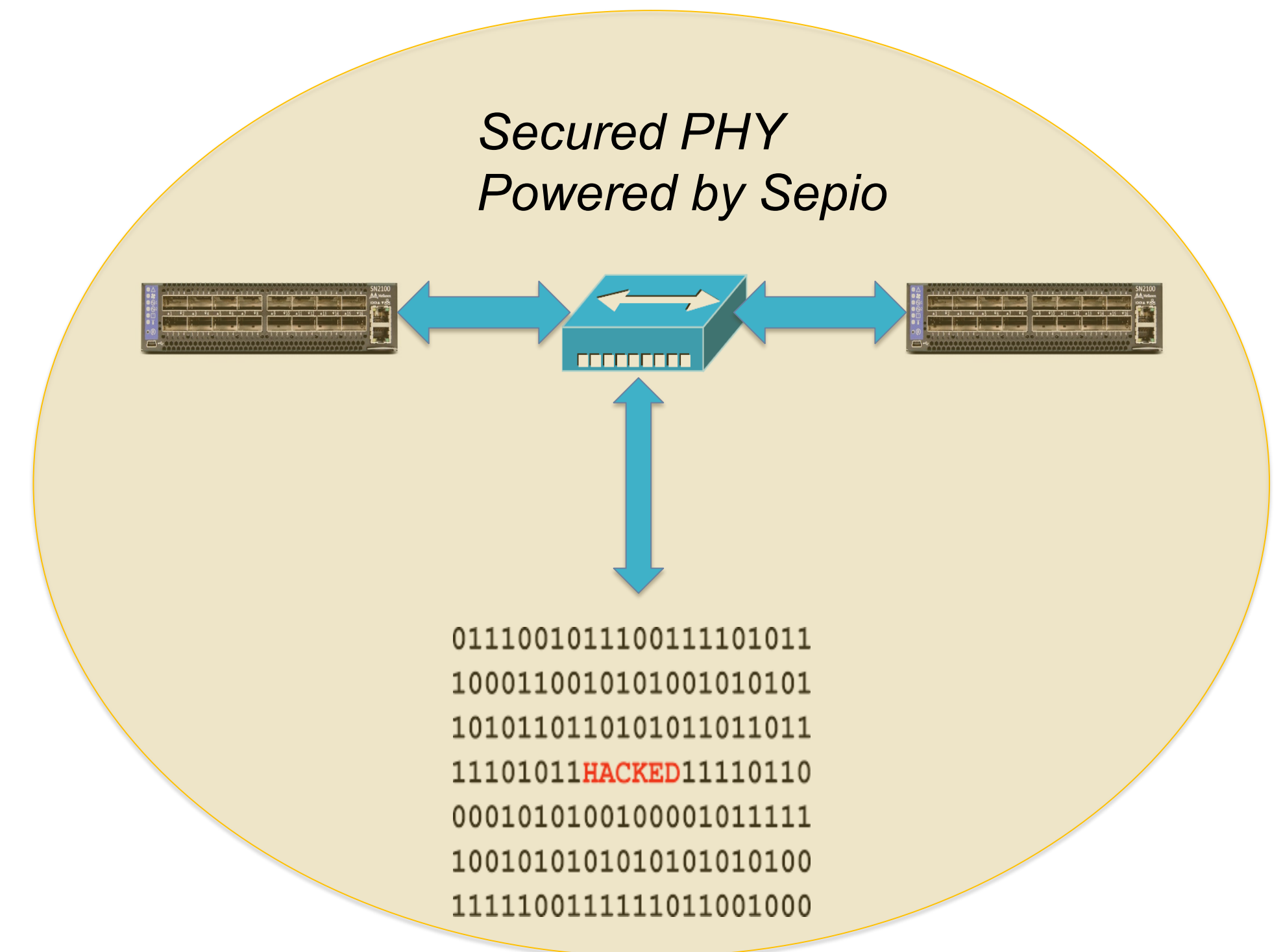
The Sepio security stand running on SONiC offers a unique solution that discovers, identifies and blocks malicious physical layer devices (active and passive)

Full protection against:

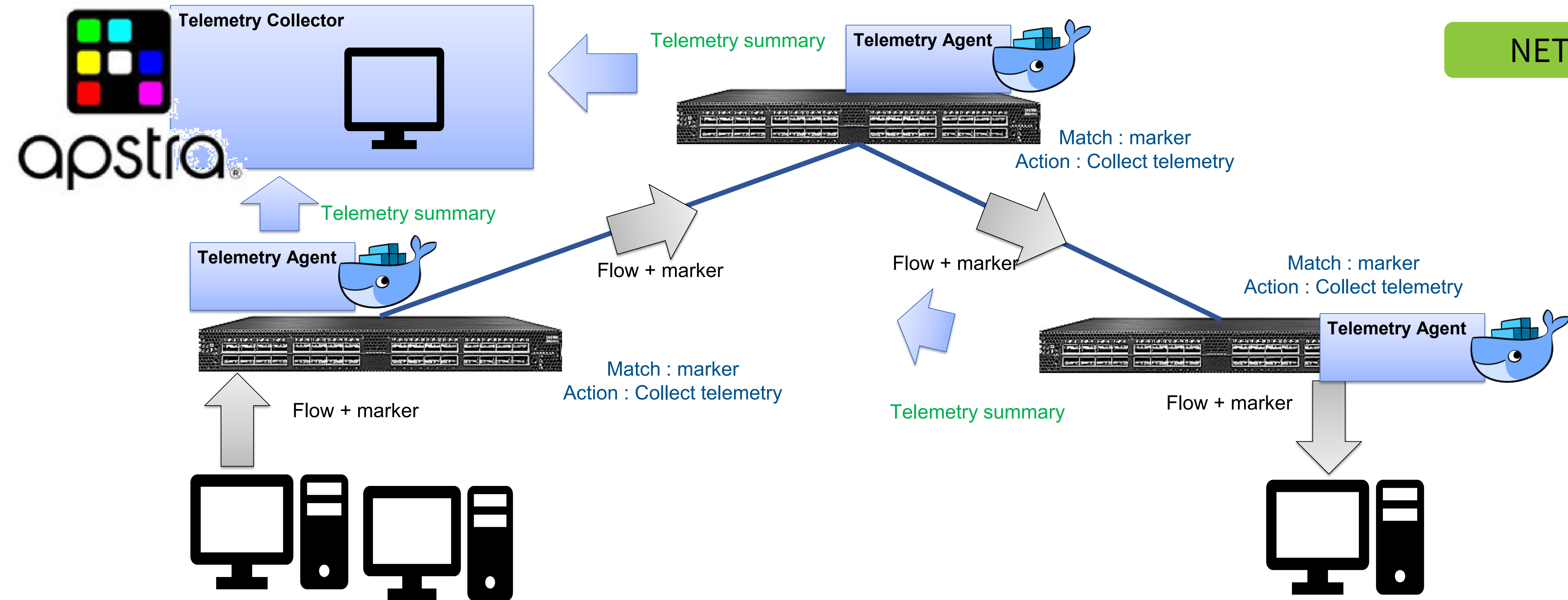
- Invisible network implants
- Manipulated firmware



NETWORKING



SONiC+ Telemetry



NETWORKING

SONiC+ – Components



NETWORKING



SONiC+ Application extension

SONiC+ Orch Agent extension

SONiC+ syncD extension

SONiC+ SAI extension- Done

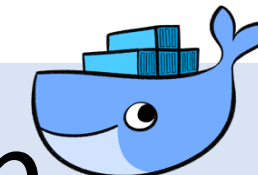
SONiC+ SAI Extension



Ability to add changes to control & data plane according to customer needs

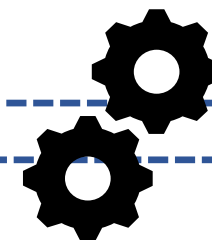
NETWORKING

SONiC⁺ LB app



LB.p4

Mellanox
P4 Compiler



Auto generated FLEX SAI API

Mellanox SDK

SAI pipeline

SONiC⁺
pipeline



<https://github.com/opencomputeproject/SAI/tree/master/flexsai/p4>



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Call to Action

Please join us working on the infrastructure for :



NETWORKING

SONiC⁺ Application extension

SONiC⁺ Orch Agent extension

SONiC⁺ syncD extension



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OCP Global Summit | March 14–15, 2019

