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F5 and VMware Virtual Desktop Infrastructure

F5 helps ensure maximum performance and availability for VDI

VMware Virtual Desktop Infrastructure (VDI) is the premier virtual desktop solution in the marketplace. Customers are deploying it in a myriad of different ways and reaping the benefits of manageability, efficiency and reliability. Virtual desktop technologies like VDI achieve their impressive benefits by moving the computational and management resources from the client side to the server side. This centralization brings many benefits, but requires careful planning to avoid the pitfalls of reduced performance and availability.

There are common variables that can be easily addressed when deploying VDI to local clients (within the local area network) to ensure maximum performance and availability. However there are additional more complex variables that arise when the end-user is located in a branch office (over a Wide Area Network) or another remote network. These variables are introduced primarily by data being transferred outside the corporate firewall or VPN, over congested links or by access from an autonomous network. Addressing these additional issues can make the difference between happy and frustrated end users.

There are three categories of "incremental" risk to consider when deploying VDI over a Wide Area Network. Each of these can affect the success of the project:

a. Business Continuance

b. Security

c. Operating Expenses

Specifically, these risks translate to:

- Lower than expected performance by the centralized Virtual Deskop Manager (VDM) server infrastructure
- Poor user experience from remote sites
- High cost of bandwidth to branch offices
- Reduced employee productivity if the VDI deployment is inaccessible

About F5 and VMware:
As the global leader in Application Delivery Networking, F5 brings significant increases in performance, scalability and availability for applications that run on VMware. However extracting the full benefit of running an application in a virtual environment requires intelligent and automated load balancing of the virtual machines. To demonstrate the benefits and deliver increased integration between F5 BIG-IP and VMWare technology, F5 is a VMware Technology Alliance Partner. This collaboration enables F5 to leverage VMware APIs and SDKs to integrate the two lines of products, ensuring maximum support for customers of the joint solution.

How Can F5 Help?

F5 has several solutions that help reduce these risks.

Intelligent Traffic Direction and Increased Performance

F5 ***BIG-IP Local Traffic Manager (LTM)*** brings advanced application delivery networking performance to VDI. This can result in significant improvement in performance and capacity of VDM servers, through precise load balancing, traffic management and by offloading processor-intensive functions such as SSL termination and compression.

- *Load Balancing Virtual Machine Servers* – BIG-IP LTM has the ability to provide complete traffic management services to VDM servers and the VMware Virtual Infrastructure behind them. This ensures maximum availability and performance of the infrastructure.

- *VDI client connection persistence* - F5 BIG-IP LTM can manage client connection persistence based on unique sessions through it's iRules™ feature; which can be more robust than persisting based on the typical source IP address. For example, if users are accessing VDI from a web proxy, or NAT device, such as those used by large service providers or enterprise customers, LTM can distribute and persist the connections amongst all VDM connection servers rather than sending all following connections from that proxy server to a single connection or security server; as would be the case with simple or source address persistence.
- *SSL Offload* – BIG-IP LTM has the ability to offload the SSL termination typically done by the VDM infrastructure. This can offload a large amount of CPU cycles from the servers to BIG-IP, a high-performance, function-specific appliance.
- *Compression* – BIG-IP LTM has the ability to provide asymmetric compression to the client for traffic such as javascript and html.

Data Center Access

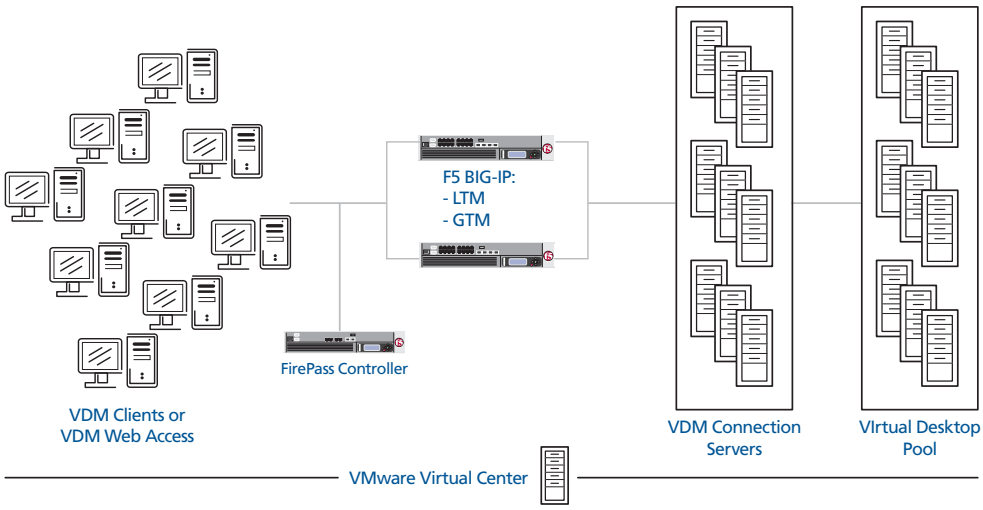
The ***BIG-IP Global Traffic Manager (GTM)*** has the ability to route incoming VDI traffic to the highest performance data center at any given time, depending on the end user's location, link conditions and data center conditions. This ensures that if one data center has reduced availability, the other data center(s) can automatically serve the VDI clients instead.

Secure Connections

F5's ***FirePass controller*** is an SSL VPN that provides advanced secure remote access to the VDM servers in the data center. Benefits include pre-logon inspections to ensure compliance of the remote client prior to allowing access to the network or VDI, as well as providing an encrypted connection during the VDI session.

WAN Optimization

Links to branch offices often rely on public broadband which can suffer from excessive latency and packet loss, and these directly impact the client's experience using a virtual desktop. The alternative is to lease high-bandwidth private links however the cost is often prohibitive. F5 ***WANJet*** helps through acceleration of virtual desktop traffic, including TCP optimization, compression and deduplication. What this translates to is the experience equal to or better than a private link, but at a fraction of the cost.



Summary

Deploying VDI can yield enormous value for organizations, whether locally or remotely. Although there are additional complexities when deploying for remote use, VDI can still perform at high levels if these network issues are addressed effectively. Doing so results in happier end users who are more productive. F5 can help address all of these issues while avoiding branch office box proliferation. For more information, go to **http://www.f5.com/vmware**

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