

COMPETITIVE BRIEF

EXPAND NETWORKS VS RIVERBED

Expand Networks provides a complete WAN Optimization feature set for Branch Offices on a single platform that allows customers to migrate from branch office server environments to complete consolidation and centralization of files, services and applications. Expand Accelerators support optimization for all TCP & UDP based applications, including enabling VoIP and Video Conferencing. Expand is focused on Enabling Branch Office Server Consolidation, Application Delivery and Desktop / Application Virtualization, all on a single platform; delivering optimized benefits before, during and after the your branch office IT consolidation projects.

Expand Networks is the leading vendor able to provide a complete Virtual Accelerator solution. This is the most cost effective alternative for customers who are implementing server consolidation and migrating to a virtual environment. Customers can mix and match between virtual and physical Accelerators and our Mobile Accelerator Client (MACC) is managed and terminated on the same platform.

Expand Networks is a classic Venture Capital backed company, with a wide base of tier one investors including Intel Capital & Vertex Investment Capital. The commitment from these backers is strong, as demonstrated with the acquisitions of DiskSites (for their WAFS technology) and Netpriva (for its unique Peer-to-Peer & Socket level QoS technology). These technologies have all been fully integrated into the AOS of Expand's WAN Optimization solution - not left as add-ons as is the case with some other vendors.

Expand's solution has been proven in some of the largest global WAN Optimization networks, with the largest installed base and largest virtual deployment. Expand Networks WAN Optimization solution serves customers in over 100 countries with over 50,000 units deployed and over 4,500 customers. Expand is the largest supplier of WAN Optimization products to US Government and Military agencies (greater than 10,000 units) and also has the largest install base of 2000 customers specifically for Citrix ICA and Microsoft RDP Optimization.

EXPAND ADVANTAGES

- Proven large network deployments, Expand boasts the largest Accelerator deployments of any vendor.
 - Appliance Accelerator = 4,200 Accelerators on a single Enterprise WAN
 - Virtual Accelerator = 200 Accelerators in a Telco Managed Service environment
- Provides a single platform offering multiple WAN Optimization services on a single fully integrated platform
- Uniquely provides optimization for ALL IP traffic, including UDP
- Expand has "direct optimization" for SBC/VDI environments, including RDP, ICA, PCoIP & ALP.
- Complete "Virtual Server" support for branch office services, including CIFS acceleration & Local Print, DHCP & DNS services
- Leveraging existing tools from Virtualization vendors, Expand is able to offer complete "Warm Cache" High Availability with no additional hardware or associated costs
- Expand's "Dynamic Cache Selection" uniquely directs real time traffic to "In Memory" Caching and bulky traffic to "In Drive" Caching
- Provides monitoring & QoS up to Layer 7, to ensure business SLAs are met
- Future proofed scalable licensing - pay for the bandwidth you accelerate and not the appliances maximum capabilities, as per other competitors
- Largest TCP session scaling of any platform, entry products support 64,000 sessions, unlike Riverbeds 25 sessions!
- Complete product range built around a single operating system - Appliance, Virtual and Mobile Client Accelerators all managed by ExpandView, a single Central management solution

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The table below outlines the differences in capabilities between the two products when optimizing the real-time applications used in SBC/ VDI environments.

	Citrix ICA	MS RDP	Sun Ray ALP	VMWare PCoIP	Telnet
Expand	●	●	●	◐	●
Riverbed	◐	◑	○	○	◐

RIVERBED LACKS A TRUE BRANCH OFFICE SERVER CONSOLIDATION OFFERING

The Steelhead appliances reduced feature set is unable to support a server consolidated environment at the branch office.

a) Riverbed Service Platform (RSP) adds complexity

RSP is a complex fix developed to cover up their lack of required features needed for true consolidated branch office environments.

i) **Riverbed requires virtual solutions for additional features:** to provide additional services such as IPSEC, DHCP and QoS it is necessary to install multiple Virtual Appliances from third party vendors on their RSP platform, making for a multi-vendor complex deployment.

ii) **Confusion over management:** who owns what on the device? The security team need to involve the network team when provisioning additional firewalls at the edge, and the server team when doing so in the core

iii) **Lack of feedback between features:** the DHCP server at the edge now has a license model different to the QoS engine, which in turn is different to the monitoring engine, which is different to the WOC and so on...

iv) **Finger Pointing:** if a failure occurs in any of the modules, who is responsible for support, both internally and externally? Will all fingers initially point to the network team responsible for the RSP appliance?

b) Riverbed lacks “Dynamic Cache Selection”

Riverbed has a static cache methodology and are unable to offer both “In memory” caching & “In drive” caching simultaneously to encompass both real-time applications and bulky traffic types, which is essential to meet real world branch office requirements.

c) The Virtual Steelhead lacks required features and is not designed for the Data Center Deployment:

The Virtual Steelhead offered by Riverbed does not support IPSEC, DHCP, DNS, QoS etc, unless you run a virtual appliance WITHIN their virtual appliance.

Expand’s solution for branch office consolidation considers the requirements of the whole infrastructure by allowing consolidation of multiple services without any reduction in performance. Expand’s concept of a single appliance with a single configuration interface means that all the services are supplied and supported by a single entity, which in turn supports a true consolidated model.

RIVERBED FOCUSES SOLELY ON TCP TRAFFIC TYPES, AND DOES NOT INTERACT WITH OTHER IP PROTOCOLS

A comprehensive WAN Optimization solution needs to be aware of everything that is traversing the WAN. Optimizing and controlling only TCP traffic means that other protocols, such as UDP are allowed to run riot across the WAN.

a) Riverbed cannot optimize UDP traffic.

Branch offices and mobile users are increasingly using application based on UDP traffic types (including VoIP, video & streaming applications). Where Riverbed's sole focus is TCP, this leaves these traffic types with no optimization or priority across the WAN.

b) Riverbed cannot address VoIP, SIP, Video and Skype traffic.

Certain applications require more than just port based recognition; these traffic types need to be discovered, monitored and prioritized at L-7. Expand is able to do this with a built-in L-7 QoS engine working both inbound and outbound, with or without a remote appliance.

The table below shows a comparison between the two products looking at the ability of each to discover, monitor & control certain applications across the WAN.

	Citrix ICA	MS RDP	VMWare PCoIP	VoIP	P2P	Sharepoint	MAPI	Instant Messaging	Video	Port 80 Apps
Expand	●	●	◐	●	●	●	●	●	●	●
Riverbed	◐	◐	○	○	○	◐	◐	○	○	◐

RIVERBED SOLUTION LACKS SCALABILITY – POOR SESSION, BANDWIDTH, MANAGEMENT AND DEPLOYMENT ECONOMICS

A comprehensive WAN Optimization solution needs to be aware of everything that is traversing the WAN. Optimizing and controlling only TCP traffic means that other protocols, such as UDP are allowed to run riot across the WAN.

An effective solution for WAN Optimization must be scalable with regards to number of locations, available bandwidth and the number of TCP sessions.

a) Riverbed's Steelhead appliances have TCP session scaling limitations

The average Enterprise user will have between 20 and 25 concurrent TCP sessions. Riverbed's entry level Steelhead appliance supports only 25 TCP sessions; this is enough for a single user! Whereas the entry level Expand Appliance supports upto 64,000 TCP Sessions. The largest Steelhead appliance for the Data Center supports 100,000 TCP sessions, enough to support 4,000 users, where as Expands offering supports upto 256,000 TCP sessions, supporting upto 10,240 users.

Riverbed's Steelhead pricing is based on specific hardware configurations, requiring users to purchase appliances which support bandwidths in excess of their needs.

Expands flexible licensing is based on bandwidth at the branch office. Customers pay only for what they need via flexible licensing, which also enables upgrades without the potential need of changing hardware.

b) Riverbed requires a multi appliance solution at the datacenter

To manage and optimize Riverbeds Remote Office Steelheads and Mobile Steelhead Riverbed requires a separate appliance at the datacenter to terminate each offering. Expands Appliance, Virtual Appliance and Mobile Accelerator Client all terminate on same datacenterAccelerator and management systems.

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c) Riverbed needs an appliance for very small offices.

Expands Mobile Accelerator Client (MACC) with 'HIVE Technology' enables a "virtual shared cache" ensuring each user benefits from the other users traffic flows. With Riverbed the relationship with the remote client cache is unique to the client and each user cannot gain benefit from the others users traffic flows.

RIVERBED CLAIMS TO HAVE A PLUG AND PLAY INSTALLATION

Riverbed has designed their product for customer lab & POC testing. This makes it look easy to deploy when the customer is testing, but it is only when the customer moves to a global installation that the true inflexibility becomes apparent.

- Lacks dynamic cache selection - you have to select either in memory or in drive caching for all traffic
- Riverbed lacks Microsoft RDP proxy – Accelerators are uniquely auto configured for "zero touch" installation into RDP environments.
- Lacks firewall transparency
- Lack of standards based (required for most government & military agencies) TCP-Acceleration techniques (SCPS)
- Riverbed High Availability requires additional hardware and additional cost
- Separate termination platforms required for Remote Steelheads & Remote Clients

SUMMARY

Expand's technology is a standards based, tightly integrated, multi-service platform that delivers the complete Application Acceleration solution. The platform is both open and scalable, allowing future technologies to easily integrate with all of the other Expand services currently available.

This complete and flexible approach is the only way to guarantee simplicity and cost reduction as IT adapts to meet today's global business requirements.

