

Citrix WANScaler

ACCELERATING AND OPTIMIZING BRANCH OFFICE APPLICATION DELIVERY

Citrix WANScaler™ accelerates application performance for branch office users, delivering LAN-like performance over any wide area network (WAN). By improving the performance of enterprise applications such as Windows® file sharing by up to 30x or more, WANScaler enhances user productivity, defers expensive bandwidth upgrades, and enables the consolidation of application resources into datacenters.

ENHANCE THE USABILITY OF APPLICATIONS OVER THE WAN

An application user on a LAN experiences fast response times. But when using the same application over a WAN, the user will typically experience longer application response times or at worst an unusable application. While often blamed for poor application performance, the network is not always the culprit. Most enterprise applications are designed for the LAN where the user and application server are in close proximity. However, when users move to remote branches, introducing additional network latency between the application server and the desktop, the application's design limitations are exposed. Citrix WANScaler mitigates performance penalties and delivers LAN-like application performance with an advanced suite of application acceleration and WAN optimization technologies. WANScaler automatically accelerates TCP-based applications where performance affects user productivity, such as SAP, Oracle, Microsoft® SharePoint® and Microsoft® Exchange®. WANScaler also enhances IT productivity by accelerating, for example, data-protection applications from Network Appliance, Double-Take and EMC.

DEPLOY APPLICATIONS ANYWHERE

Citrix WANScaler enables enterprises to:

- **Extend collaborative workflows and improve productivity on a global scale**
Citrix WANScaler accelerates files and application data over the WAN between dispersed branch offices. Users spend time using the application instead of waiting for it.
- **Capitalize on cost savings with IT resource consolidation**
Citrix WANScaler enables consolidation of applications and data storage into a few datacenters. Cost savings can be achieved by reducing datacenters and simplifying the application infrastructure.
- **Protect data centrally**
Citrix WANScaler speeds data delivery to branches, allowing data to be stored and replicated in a protected facility to meet regulatory or corporate mandates for data security and disaster recovery.



Key Benefits

ACCELERATES APPLICATION PERFORMANCE

Delivers LAN-like performance for applications delivered over the WAN

Accelerates all TCP-based applications

Application fluency for faster data transfers

AUTOMATED OPTIMIZATIONS

Dynamic, network aware self-tuning of optimizations

Automatically selects best compression mechanisms based on traffic and network conditions

Reduces cost of ongoing IT maintenance

ENABLES IT CONSOLIDATION AND IT COST REDUCTIONS

Supports centralization of application resources into fewer datacenters

Multi-Level Compression improves application throughput in congested environments

PROVIDES EASY AND FLEXIBLE DEPLOYMENT

Complete network transparency delivers simplest deployment and simplifies maintenance

Multiple deployment modes for maximum flexibility

ACCELERATING APPLICATION AND DATA DELIVERY

Citrix WANScaler is built around the Citrix AutoOptimizer™ Engine, which automates all acceleration mechanisms without complex manual or static configurations. AutoOptimizer applies the best combination of TCP optimizations, compression and application acceleration based on real-time application traffic conditions. AutoOptimizer minimizes the impact of latency on application performance and maximizes WAN capacity, with adaptive TCP flow control to mitigate TCP performance penalties from packet loss and re-transmission and dynamic detection of real-time WAN link conditions.

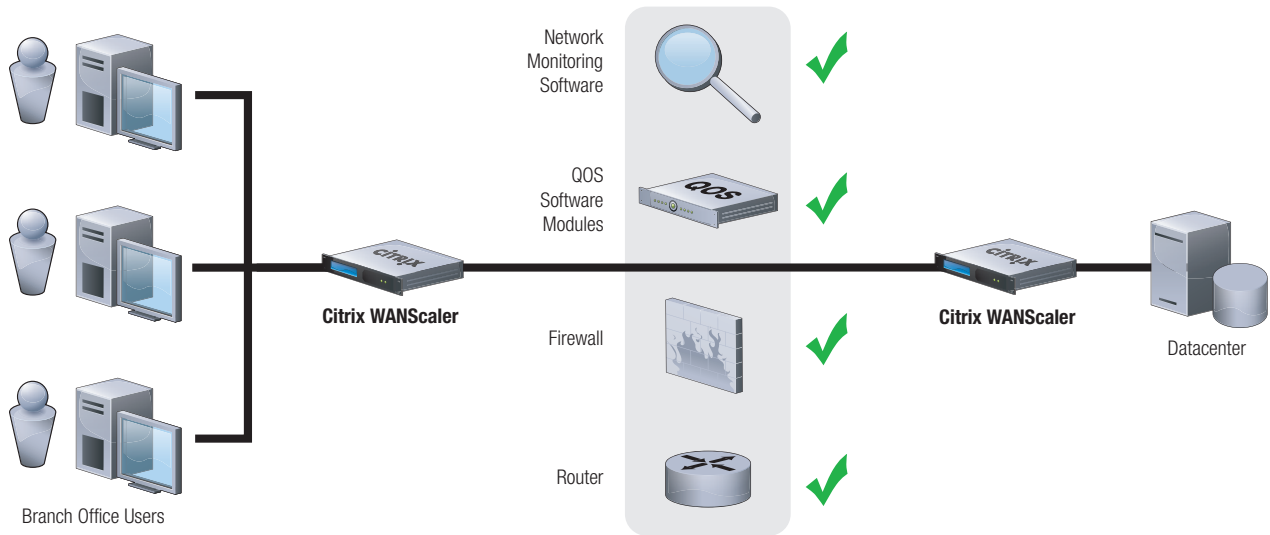
WANScaler's industry leading compression technology reduces link congestion, increases data throughput and accelerates application response. Citrix's unique Multi-Level Compression applies multiple compression mechanisms prior to transmitting data, with selection of the optimal compression techniques based upon network load conditions, WAN bandwidth and traffic type. Multi-Level Compression, built into all WANScaler products, results in compression ratios of 10:1 to 300:1, and up to a peak of 3500:1. As a result, organizations can support more users and more application traffic on their WAN infrastructure, while realizing better performance for all applications delivered to the branch office.

APPLICATION FLUENCY

Citrix WANScaler immediately detects application protocols such as CIFS, FTP, NFS and HTTP and automatically applies the most efficient optimization methods, including verifying client-server handshakes, reducing protocol chattiness, and optimizing payload. Faster application response times and better bandwidth utilization result.

TRANSPARENT APPLICATION DELIVERY

Citrix WANScaler offers transparent operation to both applications and the network. Application traffic flows are accelerated without intrusive tunneling technology, which can obscure vital IP and TCP header information.



WANScaler installs and accelerates without reconfiguring other network devices, services or applications. Other solutions require rerouting network monitoring statistic collection, reworking QoS or traffic tagging, changing network security policies, or redirecting users to the WAN optimization solution instead of the destination server.

WANScaler CLIENT SUPPORT

Citrix WANScaler Client extends application acceleration to micro-branch offices and mobile workers with the same protocol acceleration, TCP optimization, and compression feature as WANScaler appliances. Installed on user computers, WANScaler Client supports popular VPN mechanisms including IPSec, Microsoft® PPTP and Citrix Access Gateway™ SSL VPNs for secure application acceleration. WANScaler Client is available with the WANScaler 8500 and 8800 series appliances.

CLASS OF SERVICE AND QUALITY OF SERVICE

WANScaler Quality of Service (QoS) and Class of Service (CoS) allows rate shaping, prioritization, and granular management of enterprise traffic. Administrators can configure applications with a QoS priority and minimum bandwidth, thus guaranteeing predictable application response times in heavily congested environments.

SIMPLE AND FLEXIBLE TO DEPLOY

Citrix WANScaler deploys easily into a network, resulting in very low deployment and ongoing maintenance costs. In addition to the automated acceleration and transparent features, WANScaler can be deployed in the network with in-line, policy-based routing and WCCP modes. Additionally, WANScaler supports multi-path networks where there is more than one WAN link between locations with Group Mode and multi-port network interface card (NIC) options. For redundancy, WANScaler supports high-availability (HA) pair mode with VRRP.

| KEY FEATURES | | |
|--|---|--|
| <p>ACCELERATED APPLICATION PERFORMANCE</p> <p>Advanced TCP Flow Control</p> <ul style="list-style-type: none"> Transparent acceleration Intelligent packet recovery Improved TCP performance <p>Multi-Level Compression</p> <ul style="list-style-type: none"> L2 cache compression Differential (Delta) compression Memory-based compression Disk-based compression <p>Application Protocol Acceleration</p> <ul style="list-style-type: none"> CIFS FTP HTTP NFS <p>Service Class Policies</p> <ul style="list-style-type: none"> IP address Port number | <p>DEPLOYMENT EASE</p> <p>Supported Bandwidth</p> <ul style="list-style-type: none"> Appliance: 128kbps – 500Mbps <p>Redundancy</p> <ul style="list-style-type: none"> Fail-to-wire NIC High availability (VRRP) RAID* Redundant power supplies and fans* <p>Deployment Modes</p> <ul style="list-style-type: none"> Inline Virtual inline WCCPv2 Proxy Redirector mode** <p>Network Support</p> <ul style="list-style-type: none"> Mesh Hub and spoke Point-to-Point Preserves network level QoS and CoS tagging: VLAN (802.1q), Diffserve / IP ToS | <p>SIMPLIFIED INSTALLATION AND MANAGEMENT</p> <p>User Interface</p> <ul style="list-style-type: none"> Web-based GUI (HTTP and HTTPS) Serial <p>Extensive Logging</p> <ul style="list-style-type: none"> SNMP MIB II support Syslog Easy integration with existing management tools <p>Secured Authentication</p> <ul style="list-style-type: none"> RADIUS and TACACS+ authentication for secure, centralized administration <p>VPN Interoperability**</p> <ul style="list-style-type: none"> Microsoft™ PPTP Cisco IPsec Citrix Access Gateway SSL VPN |

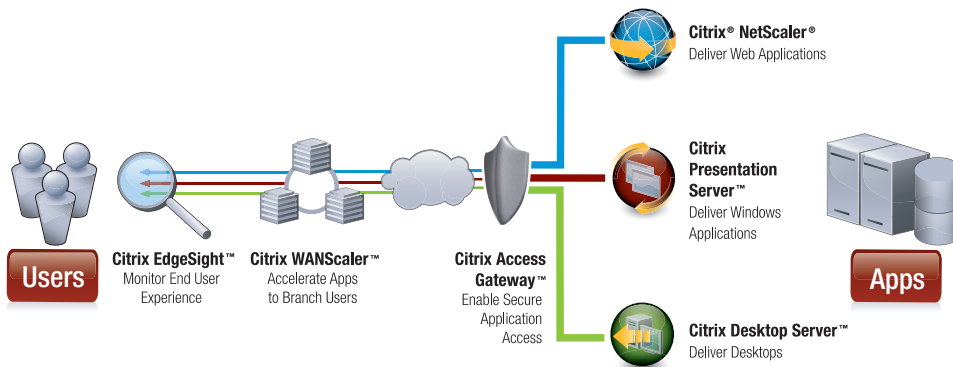
*On certain models ** Client only feature

| | SOLUTIONS FOR OPTIMIZED APPLICATION DELIVERY TO BRANCH OFFICES | | | | | | SOLUTIONS FOR BANDWIDTH | | | |
|--|--|----------------|-----------------------|----------------|----------------------|----------------|-------------------------|-----------------|----------------|-----------------|
| | SMALL BRANCH OFFICES | | MEDIUM BRANCH OFFICES | | LARGE BRANCH OFFICES | | DATACENTER | | ENTRY | ENTERPRISE |
| | WANScaler 8310 | WANScaler 8320 | WANScaler 8510 | WANScaler 8520 | WANScaler 8530 | WANScaler 8540 | WANScaler 8810 | WANScaler 8820* | WANScaler 6520 | WANScaler 6820* |
| Max. Bandwidth | 1 Mbps | 2 Mbps | 5 Mbps | 10 Mbps | 20 Mbps | 45 Mbps | 45 Mbps | 155 Mbps | 45 Mbps | 155 Mbps |
| Recommended Max. Users | 50 | 75 | 150 | 250 | 500 | 750 | 1,000 | 10,000 | N/A | N/A |
| Recommended Number of WANScaler Clients | N/A | N/A | 150 | 250 | 500 | 750 | 1,000 | 1,000 | N/A | N/A |

* High Speed Upgrade option available

Citrix Application Delivery Infrastructure

Deliver Any Application to Any User with the Best Performance, Security, Cost and Agility



Citrix® NetScaler® for delivering Web-based applications — Optimize all Web applications with an integrated networking solution that accelerates performance, improves security, and substantially reduces load on servers.

Citrix Presentation Server™ for delivering Windows-based Applications — Save millions in management costs and eliminate data security risks by installing all Windows applications in the datacenter and virtualizing or streaming them to end users over the network.

Citrix Desktop Server™ for delivering desktops — Reduce the cost, management and security risk of desktop computing by delivering Windows desktops virtually from the datacenter in a way that actually improves the end user experience.

Citrix Access Gateway™ for enabling secure application access — Provide a secure single point of access to all applications that automatically customizes access policies based on user scenarios.

Citrix WANScaler™ for accelerating applications to branch users — Instantly improve the performance of applications delivered over the wide area network while reducing bandwidth by up to 75%.

Citrix EdgeSight™ for monitoring end user experience — Ensure applications are meeting business metrics at all times by monitoring performance from the user's perspective.



About Citrix: Citrix Systems, Inc. (Nasdaq:CTXS) is the global leader and the most trusted name in application delivery infrastructure. More than 180,000 organizations worldwide rely on Citrix to deliver any application to users anywhere with the best performance, highest security and lowest cost. Citrix customers include 100% of the *Fortune* 100 companies and 98% of the *Fortune* Global 500, as well as hundreds of thousands of small businesses and prosumers. Citrix has approximately 6,200 channel and alliance partners in more than 100 countries. Annual revenue in 2006 was \$1.1 billion. Learn more at www.citrix.com.

©2007 Citrix Systems, Inc. All rights reserved. Citrix®, Citrix WANScaler™, Citrix Access Gateway™ and Citrix AutoOptimizer™ Engine are trademarks of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered in the United States Patent and Trademark Office and other countries. Microsoft® Windows®, SharePoint® and Exchange® are registered trademarks of Microsoft Corporation in the United States and/or other countries. UNIX® is a registered trademark of The Open Group in the United States and other countries. All other trademarks and registered trademarks are property of their respective owners.

Citrix Worldwide

WORLDWIDE HEADQUARTERS

Citrix Systems, Inc.

851 West Cypress Creek Road
Fort Lauderdale, FL 33309 USA
Tel: +1 (800) 393 1888
Tel: +1 (954) 267 3000

EUROPEAN HEADQUARTERS

Citrix Systems International GmbH

Rheinweg 9
8200 Schaffhausen
Switzerland
Tel: +41 (52) 635 7700

ASIA PACIFIC HEADQUARTERS

Citrix Systems Hong Kong Ltd.

Suite 3201, 32nd Floor
One International Finance Centre
1 Harbour View Street
Central
Hong Kong
Tel: +852 2100 5000

CITRIX ONLINE DIVISION

5385 Hollister Avenue
Santa Barbara, CA 93111
Tel: +1 (805) 690 6400

www.citrix.com