



# Enhance Performance for VMware View AlwaysOn Desktop with Fine-grained Application-level Control

A Riverbed and VMware Joint Partner Brief

## Business challenges

The vision of delivering any application or service to any user, on any device, over any network is quickly becoming a reality. As business processes become more reliant on technology, the risk of downtime increases in lockstep. Planned and unplanned downtime cuts into an organization's productivity and bottom line. As organizations move towards virtual desktops, providing high availability becomes even more critical because any downtime can reduce worker productivity.

Industries such as healthcare, government, first responders, and financial services in particular demand immediate and constant access to desktops and applications. They need a solution that can overcome application performance, scalability, availability, and control challenges associated with virtual desktops and applications, across a wide variety of devices, locations and networks.

Riverbed and VMware have partnered to ensure that users always have secure, easy, and quick access to their virtual desktops no matter what device they are using, and no matter where they are accessing from. The combined solution enables IT to provide business continuity and high availability for end users in organizations that require constant access to desktops, applications and data without sacrificing mobility or end-user experience.

## At A Glance

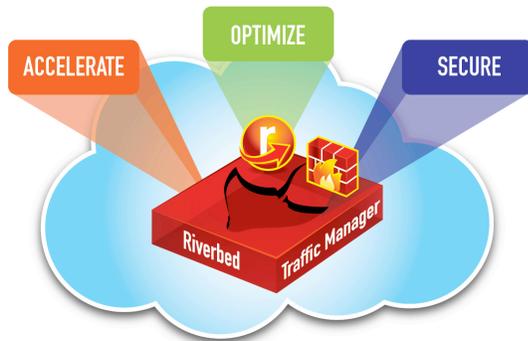
Riverbed has partnered with VMware to integrate the Stingray Traffic Manager application delivery controller (ADC), with VMware View AlwaysOn Desktop solution.

### Features:

- Non-stop access to the desktop with fast logon times
- Local and global advanced traffic management to maximize scalability and availability
- Accelerated applications
- Fined-grained application-level control custom policies and prioritizations that align with business needs
- Connectivity to desktops from any endpoint device, from anywhere, even in the event of a site failure

## Riverbed Stingray Traffic Manager: The power of application acceleration

Riverbed® Stingray™ Traffic Manager is a full performance software and virtual Layer 7 application delivery controller (ADC) that enables enterprises and cloud operators to create, manage, and deliver key services more quickly, more flexibly, and at a lower cost. Stingray Traffic Manager software offers much more than just load balancing. It controls and optimizes end-user services by inspecting, transforming, prioritizing, and routing application traffic. Riverbed Stingray™ TrafficScript language facilitates the implementation of traffic management policies that are unique to an application by allowing organizations to build custom functionality or to leverage existing features in Stingray Traffic Manager software in a specialized way.



*Stingray Traffic Manager software is the complete solution for application delivery for the data center and the cloud.*

Stingray products are designed for the cloud, whether public or private. Most other application delivery providers offer hardware load balancers or firewalls, or at best, very limited virtual machine versions. Stingray Traffic Manager is designed from the ground up to be deployed as software, so it is better suited to development, operations, and cloud needs.

### Stingray Traffic Manager software benefits include:

1. **Speed:** Accelerate services, increase capacity, and reduce costs by offloading performance-draining tasks such as SSL and compression onto Stingray optimized implementations. Administrators can also cache commonly requested content and optimize traffic delivery to your applications so they'll run as fast as they would in a perfect benchmark environment.
2. **Reliability:** Improve application availability by intelligently distributing traffic, avoiding failed or degraded servers, monitoring performance problems, and shaping traffic spikes.
3. **Improved security:** Stingray Traffic Manager software operates as a deny-all gateway that can be configured to admit certain traffic types. This gives full control over how traffic is internally routed. High-performance inspection interrogates

any part of a request or response before applying global filtering or scrubbing policies. The Stingray™ Application Firewall software option also protects against a broad range of web application attacks.

4. **Ease of management:** Stingray Traffic Manager software makes it easy to manage how users interact with the applications, and the infrastructure those applications depend on. Administrators can also use it to shape, prioritize, and route traffic, to drain infrastructure resources prior to maintenance, and to upgrade user sessions across application instances all while preserving the user experience the business demands.

## VMware View AlwaysOn

The VMware View AlwaysOn Desktop is a high-availability solution for virtual desktops. The solution helps any organization build a virtual desktop infrastructure based on VMware View™ and provides non-stop access to desktops hosted in the data center while streamlining application updates, enhancing data security, and delivering the highest fidelity user experience. It enables an organization to address the following requirements:

### Availability

The View AlwaysOn Desktop solution is designed to provide non-stop access to desktops hosted in the data center. An active-active configuration is used for the VMware View infrastructure to ensure that data center resources are utilized optimally and end users are provided with the best possible user experience. With a stateless desktop model and constant replication of master images and user data between two pods (at the same location or two different locations), end users have non-stop, high-availability access to their desktops — even if any one site becomes unavailable.

### Mobility

The View AlwaysOn Desktop solution is built on VMware vSphere™ and VMware View to deliver the highest quality desktops to end users accessing from any endpoint device. Since the desktops are hosted on the data center, end users have an option of using any endpoint device (zero clients, tablets, laptops, etc.) when accessing their desktops. The solution also provides session persistence across devices allowing users to access their desktops from different devices. And with the use of PCoIP protocol, VMware View delivers the best desktop user experience from any device.

### Security

From the integration of two-factor authentication solutions to hypervisor-based antivirus products, the solution enables the highest level of security in the organization without disrupting the end-user experience. It also incorporates products that ensure regulatory compliance with any industry standard.

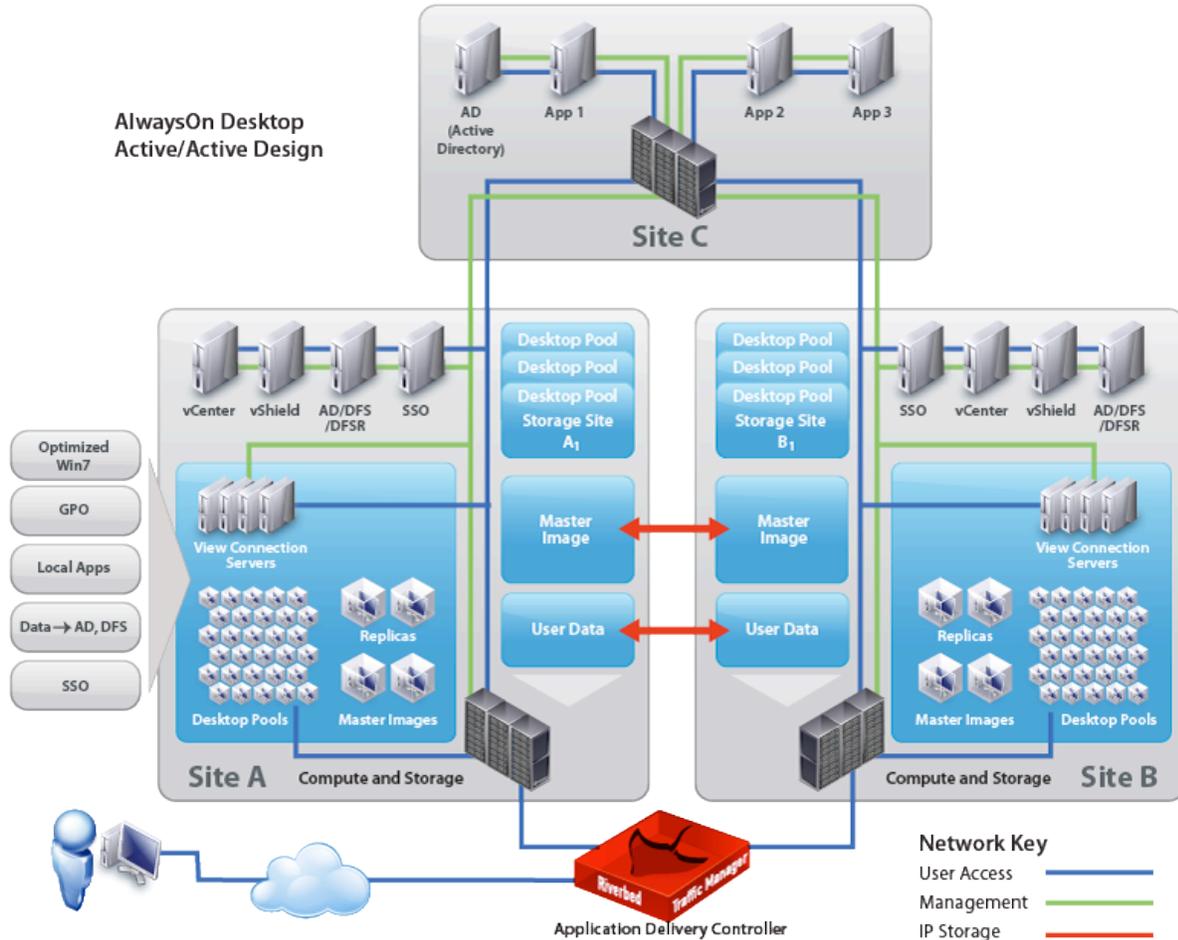
The View AlwaysOn Desktop is a validated solution architecture offered by VMware and VMware Ready Partners. This solution is an active-active configuration with multi-levels of redundancy as well as continuous monitoring and load balancing between sites. Replication of end user data between the sites allows organizations to take advantage of low cost stateless desktops while still preserving end user settings, data and favorites.

Key features:

- High availability
- Session persistence
- Security

While security and session persistence are inherent benefits of VMware View VDI, the architecture is built with two View pods to achieve high availability in case of a complete site failure. The two View pods can reside in the same or in different data centers.

**How is the View AlwaysOn Desktop Solution deployed?**



**Combining application acceleration power with high availability**

Riverbed has partnered with VMware to integrate the industry’s only pure-software ADC, Stingray Traffic Manager software, with VMware View AlwaysOn Desktop solution. The joint solution now enables IT to provide business continuity and high availability for end users within organizations that require constant access to desktops, applications and data without sacrificing mobility or end-user experience.

The View AlwaysOn Desktop is a validated solution architecture offered by VMware and VMware Ready Partners. Riverbed Stingray Traffic Manager when combined with VMware View brings a tightly integrated offering to meet the needs of organizations that need high availability, performance and scalability to desktops, applications and data.

For the IT administrator, Stingray Traffic Manager software delivers a powerful set of application delivery tools such as intelligent traffic management capabilities between multiple pods, sites, and geo-locations. It delivers accelerated performance, increased scalability and availability, and fine-grained application-level control.

Simple but powerful scripting language, easy user interface-based configuration management, and robust application programming interface (APIs) all combine to make Stingray Traffic Manager software manageable like an application and provisioned like a service. This makes it better suited than a hardware load balancer to accelerate, scale and control, end-to-end high-availability desktop solutions.

It is particularly well suited for deployments requiring high scalability ranging from hundreds to tens of thousands of devices.

### **How does the integrated solution work?**

Stingray Traffic Manager instances are deployed at both sites and the Stingray instance at one site provides single-namespace access to the clients (i.e., all users in both sites use the same URL to access their desktops). Single-namespace access significantly enhances user experience, since users at multiple locations, and/or users traveling to multiple locations can access their desktops using the same URL. Stingray Traffic Manager software also provides the initial routing to the two sites based on the IP of the incoming connection, and it can be configured to route traffic based on IP, continent, country, or ISP provider of the incoming connections.

### **Local load balancing:**

The application delivery solution provides advanced layer-7 load balancing of the View Security and Connection Servers. Stingray Traffic Manager also provides intelligent traffic management as well as application scalability, acceleration, control, and optimization. As part of the integrated solution, View AlwaysOn Desktop customers can now utilize the core feature set from Stingray Traffic Manager, including load balancing, SSL Offload, health monitoring, and TrafficScript scripting ensure that a given user is always routed to a preferred site, and only in case of site failure he or she is routed to an available site.

### **Global load balancing:**

Stingray Traffic Manager global load balancing (GLB) feature can now be leveraged by View AlwaysOn Desktop to direct users to a closest available site for remote desktop access, based on the end user's geo-location and site availability. Rather than offering multiple access points (e.g., site1.company.com, site2.company.com, etc.), this feature enables IT to offer users a single site (e.g., view.company.com) that helps distribute connection requests automatically according to the correct policy.

The feature also provides single-namespace access to clients/user (i.e., all users access desktops using a single URL. GLB picks the closest site to the user based on the end user's geo-location and site availability. And it supports routing of user traffic based on their IP address, continent, and country – this provides customers with multiple options that meets their requirements and needs.

### **Active Directory query:**

The routing and connectivity between the two sites for high availability is determined by the configuration of Stingray Traffic Manager, AD entitlement, and View pod sizing. Stingray Traffic Manager is deployed at each site to provide AD lookup and to route the incoming connections to the appropriate View Connection Manager. It queries Active Directory to enable the selection of the appropriate VMware View Pod to which to direct the user. In essence, Stingray Traffic Manager provides the intelligence required to direct the connection to the appropriate View pod and to the appropriate Security Server within that View pod.

## **Conclusion**

The VMware View AlwaysOn Desktop is a powerful architecture based on technology from VMware and Riverbed Technology that enables organizations to improve performance and scalability while reducing costs and complexity. It ensure that users always have easy and quick access to their virtual desktops no matter what device they are using, and no matter where they are accessing from, while at the same time providing IT administrators with a powerful set of application delivery tools to meet evolving user needs and meeting business requirements.

## **More information**

- Stingray Traffic Manager: <http://www.riverbed.com/us/products/stingray/>
- Free Stingray Developer Edition Download: [http://www.riverbed.com/us/products/stingray/free\\_stingray\\_download.php](http://www.riverbed.com/us/products/stingray/free_stingray_download.php)



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