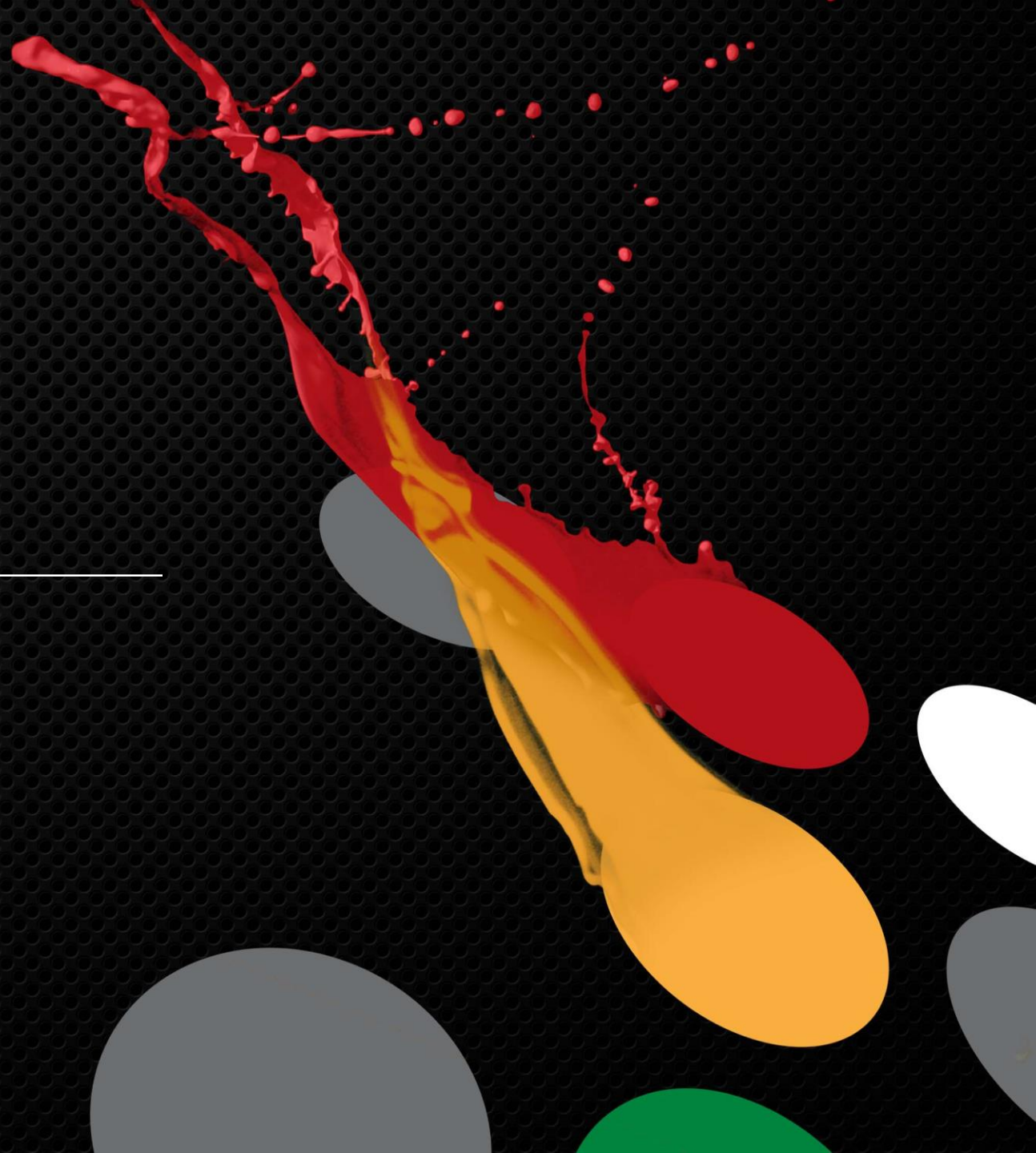




Marek Karczewski

NGSec 2017

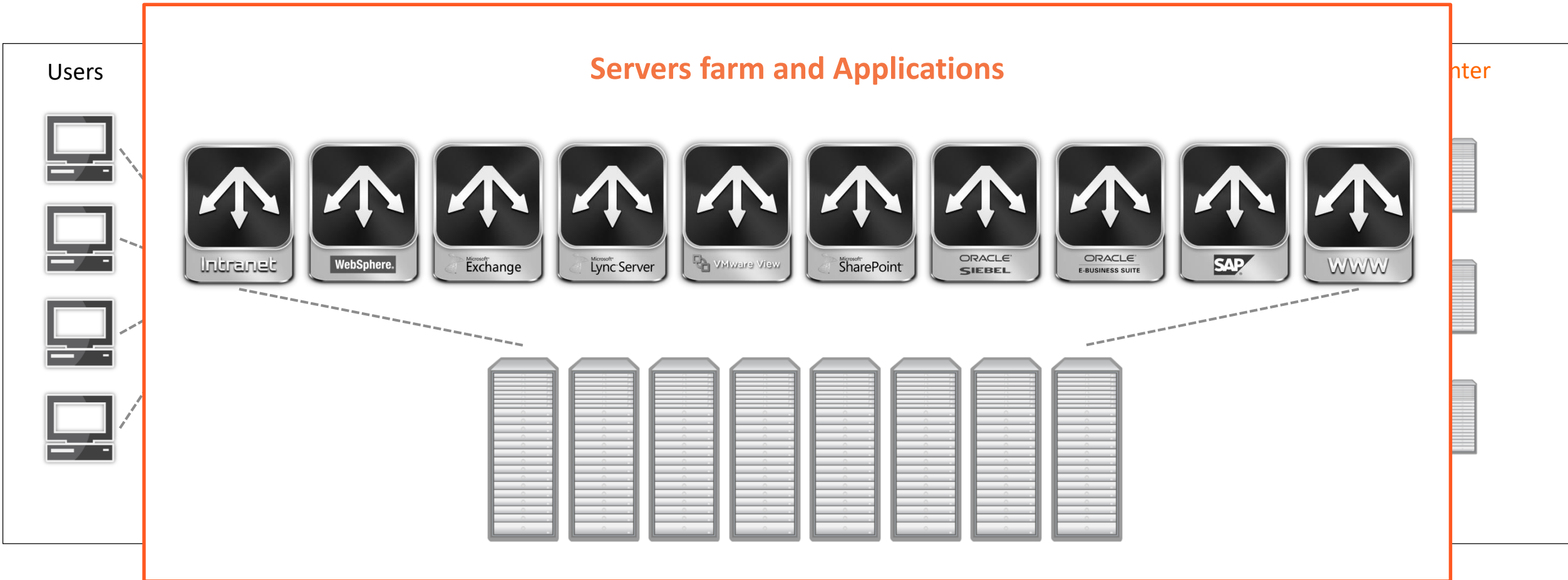




Network-wide Cyber Services



What do we protect ?



Transformation from device centric to network-wide services

Device-centric service



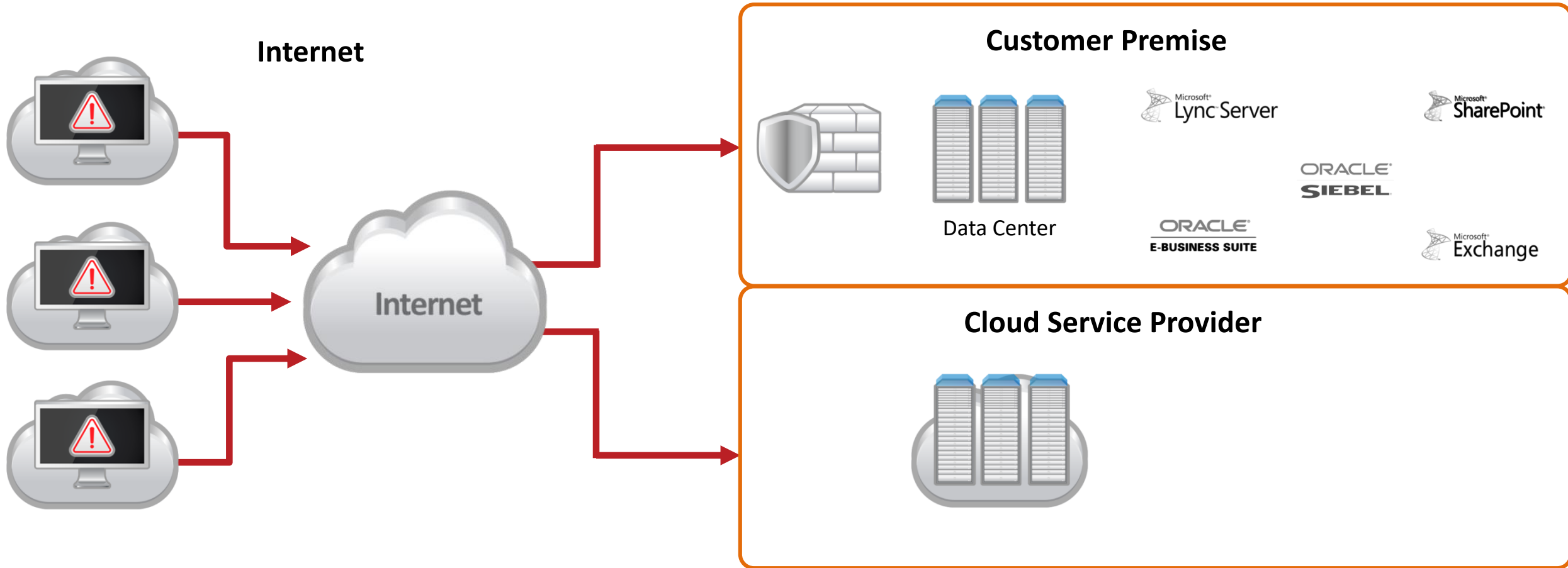
Network-wide service



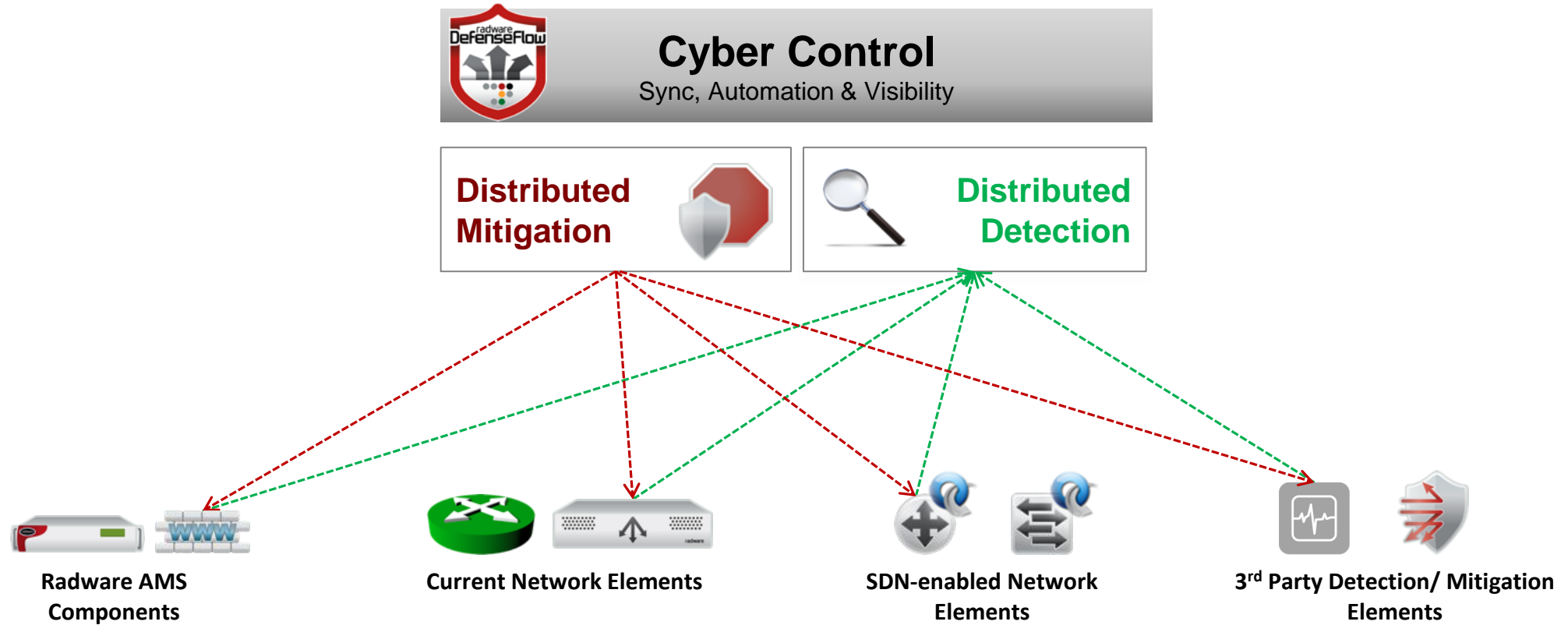
Network as a host...

A network that is part of the service

Transformation from device centric to network-wide services



Transformation from device centric to network-wide services

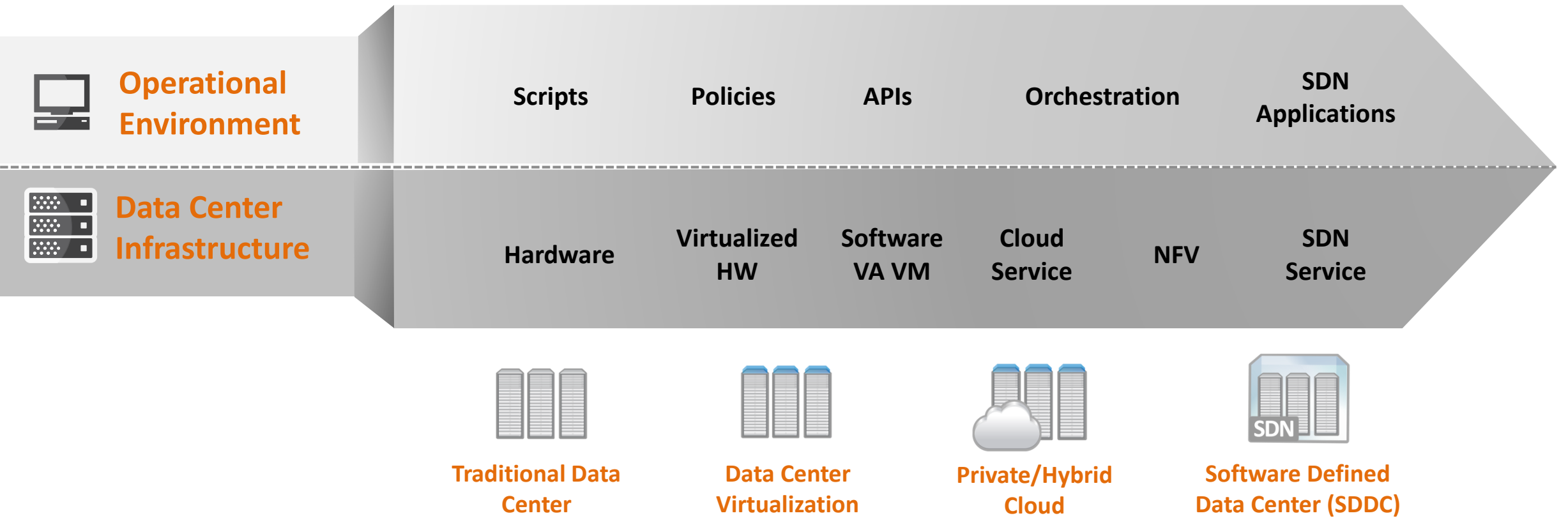


Data-Centers are Evolving – Transitioning to SDDC

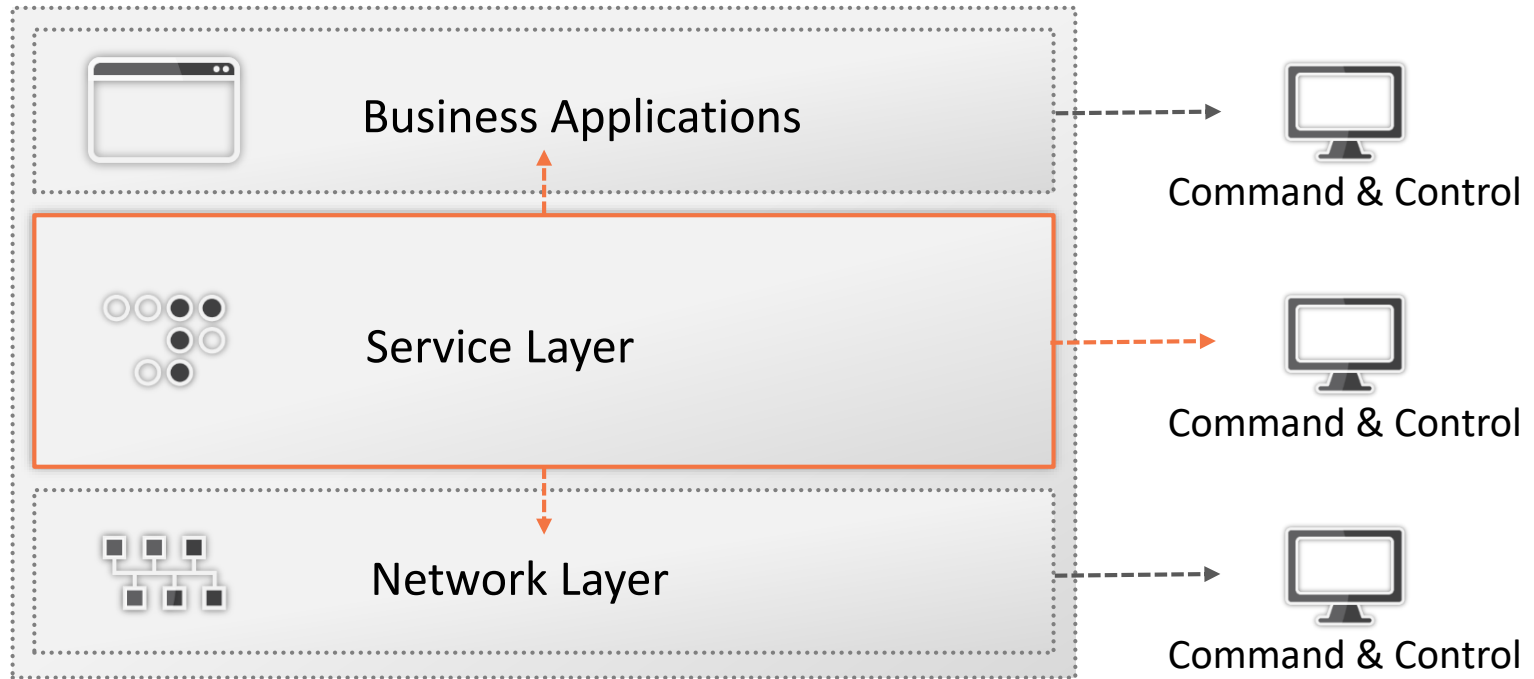


The Evolution of Data Centers

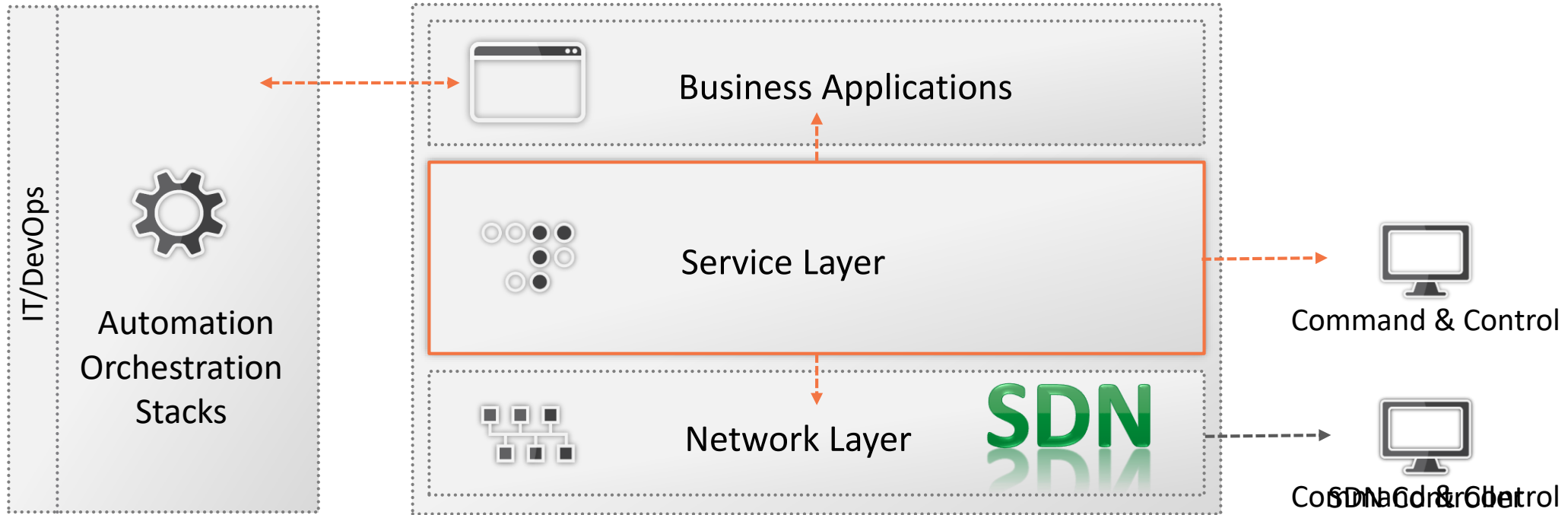
Data Centers are constantly evolving



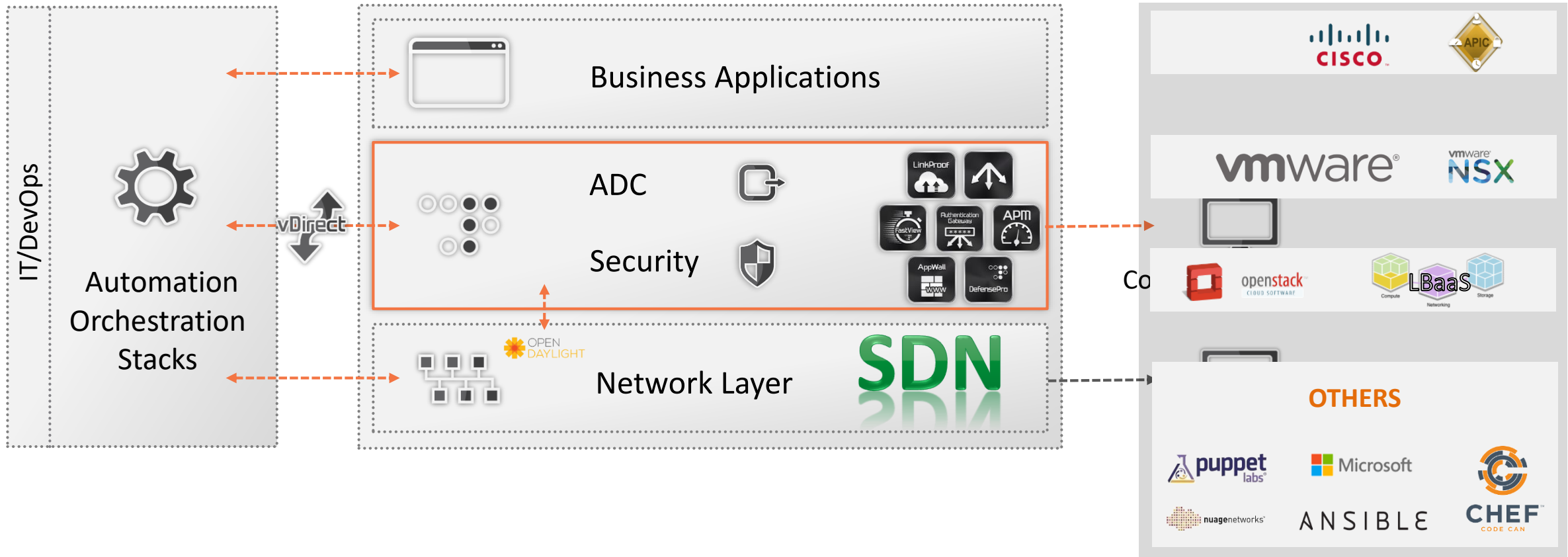
Traditional Data Center



Data Center Transformation to SDDC



Transformation Complete – Full Fledged SDDC

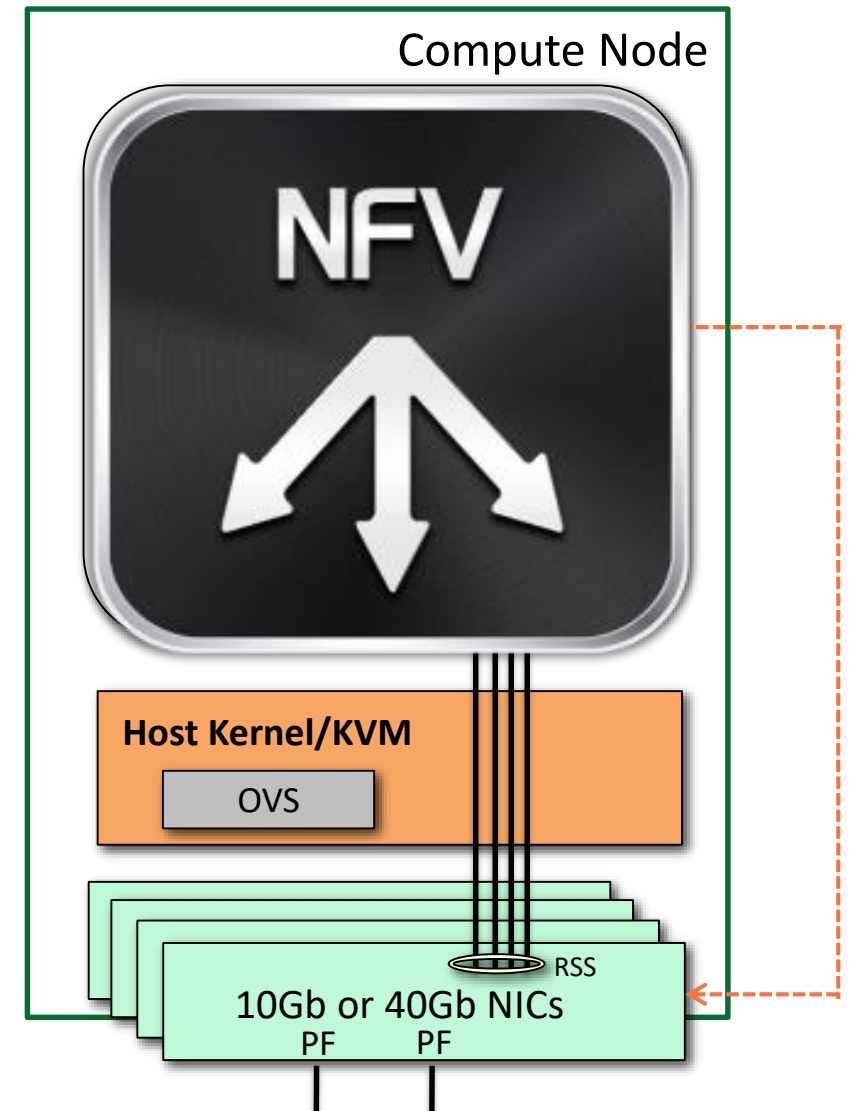


NFV as Part of Network-wide Cyber Services

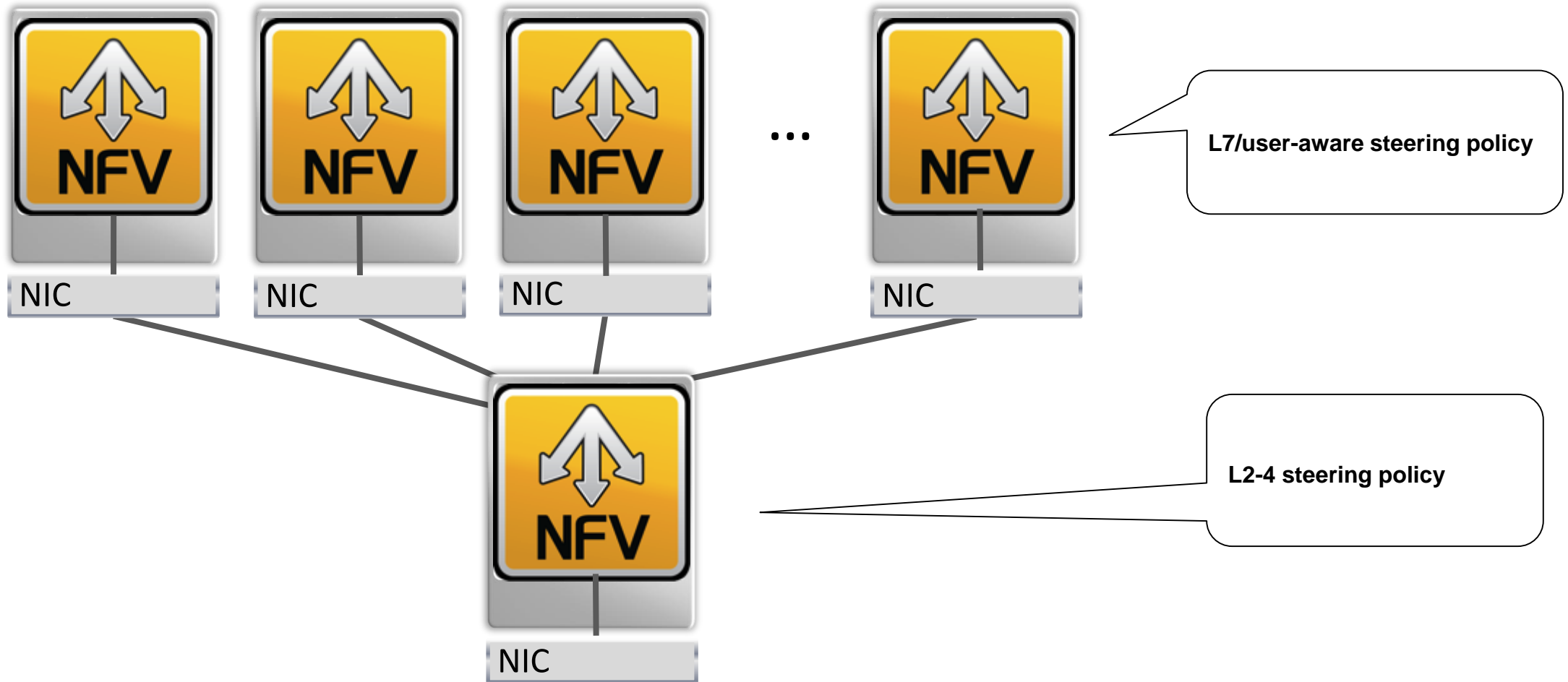


NFV – Network Function Virtualization

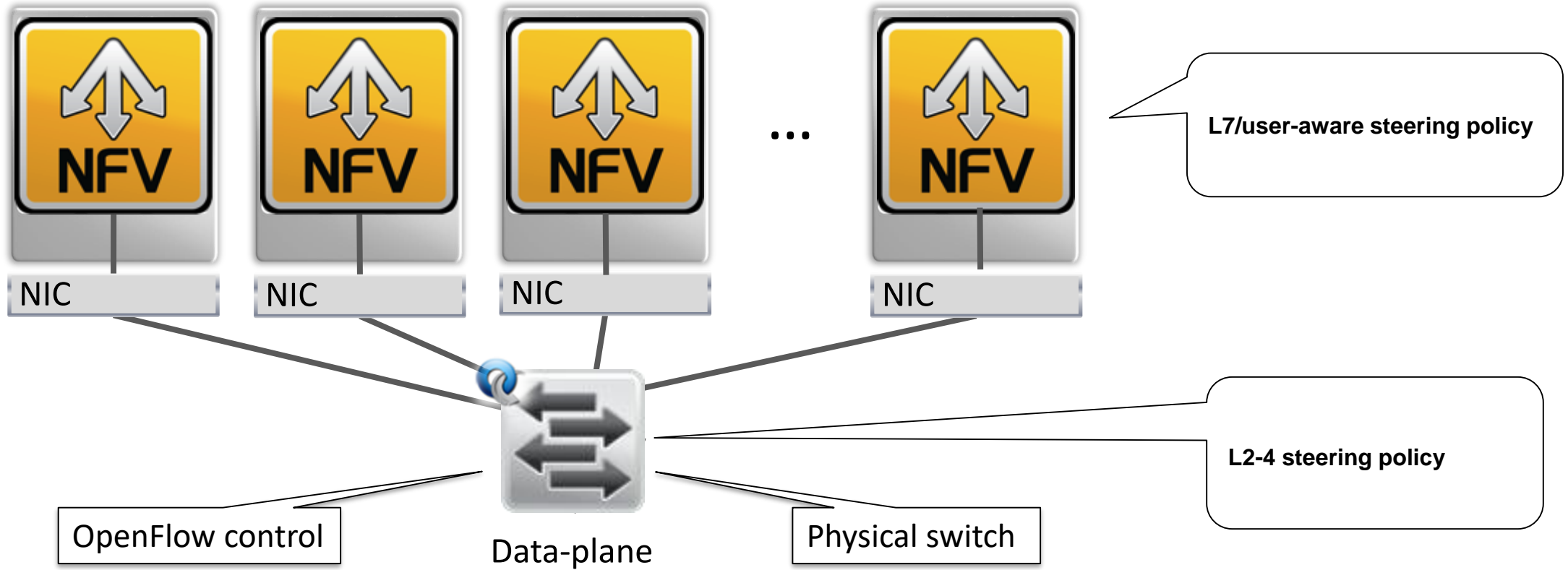
Leverages DPDK and KVM PCI pass-through



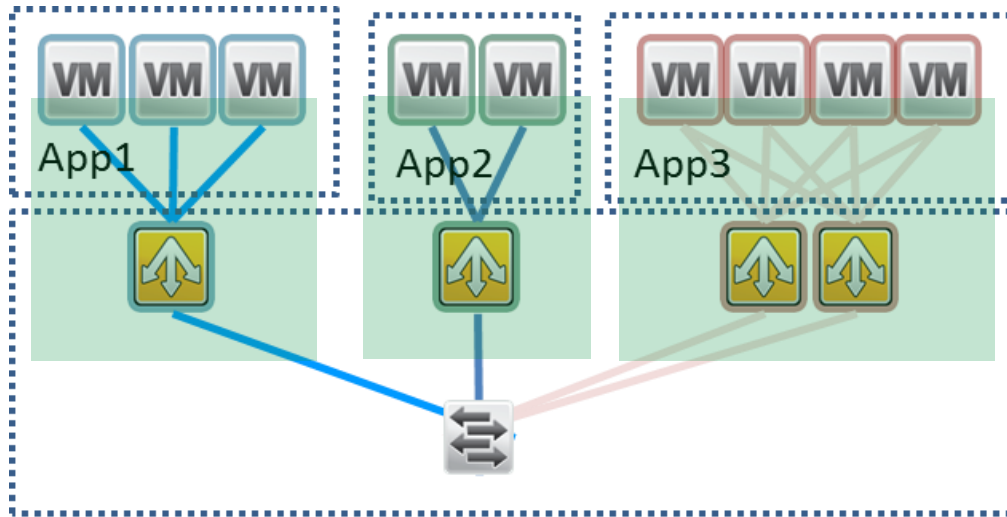
Software Chassis Concept



Software Chassis Concept



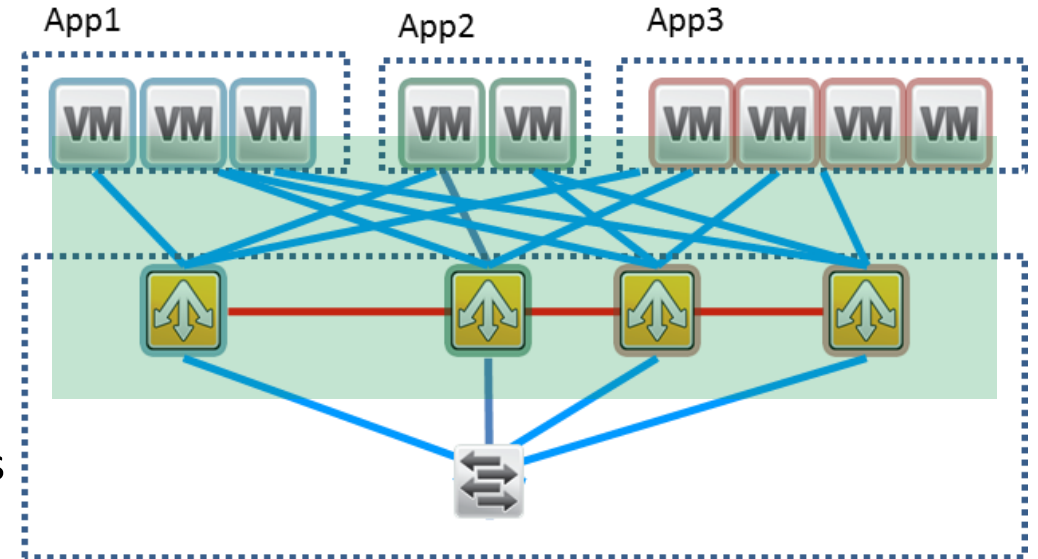
Software Chassis Concept – Multi Tera capacity



Multiple Clusters

'Mice' Flows

'Elephant' Flows

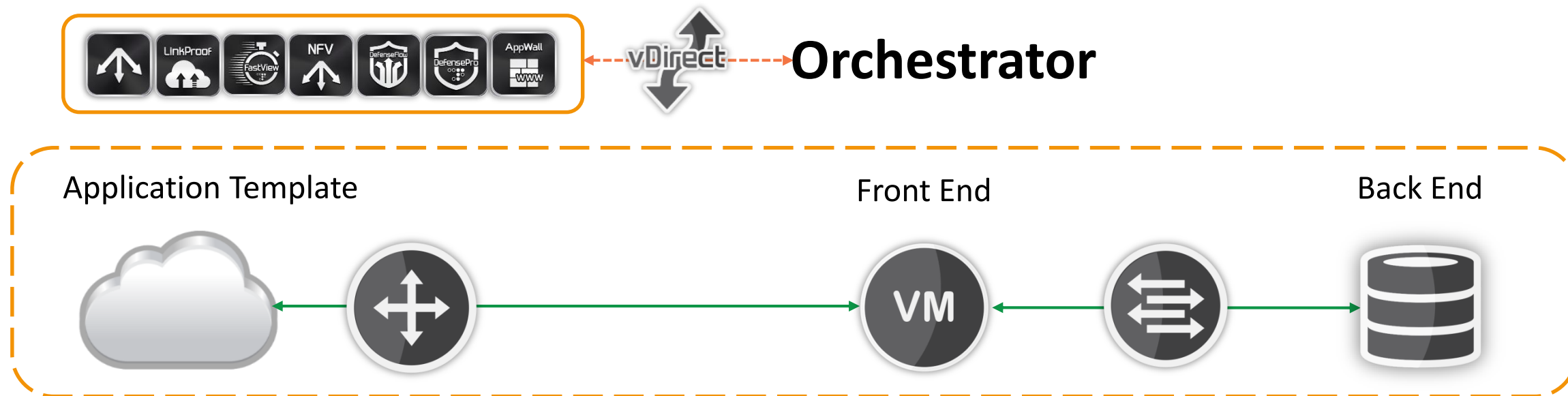


Terra-VIP Cluster

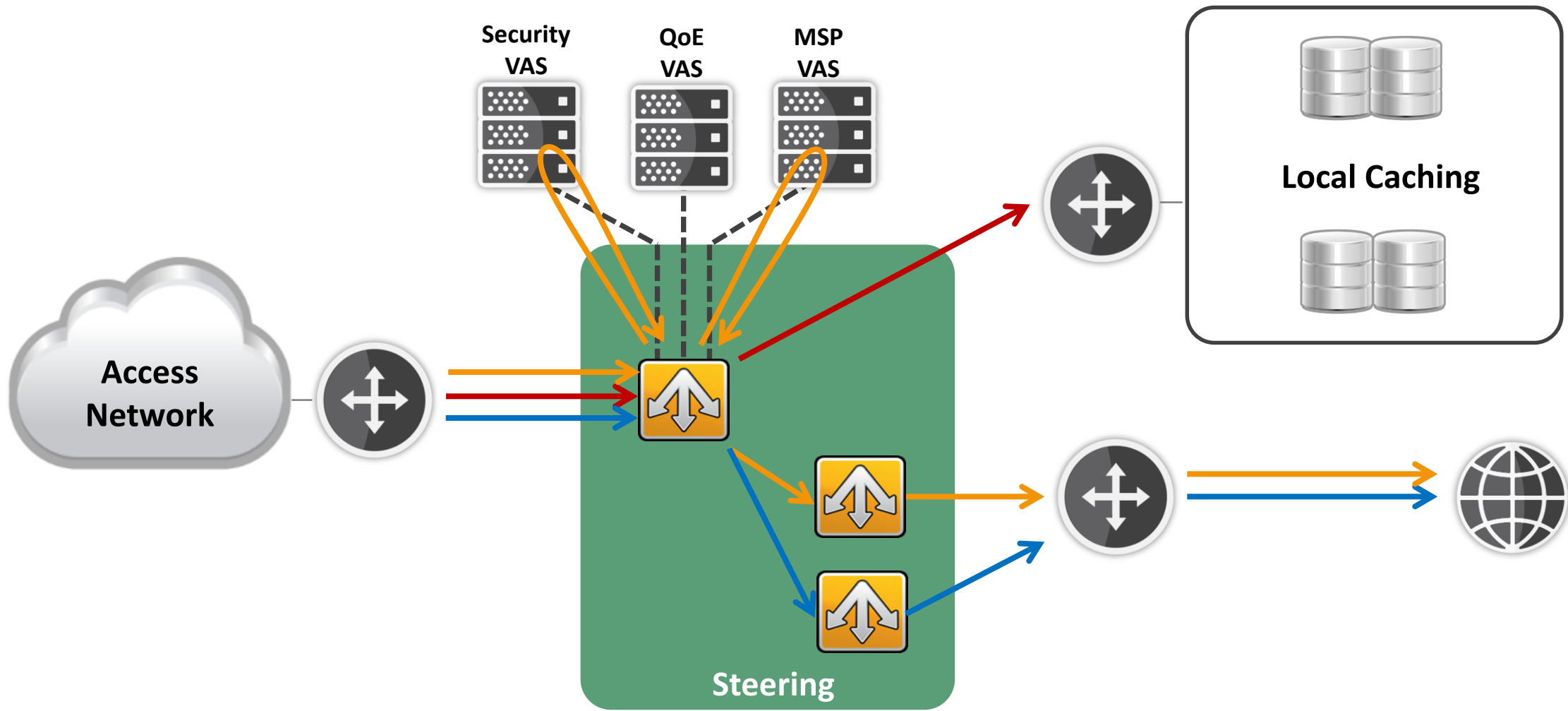
Service Steering



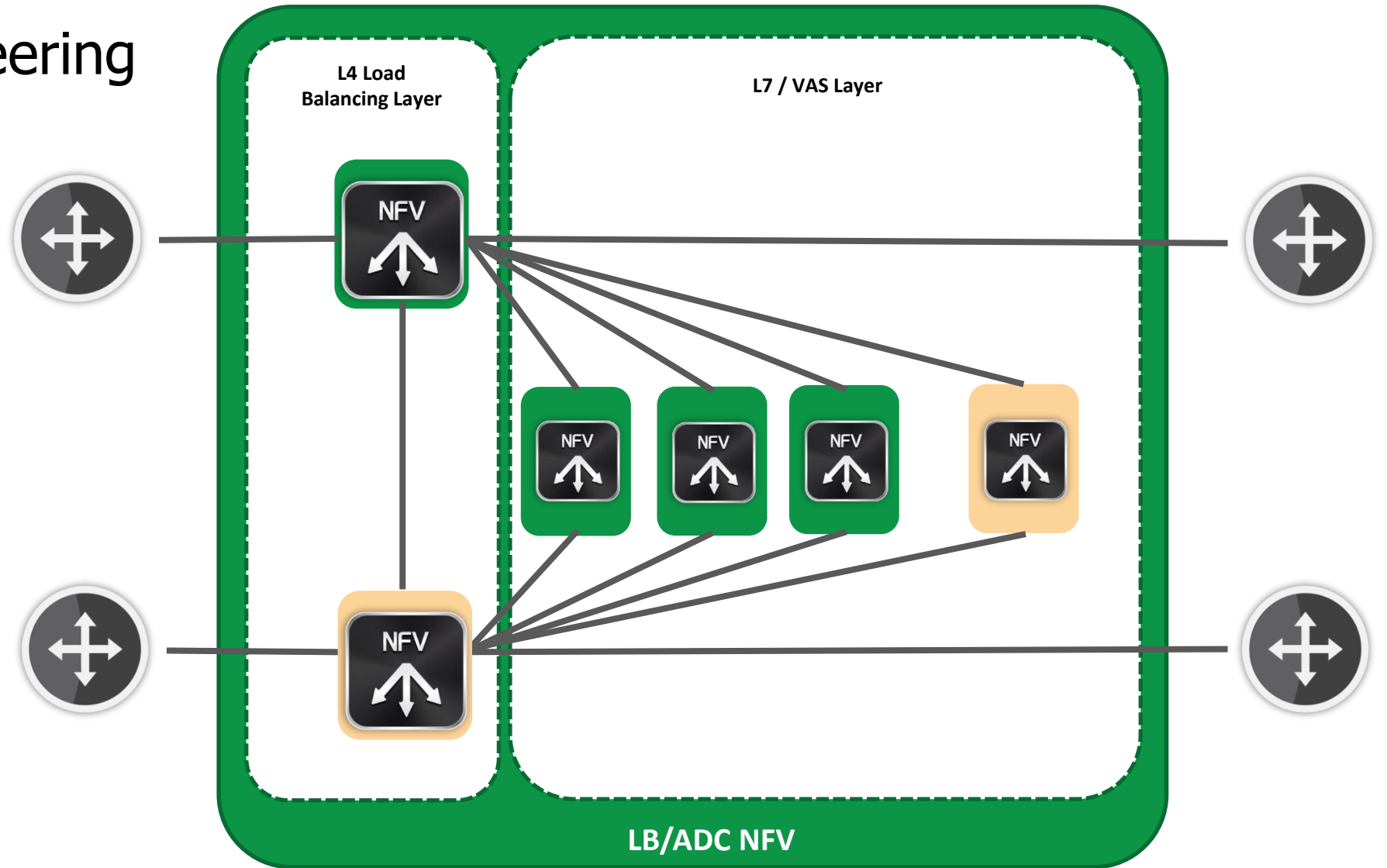
Orchestration, Service Steering



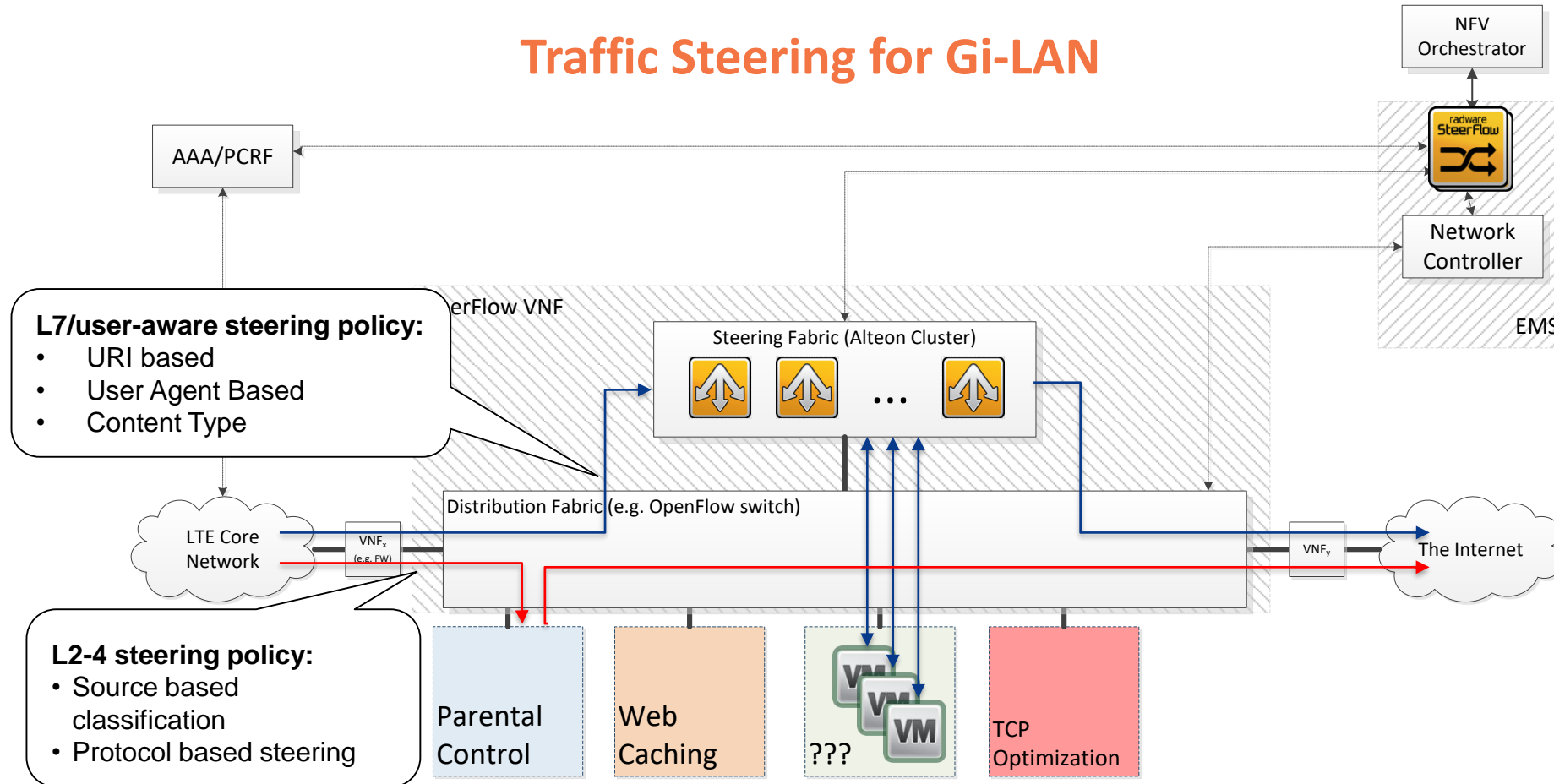
Traffic Steering



Traffic Steering



Traffic Steering for Gi-LAN



SSL Interception and Steering

Internet



Security

SSL Interception

- how a solution can support efficiency while inspecting encrypted traffic that's **masquerading a clear traffic**?
- It must **dynamically define filters that intercept and open traffic for inspection** even if it flows through non-standard TCP ports

Security

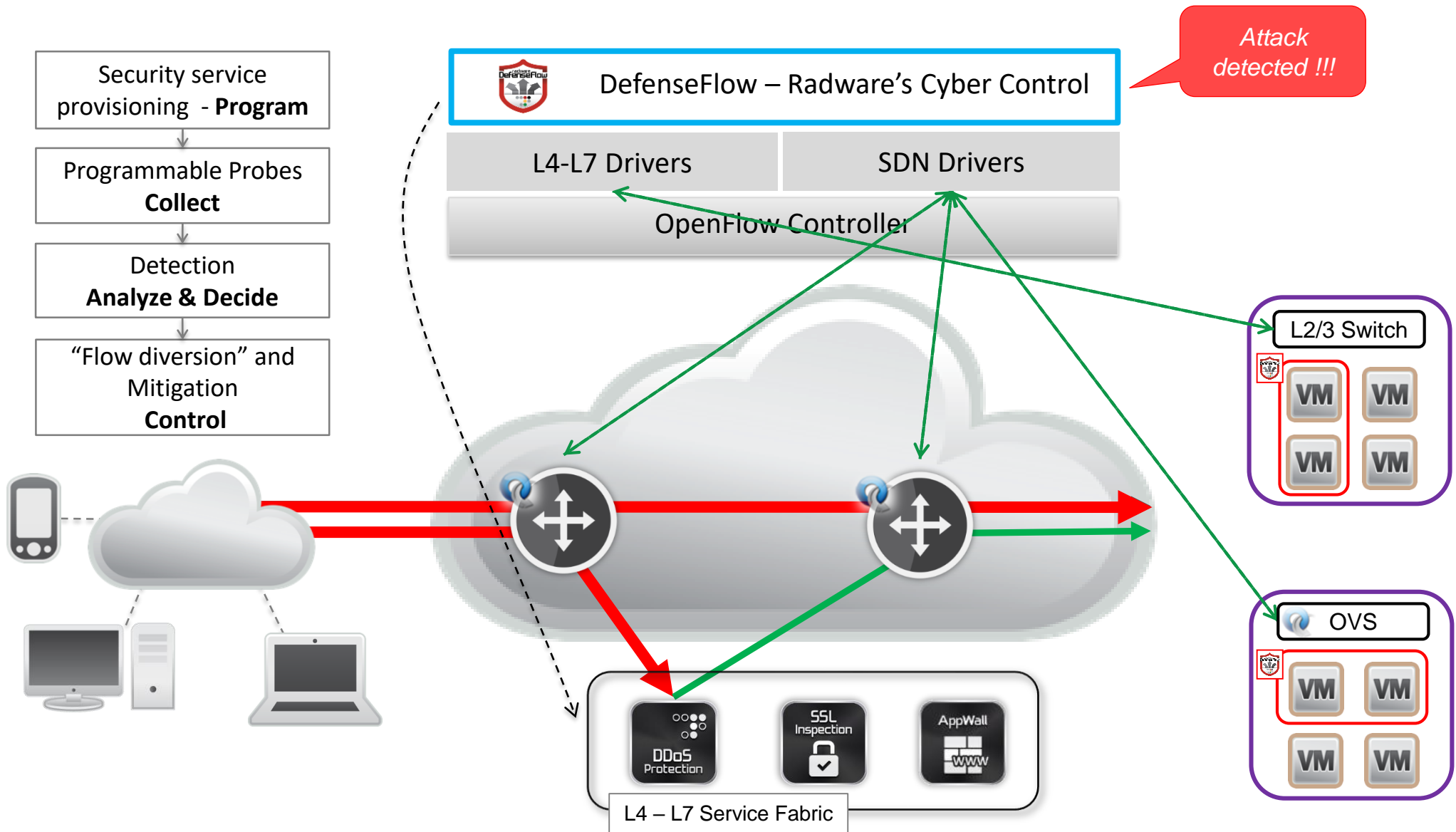
- In DDoS attack environment in order to avoid turning the SSL traffic inspection solution into **a target itself**, a solution **must not perform like a proxy or have its own IP addresses**

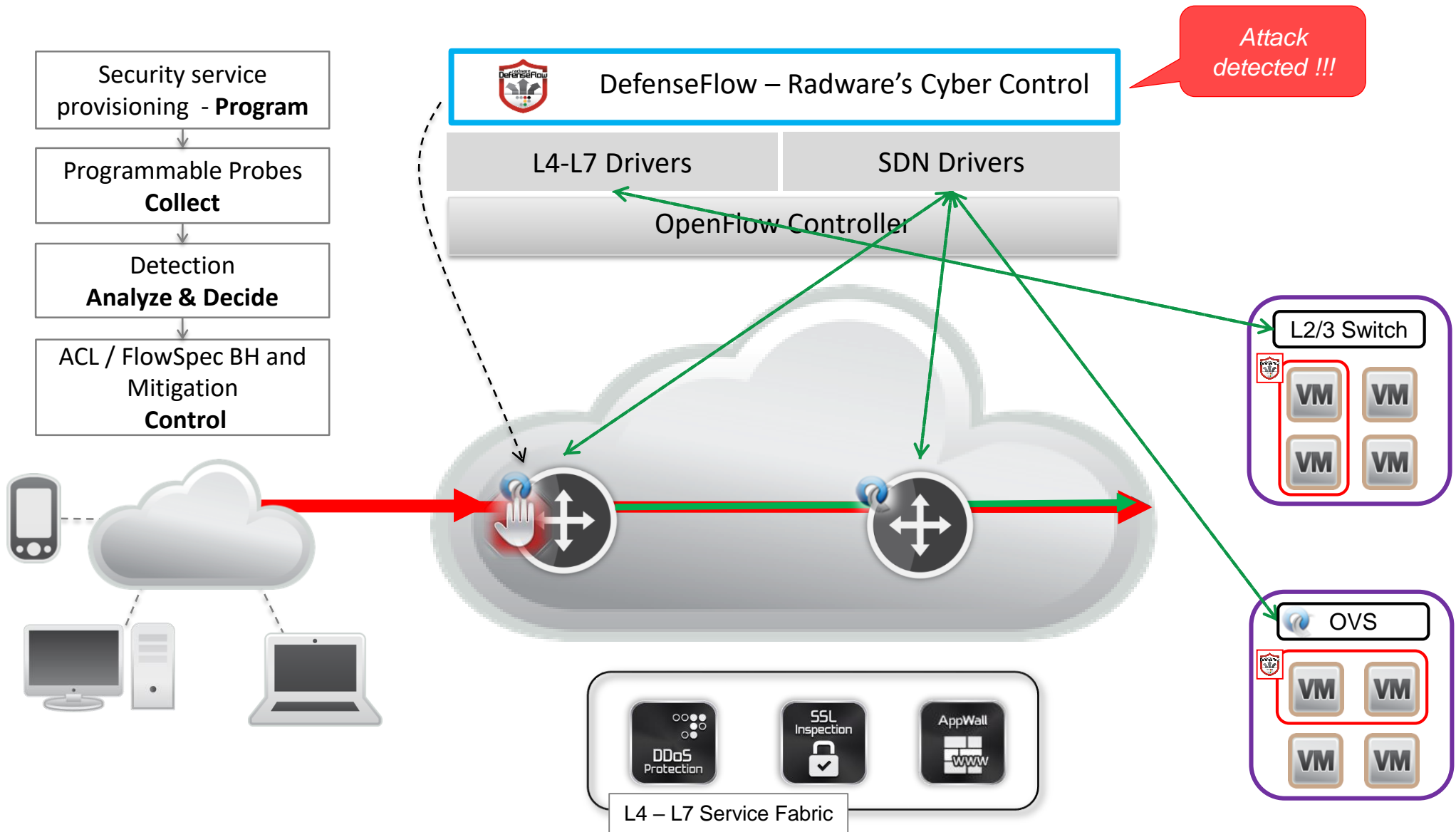
Internal Network

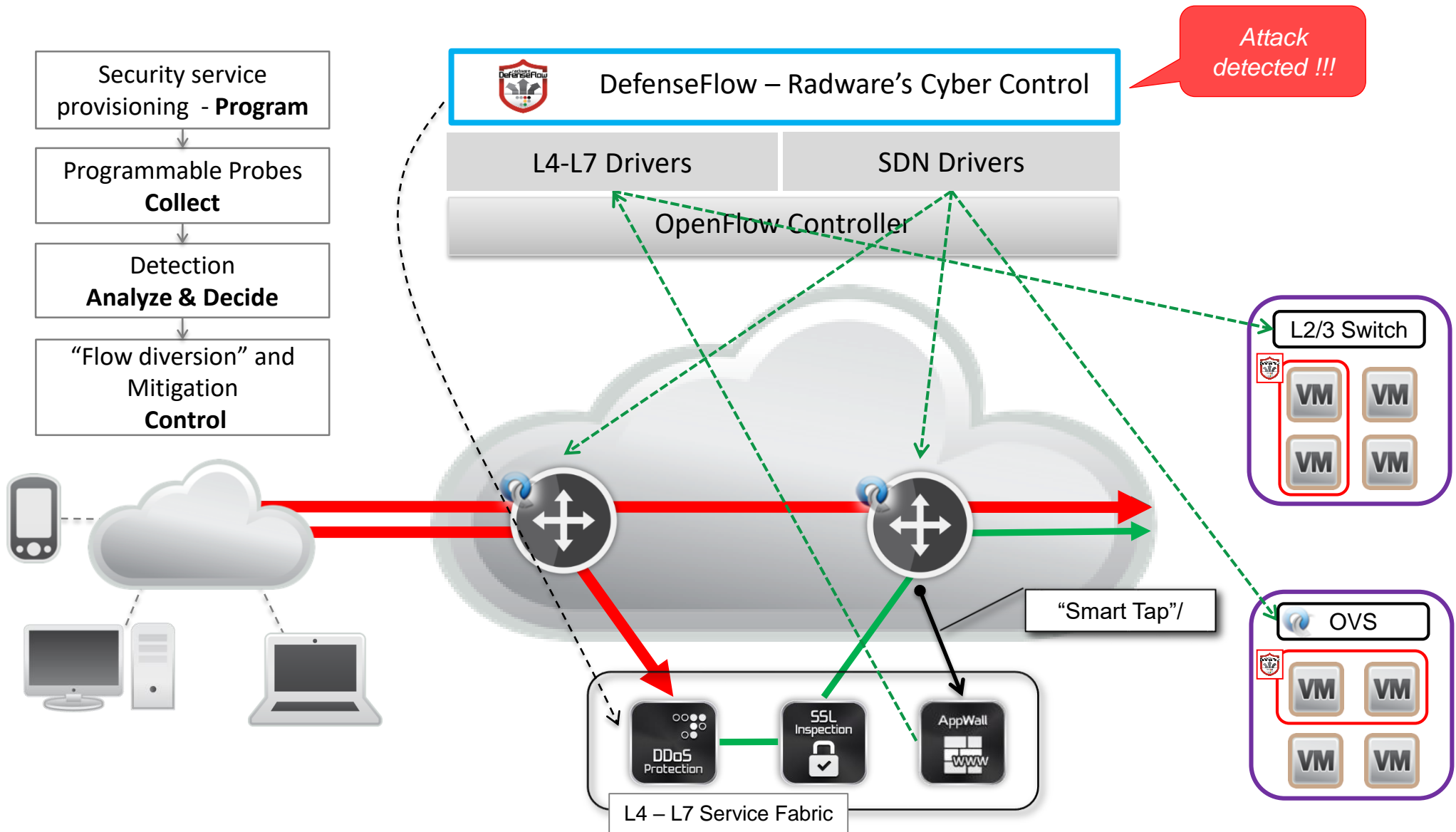


Self Defense, Automated, Network-wide Security







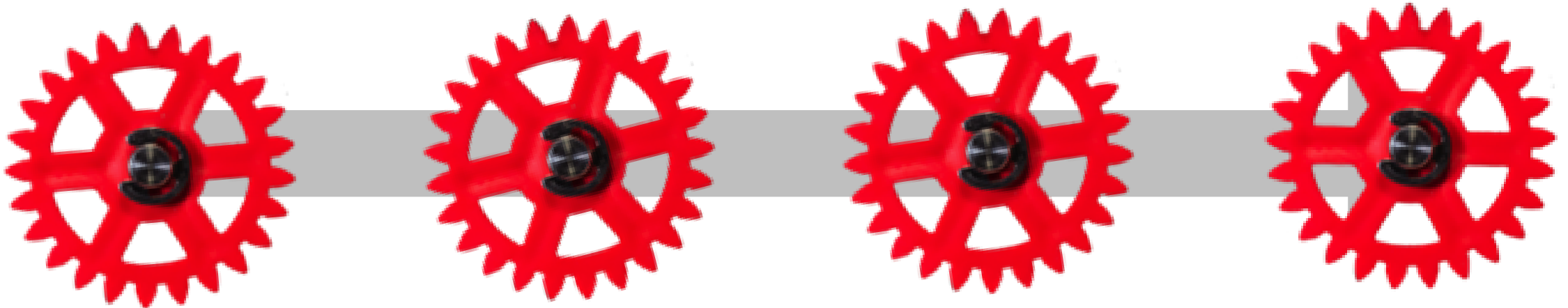


Summary



Self Defence, Automated, Network-wide Security

From point protection... to an **automated & Intelligent network defense** model !



Thank You

An abstract graphic on the right side of the slide. It features several overlapping, organic shapes in vibrant colors: a large yellow shape, a red shape below it, and a green shape above the yellow. There are also smaller red circles scattered around. The background of the entire slide is a dark, textured pattern of small, light-colored dots.