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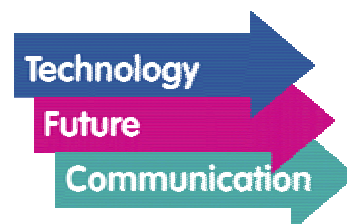
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# WhitePaper

## HOB WTS Computing

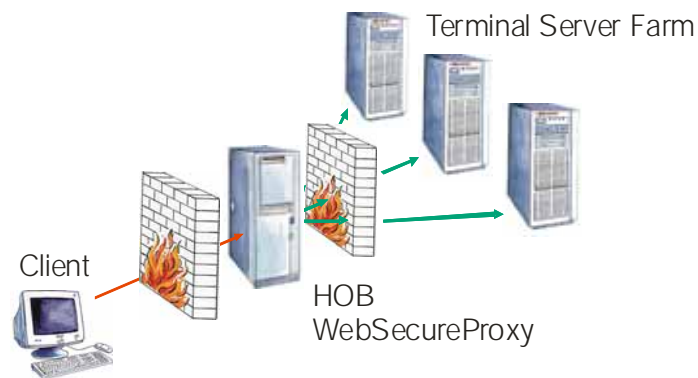
Secure Access to Windows Terminal Server Farms –  
Even Over the Internet

March 2007



## HOB WTS Computing: Secure Access to Windows Terminal Server Farms, Even Over the Internet

An important component of the HOB RD VPN idea is to work with applications via the Microsoft RDP protocol. In the current MS Windows Server 2003 version, this protocol is especially powerful. Security, absolutely necessary when working over the Internet, is provided with extended SSL functionality. The HOB WebSecureProxy effectively shields the Windows Terminal Server from direct access over the Web.



HOB WTS Computing - Basic Scenario

The illustration above shows the basic connection of users over the Internet. In this sample scenario, the user connects to the HOB WebSecureProxy via HTTPS from any Web browser. At the HOB WebSecureProxy (WSP), the user authenticates himself with a user name and password. The optional use of tokens, for example, RSA SecurID, further increases security. The HOB WebSecureProxy has the appropriate RADIUS protocol interfaces to any authentication server. After successful authentication, the HOB Terminal Server client HOBLink JWT is downloaded, as an applet, and it automatically establishes an SSL-encrypted connection to the HOB WebSecureProxy. The WSP, in accordance with the HOB Load Balancing settings, makes the connection to the best suited terminal server. Important note for firewall administrators: All communications between the client and firewall are carried out over just one port, preferably port 443.

When using a Windows Terminal Server farm to provide applications to your employees, you will need a powerful load balancing mechanism. The load balancing offered by Microsoft can only provide you with a sequential selection of the individual servers (Round Robin), or a distribution according to network load.

The optimal utilization of a Windows Terminal Server farm, however, requires an evaluation of the individual server's CPU load or other parameters.

The HOB Load Balancing mechanism can measure up to 13 different values, which can be set and weighted by the administrator to best fit his needs.

The following parameters can be selected:

- CPU load
- Pagefile use
- Swap activity (total, read, write)
- Memory use
- Active sessions
- Disconnected sessions
- Network load
- Number of processes
- Number of threads
- Hard disk utilization
- Input / Output activity

HOB Load Balancing – How it works:

Before establishing a session, the HOB client queries the available Windows Terminal Servers. This can be done via a broadcast or a defined server list. Each addressed server then reports its current load. The querying client can then select the server with the least load. This mechanism also supports "disconnected sessions." Hereby the user is connected to the same Terminal Server which was in use before the session was disconnected.

When the connection is established over the Internet – HOB WTS Computing – the load query is carried out via the HOB WebSecureProxy. This is the central control location for all communications between the users/clients and the Windows Terminal Server farm. The HOB WebSecureProxy, preferentially placed in the DMZ, between both firewalls, effectively shields the company servers from direct access over the Internet.

The scenario described above covers the basic functionality of HOB WTS Computing. Of course, this functionality can be extended, for example, by a powerful user management with

LDAP or MS Active Directory. No special requirements are made on the client side. This solution is virtually "clientless." The HOB solution also offers you many additional functions, for example:

- HOB True Windows – makes remote applications appear as if they were being run locally
- Bidirectional audio
- Virtual Channel Support
- SmartCard Redirection for SmartCard-based logging on to a Windows Terminal Server
- Print capability fully independent of the printer hardware (HOB EasyPrint)
- Optional virus scanning of files exchanged over Local Drive Mapping

Read more about the available functions in the HOBLink JWT and HOBLink JWT Enterprise Access (incl. user management) product documentation.

For further information on the HOB WebSecureProxy, please see the HOB Whitepaper "HOB WebSecureProxy: Encryption, Security, Performance, Failsafety."

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