

Solution Guide: G/On and VDI

Getting the most from Desktop Virtualization

Executive Summary

"Virtual Desktop Infrastructure", or VDI, is gaining increasing acceptance from businesses and organizations because VDI extends optimization and operational advantages of server side virtualization to the desktop. VDI is a technology that offers individual virtual desktops to users, controlled and managed by, and in, a centralized backend server infrastructure.

Compared to traditional Terminal Services and Citrix based solutions, VDI provides users with individual virtual PCs as opposed to individual user accounts on *shared* PCs.

However, since VDI technologies are centered around the computer, they do not address network challenges. IT Administrators looking to deploy VDI are typically forced into SSL or IPsec based VPN solutions which rely heavily on a wide range of third party solutions (tokens, certificates, proxies etc.) to provide the necessary security levels required to fulfill the promise of true mobility.

G/On from Giritech addresses all aspects of the networking challenge by securely connecting users to the VDI, providing an optimized and seamless, end-to-end, secure connection between users and the backend virtualization infrastructure.

Contrary to traditional VPN based solutions G/On does not connect the remote PC to the corporate network but connects users directly to their applications. Consequently, G/On's USB option provides the mobility support that enables extended use of VDI beyond the internal networks to almost any location on the Internet.

G/On with VMWare View enables IT Administrators to make the most of VDI – simple and secure – gaining the full benefits of desktop virtualization.



Solution Highlights

Benefits

- *Improved end user experience*, just "Plug and Work"
- *Increased security* by addressing all the security challenges associated with network access in an integrated way
- *Mobility*, carrying all required executables on the secure G/On USB device allows access from almost any internet connected PC
- *Lower network complexity*. G/On provides an end-to-end complete network solution connecting users to their virtual desktop.
- *Full tracking of all user access*

Pre-requisites

Will run from almost any standard Windows PC with Internet access. Integration of VDI with G/On has been tested and delivered to customers based on VMWare View 3.

1. The Challenge

"Virtual Desktop Infrastructure", or VDI, is gaining increasing acceptance from businesses and organizations because VDI promises to extend optimization and the operational advantages of server side virtualization to the desktop. VDI is a technology that offers individual, virtual desktops to users, controlled and managed by a centralized back end server infrastructure. VDI is a virtualization-based version of the client/server model that IT departments have normally offered their businesses. With VMWare's VDI, users can connect from a thin client or browser over the network to their own virtual desktops running on backend ESX infrastructure. Compared to traditional Terminal Services based solutions, the end users are provided individual virtual PCs as opposed to individual user accounts on *shared* PCs.

The advantages of VDI include:

- Simplified endpoint management by offering a centrally controlled desktop image to users as opposed to relying on software located on a more or less secure standalone endpoint.
- Increased security by controlling and enforcing the patch state and update levels of OS and applications from and in a central location
- More effective use of local PCs
- Rapid deployment, or re-deployment, of desktops to new and existing users
- Simpler regulatory compliance (e.g. HIPAA and SOX)
- No application compatibility issues (as can be the case for TS or Citrix) as each user has a complete, but virtualized, computer available.

VMWare's VDI solution (Virtual Desktop Manager, VDM) consists of three main elements: Virtualization servers with associated infrastructure, hosted individual OS instances and the Connection Server (VMware's VDI Connection Broker). The Connection Server distributes and manages incoming connections from users towards the OS instances on the backend server infrastructure. The Connection Server is thus a core component in any VDI installation. The G/On server is set up in front of the VDI Connection Server to handle all network related functions.

Advanced virtualization technologies are highly optimized towards the effective use of hardware and software resources thus making them very computer centric (server and PC). Typical virtualization solutions do not address the challenges of the network between client and server(s). IT Administrators looking to deploy VDI are still left with traditional classical SSL or IPsec based VPN solutions which rely heavily on third party solutions (e.g. tokens, certificates, proxies etc.) to provide the necessary security levels required to fulfill the promise of ubiquitous mobility that is the pre-requisite for giving IT Administrators and users the full advantages of desktop virtualization.

When analyzing this challenge of connecting virtualized servers with virtualized desktops it becomes clear that there are five security challenges in providing remote access to virtual desktops:

1. Identifying who is trying to connect: Strong multi factor authentication of end users
2. Protect the backend from potential infections from unknown endpoints
3. Protect data in transit on the Internet, i.e. encryption
4. Filtering of connections before allowing access to the back end based on identity, location and client PC of user.
5. Authorization of users' connections to back end applications, i.e. the virtual desktops

Simply deploying standard RDP and SSL technology, as is typically recommended, only addresses a small part of this overall picture.

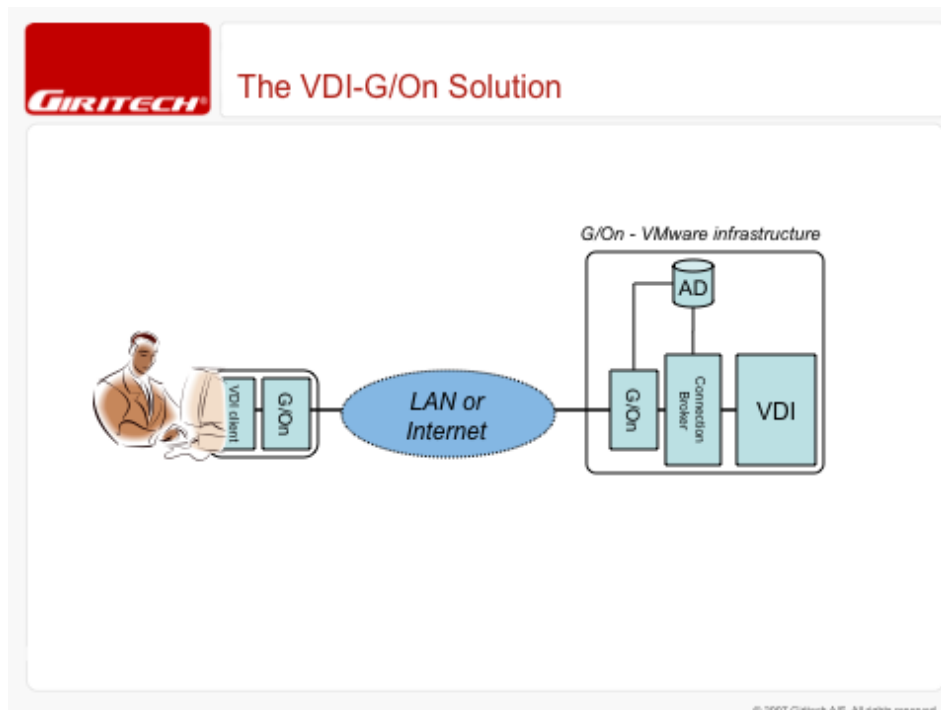
2. The Solution

A complete end-to-end secure virtualization is achieved by integrating G/On and VMWare VDI:

1. All necessary client side software (VMWare View and G/On) is copied to the unique G/On USB token that also serves as HW authentication device.
2. At execution (e.g. auto launch from the USB CDROM) a seamless and secure connection to the G/On server is established and the user is authenticated.
3. The VMWare View client is automatically launched and provides the user with a direct and secure access to the virtual desktop inside the VMWare farm from any PC with Internet access – no installation is required.

The G/On USB option provides the mobility support that enables extended use of VDM beyond internal networks to almost any location on the Internet. The VMWare View Client runs off the G/On USB device thus combining the networking capabilities of G/On with the mobility and maintenance advantages of having all client side software integrated on the unique G/On USB. Furthermore, the built-in software deployment system in G/On allows the IT Administrator to centrally manage all necessary client side software.

Giritech remains the only vendor in the market that provides a complete, end-to-end and fully integrated user to application networking solution. G/On therefore completes the virtualization picture by offering a unified and optimized network infrastructure.



The figure above outlines how G/On provides a complete and secure connectivity solution between VDI clients on remote PCs and the VDI backend. This combination provides an easily managed networking solution addressing all the issues of endpoint management and network connectivity.

3. The Benefits

Due to the fully integrated feature set of G/On, there is no requirement for installed software on the local PC. The VDI client and G/On software reside on the G/On USB key (or can optionally be installed on the local computer) and thus provide full flexibility and mobility for the end user. Furthermore all software required is managed via and from the G/On server. Updating the software, VMWare View and/or G/On, therefore becomes a simple task.

Customers achieve the following main advantages:

- Optimized network infrastructure
- Simplified management of end user environments
- Unified connectivity for all user types, ranging from internal administrative staff to temporary employees in the municipality's different departments
- Increased security levels

4. More Information

To find out the details about the functionality and features of G/On and to obtain references on G/On installations worldwide plus learn more about the importance of an integrated solution to the 5 challenges of remote access please refer to: www.giritech.com.

Please contact Giritech for a presentation and demonstration of an integrated G/On-VDI solution and to understand how this technology can benefit *your* infrastructure.

5. Contact

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