

Juniper Networks Solution for Secure Access to TCC Applications

Securing Access to Citrix, Microsoft Terminal Services, and Other Thin Client Applications with Juniper Networks Secure Access SSL VPN

Challenge

As more and more IT departments are provisioning their applications to Thin Client Computing (TCC) technology, it is essential that remote access to these applications is secure. However, the real challenge is not only providing secure access to thin-client applications, but also providing access to emerging web applications, client/server applications, full network access to all applications, and to meet the growing use of mobile devices. Enterprises need to invest in a platform that can enable robust support for all their remote access needs.

Solution

Juniper Networks Secure Access (SA) SSL VPN solution provides the most comprehensive support and extensive functionality to all TCC environments to ensure the most secure access and transfer of data.

Benefits

- Provide remote access to corporate resources
- Provide the ability to authenticate, authorize and audit thin client traffic
- Ensure end point device security
- Control access based on the combination of user, end point device and network information
- Protects investment by integrating all remote access needs on a single platform

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- Microsoft's Remote Desktop Protocol (RDP), which is used by Microsoft® Windows Terminal Services (WTS) products, and other vendors' products that are based on WTS.
- Citrix's Independent Computing Architecture (ICA), which is utilized by Citrix's XenApp product (formerly known as Presentation Server or MetaFrame).

Other TCC technologies include UNIX X-Windows system and Virtual Network Computing (VNC) products¹.

The Challenge

Thin client computing (TCC), otherwise known as server-based computing, was designed to drive down the high costs associated with running applications on every desktop, enabling access to applications written for one computing platform from other platforms, and providing remote access/control of applications. Companies like Citrix, have created entire businesses based on offering this technology. Nonetheless, IT departments are constantly struggling with the costs associated with managing and securing TCC environments as the number of users and applications grow. The escalating demands have often forced IT departments to establish monthly budgets for the sole purpose of adding new TCC resources, like additional Citrix & Microsoft end user and server licenses. As a result of this trend, it's imperative for companies to have a robust secure remote access solution to TCC applications for their users.

The Juniper Networks Thin Client Computing Solution

Juniper's Secure Access SSL VPN can secure and assure access to any application, and it has the industry's best support for Thin Client Computing applications. Juniper provides several different access method options for providing secure access to TCC applications in order to meet administrators' different usage requirements. These access methods include:

Core Clientless Access

Core Access uses Juniper's Content Intermediation Engine, which intermediates SSL traffic and native protocols to provide clientless access to complex Web-based enterprise applications, Java applications, file shares and terminal hosts. Core Access can be used when administrators are required to provide Java-based TCC application access to the broadest possible set of devices, including kiosks and other non-managed devices, as well as to users without extended user privileges.

¹Terminal Emulation technologies that provide access to text-based platforms such as Telnet, 3270 (IBM Mainframe), and 5250 (IBM Midrange) are sometimes considered Thin Client Computing technologies. Juniper Networks Secure Access SSL VPN can secure and assure clientless access to these technologies as well.

²For more information on Juniper's Core Clientless Access Secure Application Manager or Network Connect technologies, see the datasheets located on <http://www.juniper.net/products/ssl/dsheet/>.

Embedded Terminal Services Access

Juniper’s embedded Terminal Services access intermediates traffic to Citrix XenApp/Presentation Servers or Microsoft Windows Terminal Servers using either existing ICA or RDP clients, or dynamically delivering the appropriate client. Terminal Services access allows administrators to centralize all of their access control policies in a single platform by enabling administrators to define policies within their SSL VPN for provisioning desktop or published applications access. Because it proxies only RDP or ICA traffic, Terminal Services access can be used when administrators are required to provide access to less trusted devices or users, without provisioning a full network tunnel into the LAN.

Secure Application Manager (SAM)

SAM is a dynamically delivered lightweight agent that intermediates remote communication with internal client/server applications over SSL². Because it proxies only administrator-defined application traffic, SAM can be used when administrators are required to provide client/server application access to less trusted devices or users without provisioning a full network tunnel into the LAN. SAM comes in a Windows version for Windows platform deployments and a Java version for cross-platform support.

Network Connect

Network Connect (NC) is a dynamically delivered lightweight agent that provides next-generation layer 3 network access to Windows, Mac and Linux platforms². Network Connect is significantly easier to deploy and manage than IPsec VPN access, and can secure and assure access to all TCC applications.

Juniper’s access methods support the following Thin Client Computing applications:

Juniper Access Method	Supported Thin Client Computing Applications
Core Clientless Access Services	<ul style="list-style-type: none"> • Java RDP clients for Windows Terminal Server deployments • Java ICA client Citrix XenApp/Presentation Server with or without Web Interface • Other Java applet clients for TCC applications such as 3270 or 5250
Embedded Terminal Services Access	<ul style="list-style-type: none"> • Microsoft Windows Terminal Server • Citrix XenApp/Presentation Server
Java Secure Application Manager	<ul style="list-style-type: none"> • Win32³ clients Windows Terminal Server deployments • Java ICA client Citrix XenApp/Presentation Server with or without Web Interface • Win32³, Mac, Linux ICA clients Citrix XenApp/Presentation Server with or without Web Interface
Windows Secure Application Manager	<ul style="list-style-type: none"> • Win32³ clients Windows Terminal Server • Java ICA client Citrix XenApp/Presentation Server with or without Web Interface • Win32 client³ Citrix XenApp/Presentation Server with or without Web Interface
Network Connect	<ul style="list-style-type: none"> • All TCC applications

Features and Benefits

Juniper’s Secure Access SSL VPN is the best way to secure and assure access to Thin Client Computing applications, and it provides the following benefits:

Best-in-Class Support for all TCC Applications

- Juniper’s multiple access technologies can support all TCC applications in virtually any customer deployment scenario from provisioning of Java clients to full Windows, Linux and Mac clients, without requiring any changes to the existing TCC deployment.

²For more information on Juniper’s Core Clientless Access Secure Application Manager or Network Connect technologies, see the datasheets located on <http://www.juniper.net/products/ssl/dsheet/>.

³Citrix Win32 client support includes support for the Program Neighborhood, Program Neighborhood age

- Juniper offers market-leading value-added functionality for TCC application access that includes optimized configuration, single sign-on, and dynamic and intelligent client delivery where Secure Access will utilize an existing client if the client is on the endpoint device, or it will provision one dynamically if it is not present on the device.
- With thousands of deployments worldwide in which Juniper has secured Citrix, WTS and other TCC products, enterprises can be certain that Juniper can preserve their investment in their existing TCC infrastructure, as well as give them the flexibility to upgrade or change that infrastructure in the future were this is to become a requirement.

Separation of Application and Secure Access Infrastructure

- Because it can provide access to all applications including any Thin Client application, Juniper's Secure Access SSL VPN enables enterprises to separate their security and networking infrastructure from their application infrastructure. This allows enterprises to independently scale and manage their thin client and security infrastructure.
- This separation also provides administrators with the flexibility to support TCC products from multiple vendors without tying themselves to one vendor. And it allows enterprises to change their Thin Client applications without requiring a potentially costly change in secure access infrastructure and vice versa.

Clientless Access to Web, File and Java Applications

- Enterprises and enterprise software vendors are increasingly deploying applications using Web technologies instead of client-server applications that are provisioned using TCC technology. This stems from the need to reduce costs, enable universal deployment and centralize application management. Juniper's market-leading Core Clientless access technology and best-in-class access to thin client computing applications enables enterprises to seamlessly support this trend without any changes to a company's secure access infrastructure.
- Providing secure clientless access to Web, file and Java applications significantly increases business productivity by allowing users to access important applications any time, anywhere. Clientless access technology is a core requirement for SSL VPNs and no enterprise should select an SSL VPN without it.

Single Platform for all Secure Extended Enterprise Application Access

- Unlike security gateways from TCC vendors, Juniper's Secure Access SSL VPN can secure and assure access to all extended enterprise applications using multiple access technologies. This allows enterprises to save significant capital, administrative and support costs by consolidating their access infrastructure into a single platform, thereby reducing the need for multiple separate security gateways for providing Citrix/Terminal Services, IPSec, Web and other application access.

Best End-to-End Security Functionality in the Industry

- As the market leader in SSL VPN technology since its inception and a recognized leader in networking and security, Juniper provides administrators with unmatched security features critical to securing access to applications. These include best-in-class authentication, granular access control, auditing, threat control, and endpoint security technologies.

Dynamic, Granular Access Control

- Enterprises want a single remote access solution that can dynamically create different types of access experiences based on whether a device is managed or unmanaged, whether a device is in compliance with corporate security policies, the kind of user needing access (employee, contractor, or partner), and whether a device is on a trusted or untrusted network. Juniper's SSL VPN solution provides tremendous granular access control, all the way up to the URL or file level.

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Solution Components

The Juniper Networks SA 700, SA 2500, SA 4500, and SA 6500 SSL VPN appliances meet the needs of companies of all sizes. Secure Access appliances use SSL (Secure Sockets Layer), the security protocol found in all standard Web browsers. The use of SSL eliminates the need for pre-installed client software deployment, changes to internal servers, and costly ongoing maintenance and desktop support. Juniper's Secure Access appliances also offer sophisticated partner/customer extranet features that enable controlled access to differentiated users and groups without any infrastructure changes, DMZ deployments, or software agents.

The SA 700 appliance is specifically designed for very small enterprises as a secure, cost-effective way to deploy remote access to the corporate network. The SA 2500 SSL VPN appliance enables small- to medium-size businesses (SMBs) to deploy cost-effective remote and extranet access, as well as intranet security. The SA 4500 SSL VPN appliance is ideal for mid-to-large size organizations while the SA 6500 SSL VPN is purpose-built for large multinational enterprises and service providers.

Summary – The Most Comprehensive Secure Remote Access Solution for Thin Client Computing Applications & All Remote Access Needs on One Platform

With Juniper's industry-leading Secure Access SSL VPN appliances, companies receive a solution that will support TCC applications from multiple vendors and get the richest functionality for providing secure remote access for all their users. Juniper Networks Secure Access SSL VPN provides a single platform that converges all remote access needs including web applications, terminal services, client/server applications, and increasing use of mobile devices. This results in lower total cost of ownership vs. deploying multiple remote access solutions.

Next Steps

Please contact a Juniper Networks representative or Juniper's global network of channel partners for any questions about the Secure Access SSL VPN appliances.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.



To purchase Juniper Networks solutions, please contact your Juniper Networks sales representative at 1-866-298-6428 or authorized reseller.