NetScaler: Cisco ACE, Nexus and ACI Integration

Superior network service provisioning and performance with Cisco and Citrix.
The world’s leading enterprises, service providers and cloud computing platforms, and eight of the top ten internet-centric companies, have standardized on Citrix NetScaler to deliver their most business-critical web applications.

**Citrix NetScaler—recommended by Cisco**

NetScaler® simplifies, accelerates and secures the delivery of complex applications while reducing the cost of hosting and operating web applications. Unique, joint development with Cisco further enhances the delivery of an application centric datacentre in private, public or hybrid clouds. Citrix® NetScaler provides the ideal upgrade path from older Layer 7 products and is the recommended replacement to the discontinued Cisco ACE.

Cisco recommends the NetScaler to its customers as a direct replacement to its ACE range and for building next-generation datacenter networks. Cisco is fully integrating NetScaler into its Cloud Network Services architecture.

NetScaler is the only application delivery controller that fully integrates into Cisco’s unified fabric.

**Challenges**

As businesses look to IT as a point of strategic differentiation, agility in the datacenter becomes more critical than ever. Fundamental to this change is the capability of IT to respond quickly to changing business requirements. Applications serve as the core of any business, but applications are only as agile as the infrastructure on which they run. With today’s datacenter infrastructure, this rule can mean waiting weeks for an application change. Application agility, mobility, and rapid deployment require the datacenter infrastructure to dynamically respond to application needs as a result of changing business requirements.

By integrating with Cisco ACI (Application Centric Infrastructure), and leveraging NetScaler integrated technologies, datacenter and cloud administrators can control network services in a unified manner with seamless insertion and automation of best-in-class services.

Cisco ACI is the foundation of an application-based datacenter. NetScaler delivers application insight to the network. Together, Cisco and Citrix enabled applications can dynamically scale and migrate throughout datacenters on-demand and with an automated approach based on business requirements or critical application-specific policies.

“As the leader in application delivery and application virtualization, Citrix NetScaler powers some of the world’s largest clouds. Being the de-facto choice for clouds, NetScaler has the application intelligence to deliver the network context to drive automated policy changes. Cisco demonstrated Cisco ACI with NetScaler making dynamic, on the fly reconfiguration of the network as changes in the Citrix virtual desktop infrastructure happened. By deploying ACI and Citrix NetScaler, our joint customers can benefit from a rich set of ADC functions while preserving their existing L4-L7 operational models. Since NetScaler is the application delivery controller of choice for both VDI and Mobility, our customers can enjoy the advantages of Cisco ACI powered infrastructure to bring faster application deployment and enable workload mobility.”

Soni Jiandani
SVP of Cisco’s ACI Division
Solution
Achieving the vision of a truly agile, application-based datacenter requires a sufficiently flexible infrastructure that can rapidly provision and configure the necessary resources independent of their location in the datacenter. With Cisco ACI, this is achieved with the Cisco Application Policy Infrastructure Controller (APIC), a centralized policy management and control point for the entire infrastructure.

Citrix NetScaler ADC provides deeply integrated services such as load balancing, application acceleration, and application security. Citrix NetScaler powers the world’s largest cloud networks and is a leader in the enterprise networking market for both physical and virtual network appliances.

The unique joint Cisco ACI and Citrix NetScaler solution improves datacenter operations and application deployment, using the Cisco APIC as the central policy control and management station while the NetScaler provides integrated Layer 4 to 7 services such as load balancing, application acceleration, and application security.

The main benefits include:

• Central point of network control with ADC service policy coordination and automation: The Cisco APIC acts as a point of configuration management and automation for NetScaler SDX™, NetScaler MPX™, and NetScaler VPX™ appliances; tightly coordinates the ADC service delivery with the network auto-mation; and provides end-to-end telemetry and visibility of service-aware applications and tenants.

• Scalable and elastic architecture for physical and virtual appliances: Cisco ACI defines a policy based service insertion mechanism for both physical and virtual ADC appliances, providing full lifecycle service management based on workload instantiation and decommissioning.

• Investment protection: Cisco ACI and Cisco APIC are fully compatible with existing ADC networks, preserving existing service operation models and using open standards protocols.

• Open ecosystem for service integration: Cisco and Citrix are guiding the IETF standard for the Network Service Header (NSH) Protocol, with the promise of agile and elastic service delivery capable of supporting the movement of service functions and application workloads.

Conclusion
As businesses quickly move to make the datacenter more agile, application centric automation and virtualization of both hardware and software infrastructure become increasingly important. Cisco ACI builds the critical link between business-based requirements for applications and the infrastructure that supports them. Citrix NetScaler ADC connects infrastructure and applications and makes that insight available to the Cisco APIC through deep integration.

“Both Cisco and Citrix believe that the datacenter is undergoing a fundamental transformation, driven by cloud, mobility and virtualization. Successfully managing application workloads in these modern datacenters requires a flexible, scalable, application aware network. To help customers make this transition, Cisco and Citrix are collaborating to unify best-in-class technologies based on Citrix NetScaler and Cisco Nexus to accelerate the transformation to new network service delivery models in the Mobile-Cloud Era.”

Klaus Oestermann
Grp VP/GM, Ntwk, Cloud & Serv Prov. Grp

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Why NetScaler?
Cisco and Citrix joint solution development
Our unique and strategic development partnership integrating RISE, VPath and OPFlex, to significantly improve Cisco Nexus and ACI environments, provides you with higher resiliency, improved agility and increased leverage of both your switching and application investments. Cisco recommends the NetScaler solution as the “go-to” from ACE.

480% performance increase over F5 in real-world application delivery
The Tolly Group independently validated NetScaler with a 480% performance improvement when comparing the F5 equivalent. It was also validated that there was more consistency of performance as more features were added or enabled, providing greater performance within each multi-tenant device.

NetScaler MobileStream
Improve productivity by significantly reducing delivery times to mobile devices. NetScaler’s multi-layer optimization for content streaming maximizes mobile page downloads and rendering. MobileStream also improves mobile performance by virtually eliminating the impact of sporadic connectivity.

HDX Insight
Deliver efficient troubleshooting and analysis resulting in fast root-cause analysis and support cost savings. HDX Insight™ delivers real-time client and server latency measurements for detailed and historical reports that go beyond the capabilities of today’s visibility tools to facilitate capacity planning. HDX Insight provides end-to-end performance data from the user to the virtual desktop environment, and web-delivered applications.

Improved Simplicity, Flexibility and Density
TriScale® ensures you only have to buy what you need today, then easily scale up your application service as solution demands grow, with a simple software license upgrade. NetScaler massively reduces capital and operational expenses, lengthy procurement cycles and installation times for new application services, while maintaining performance SLAs.

About Citrix
Citrix (NASDAQ:CTXS) is a leader in mobile workspaces, providing virtualization, mobility management, networking and cloud services to enable new ways to work better. Citrix solutions power business mobility through secure, personal workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. This year Citrix is celebrating 25 years of innovation, making IT simpler and people more productive. With annual revenue in 2013 of $2.9 billion, Citrix solutions are in use at more than 330,000 organizations and by over 100 million users globally. Learn more at www.citrix.com.

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