

Cisco Nexus 5000, 6000 and 7000 Series Integration with Citrix NetScaler with Cisco RISE

Integrated Application Network Services: Simple, Fast, Reliable

Introduction

As businesses move toward cloud-based service models, datacenters require integrated application network services to provide robust application delivery capabilities that accelerate application performance without the burden of increased complexity that adds cost and slows down business. Successfully managing application workloads in a simple, flexible, and scalable manner, while lowering datacenter costs becomes critical in the new era of cloud and mobile services.

Cisco Remote Integrated Services Engine

Cisco® Remote Integrated Services Engine (RISE) enables seamless integration of Citrix® NetScaler with Cisco Nexus® 5000, 6000 and 7000 Series Switches. Using pure plug-and-play technology, Citrix NetScaler appears as an integrated line card within the Cisco Nexus switch, simplifying and automating Citrix NetScaler deployment. Cisco RISE supports streamlined deployment for the initial configuration and ongoing management of Citrix NetScaler.

Cisco RISE allows Citrix NetScaler to be used as an extension of Cisco Nexus 5000, 6000 or 7000 Series Switches through embedded intelligent services that securely integrate the control planes of both appliances (Figure 1). Cisco RISE establishes a secure Ethernet-based connection for control plane interactions over a management virtual LAN (VLAN). It enables data plane VLANs to allow Citrix NetScaler to process application data traffic, resulting in flexibility and simplicity.

Key Capabilities of Cisco RISE Integration

Plug-and-play setup. Cisco RISE technology simplifies provisioning, reducing the number of steps required to integrate Citrix NetScaler with a Cisco Nexus 5000, 6000 or 7000 Series Switch. Cisco RISE automates Citrix NetScaler configuration and keeps network interconnect configurations synchronized. This simplifies the deployment process and reduces the risk of configuration errors.

Optimized application delivery. Automatic policy-based routing (APBR) in Cisco RISE dramatically simplifies and optimizes application delivery. It helps solve the performance challenges that result from capacity mismatches between ADC and datacenter switches. By intelligently routing only necessary traffic to Citrix NetScaler, Cisco RISE APBR allows capacity to be used more efficiently, removes the ADC as a potential performance bottleneck, and eliminates unnecessary over-provisioning of ADCs.

Using APBR, Citrix NetScaler automatically adds and deletes the required policy-based routing rules on the Cisco Nexus Switch at runtime. This eliminates the manual intervention associated with traditional policy-based routing, resulting in operational gains for administrators and

significantly reducing operation expenditures (OPEX). APBR also preserves client visibility to server applications, helping application delivery deployments meet security policies. Because applications have visibility to client IP addresses, there is less need for complex log analysis to form audit trails. Without APBR, client visibility can only be achieved through cumbersome and error-prone manual configuration.

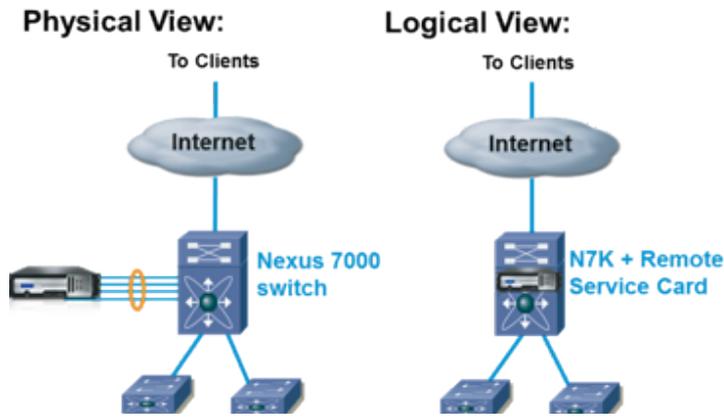


Figure 1. Physical and Logical View of Cisco NetScaler with Cisco Nexus 7000 Series Switch

High availability. Route Health Injection (RHI) provides real-time route updates between Citrix NetScaler and Cisco Nexus Switches, accelerating recovery from service failures and eliminating route black-holing during an application failure. By enabling Citrix NetScaler to deliver route health updates to the switch via Cisco RISE, IT staff can easily deploy shared services within and across datacenters at significantly lower operational cost with increased availability.

Deployment Modes

Citrix NetScaler can be deployed with Cisco Nexus 5000, 6000 and 7000 Series Switches in several ways. In **direct attach mode**, Citrix NetScaler is connected directly to a Cisco Nexus Switch (no L2 or L3 devices between them), supporting simplified provisioning and automatic configuration. In **indirect attach mode**, Citrix NetScaler is connected to a Cisco Nexus Switch through an L2 switch (Figure 2).

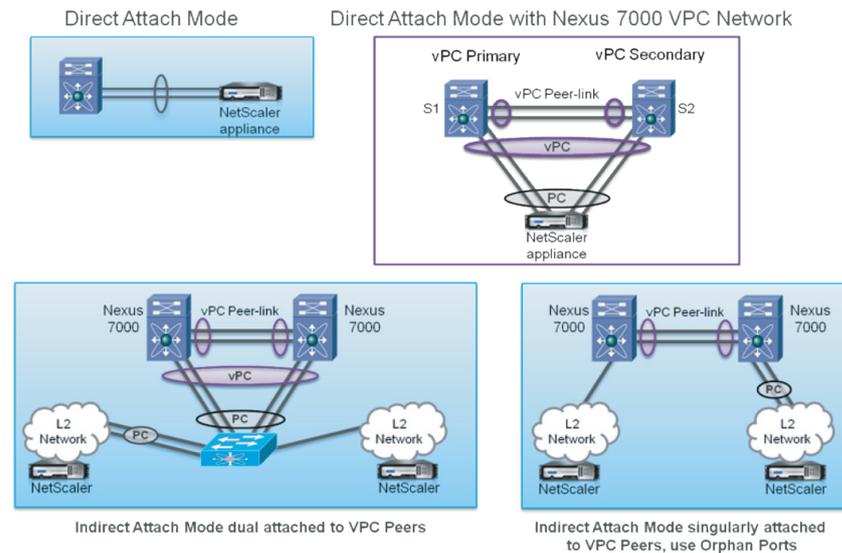


Figure 2. Attachment Modes

Nexus Virtual Device Contexts (Nexus VDC) allow a Cisco Nexus Switch to function as multiple isolated logical switches. This virtualization technology allows users to have multiple logically separated switches on a single physical switch. Cisco RISE supports multiple deployment modes within this VDC architecture (Figure 3).

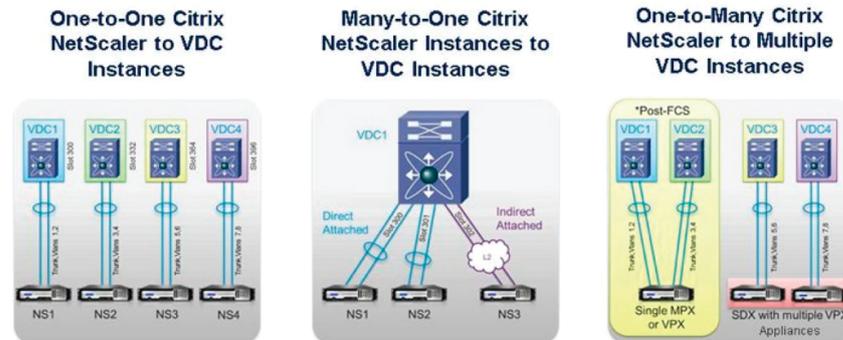


Figure 3. Nexus VDC Support

For More Information

For more information about configuration and installation, visit http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/risenetScaler/install_and_cfg/guide/b-rise-netScaler.html.



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