Magic Quadrant for WAN Optimization Controllers

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The wide-area network optimization controller market is maturing rapidly, but remains dynamic, with a high level of innovation from vendors. Organizations looking to acquire WOC capabilities should identify their specific needs and conduct real-life trials before committing to any purchase.

WHAT YOU NEED TO KNOW

Optimization techniques for wide-area networks (WANs) can improve most organizations' application response times, particularly where network latency is high, which is often due to centralization of servers and IT resources. Typically, WAN optimization controllers (WOCs) serve to prevent network latency having a severe impact on the performance of applications and underlying protocols. Through data reduction and prioritization techniques, WOCs can also help organizations avoid costly bandwidth upgrades.

The WOC market is maturing rapidly, but it is still dynamic with a high level of vendor innovation. This has led to different vendors offering different combinations of features. So, before choosing a vendor, ensure that you understand the applications and services running on your network and the protocols they use. Also, conduct a detailed analysis of your network traffic to identify specific problems (for example, excessive latency, bandwidth oversubscription or lack of prioritization for certain types of traffic). Finally, insist on a real-life trial before committing to any purchase. Performance measurement and service-level agreement (SLA) reporting are other features that are well-aligned to WOCs and that vendors can add to increase value. At present, WOC capabilities are largely delivered by dedicated equipment, usually purchased by the user organization. As the market develops, we expect to see increasing deployment of managed WAN optimization services, increasing "openness" of WOC platforms to third-party applications, and some integration of WOC features into other network equipment, such as routers. Software-only "virtual" WOC implementations are also emerging.

Our advice on selecting stand-alone WOC equipment should, therefore, be considered in light of these anticipated changes in the market, and we recommend that selection is made on the basis of relatively short payback times (typically less than three years), and on current and near-term product capabilities.

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Figure 1. Magic Quadrant for WAN Optimization Controllers
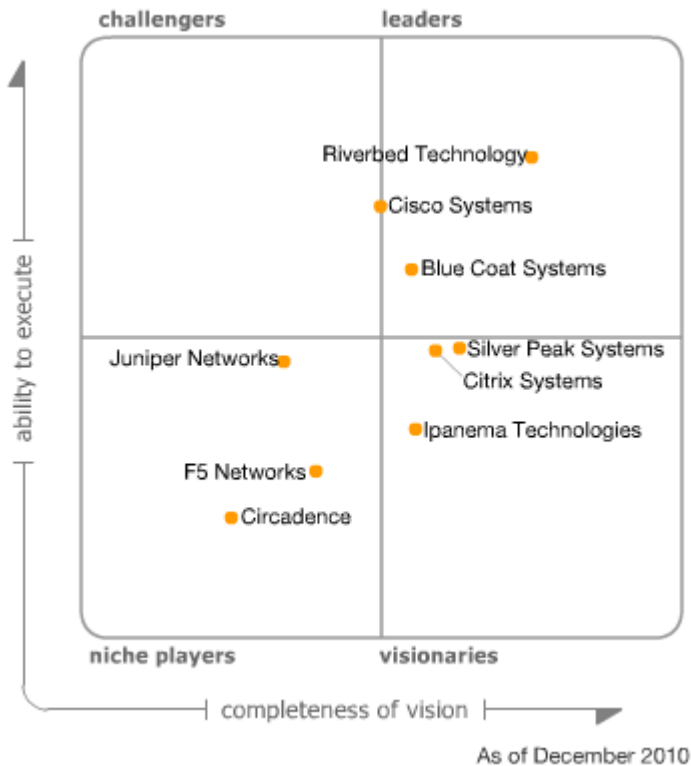
Source: Gartner (December 2010)

Market Overview

WAN optimization is about improving the performance of business applications over WAN connections. Most networks carry a variety of traffic types of differing characteristics and importance. Many organizations are striving to manage this traffic to optimize the response times of critical applications and reduce costs, given that bandwidth continues to represent a significant proportion of operating expenditure for wide-area data networks. But the cost of bandwidth isn't the only consideration — matching the allocation of WAN resources to business needs is also important. And as resources are increasingly centralized, minimizing the effect of latency on application response times is becoming a critical requirement. In addition, virtualization and new application environments such as cloud computing and Web services can put an unexpected strain on the network (see "You Can't Do Cloud Computing Without the Right Cloud [Network]" and "Is Your Network Design the Weak Link in Cloud Computing?").

Different types of traffic and IT architecture present both difficulties and opportunities for improving the response times of essential applications. For example:

- Traffic that isn't time-sensitive, such as e-mail, backups and personal Web access, can swamp WAN links, leading to slow response times from business-critical applications.

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- Applications, such as Microsoft SharePoint, that make extensive use of dynamic content can swamp WAN links, while delivering poor end-user response times.

- Global centralization of branch office servers and data centers can expose latency-sensitive protocols, again leading to slow response times.

- File transfers, operating system patch distribution and similar applications, such as the delivery of training videos, can quickly saturate WANs.

- Repeated transmission of the same, or similar, files, objects or data patterns can create opportunities for data compression.

Because optimizing overall application response times is a requirement for many organizations, this Magic Quadrant reviews vendors that address the common need to make more efficient and effective use of wide-area connections, regardless of the type of traffic or application. The predominant need is still to optimize the connection between users (both in remote branch locations and single remote users) and IT-centralized resources. However, we are also beginning to see the emergence of the need to optimize connections between data centers (vendors such as Silver Peak, Riverbed and F5 tackle that issue). We are also seeing early signs of the need to optimize traffic to mobile devices.

The development of the application acceleration market has been driven by customer demand for highly integrated solutions that employ a wide range of techniques to optimize network traffic and that offer scalability and fault tolerance. Vendors in this space initially addressed either the traffic shaping/quality of service (QoS) market, or the compression/caching market. These two segments have now largely merged, with most products supporting both sets of capabilities. While these capabilities address the problem of inadequate bandwidth, network latency has become a limiting factor on remote application performance. We therefore see an increasing need for both generic and application-specific optimizations to mitigate the impact of network latency on remote application performance.

Some vendors are now increasingly merging their enterprise content delivery network (ECDN) and WOC products, or are adding ECDN features to their WOC products. ECDN offers the capability to deliver live and on-demand streaming of media content, by splitting unicast streams and by pre-positioning content in the cache. This increases the scalability of media servers and helps to improve the response times for semistatic content, such as business procedures and software upgrades. The ECDN market is now merging into the WOC market.

In addition, the following WOC product trends are emerging:

- In branch offices, the capabilities of WOCs will evolve to the point that they can support serverless branch operations, also described as branch office boxes (BOBs). This will require — at a minimum — the addition of supporting features, including Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), active directory caching and print serving.

- Customers often need to maintain one or two key applications in the branch. BOBs are now leveraging operating system capabilities, including virtualization, to host one or more applications on the BOB hardware.

- An alternative offered by some vendors is to install a virtualized WOC in a server at the branch. That server can then run the virtualized WOC along with other virtualized appliances. An advantage is the availability of a standard virtualization environment at the branch, and easier replacement of the hardware if there's a failure. Virtual WOCs are also being loaded into clouds and used to accelerate cloud-based applications.

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- There is an increasing focus on security — including the acceleration of encrypted protocols such as Hypertext Transfer Protocol Secure (HTTPS) and the security of data stored on WOC systems.

- As basic acceleration capabilities mature, we are seeing a resurgence of interest in visibility and control, both as a means to demonstrate WOC effectiveness, and as a bandwidth/response-time planning tool. Providing application and user performance measurement and SLA reporting are key emerging requirements for WOC equipment.

- Vendors, such as Cisco and Juniper, have been integrating or bundling their WOC capabilities into their own routers, because the branch router seems a logical point of consolidation for WAN optimization. But the "bundled" WOCs inside the routers are lightweight versions, without extensive deduplication or higher-layer protocol acceleration.

Market Definition/Description

WOCs are deployed symmetrically in data centers and remote locations and improve the performance of applications that are accessed across a WAN. The WOCs are typically connected to the LAN side of WAN routers, or are software integrated with client devices. They address application performance problems caused by bandwidth constraints and latency or protocol limitations. The primary function of WOCs is to improve the response time of business-critical applications over WAN links, but they can also help to maximize return on investment in WAN bandwidth and sometimes avoid the need for costly bandwidth upgrades. To achieve these objectives, WOCs use a combination of techniques, including:

- Ensuring fair access for mission-critical applications during periods of congestion (for example, by prioritizing business-critical traffic, through QoS policing and traffic shaping).

- Minimizing the effects of network latency, using methods such as protocol- and application-specific optimization.

- Reducing the bandwidth required to transfer WAN traffic (for example, by compressing it).

Inclusion and Exclusion Criteria

Inclusion Criteria

To help organizations with their WAN optimization needs, Gartner has assessed vendors that offer generic, multifunction WOC products, rather than those that only offer application- or protocol-specific capabilities for Web caching, HTTP compression or remotely mounted file systems, or single functions, such as QoS.

While WOC technology is maturing, significant variations between different implementations remain, so we are focusing on evaluating the different feature sets that are available. Therefore, we have only included vendors that were substantially the original developers of their WOC products (either directly or through acquisition). We have excluded vendors that source the bulk of their technology under OEM or resale agreements.

As this market develops, we expect vendors that offer a combination of techniques, both generic and application- or protocol-specific, to be the most successful. To be included in the 2010 Magic Quadrant, vendors' products must include capabilities in each of the four broad categories of WAN acceleration techniques:

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- Traffic management capabilities, such as WAN QoS classification, enforcement or traffic shaping.

- Compression, caching and/or data deduplication or reduction capabilities.

- Generic protocol acceleration (for TCP or HTTP, for example).

- Application- or higher-level protocol-specific optimization features, such as acceleration of the Common Internet File System (CIFS) file-sharing protocol.

Due to the wide geographical reach of the networks that will benefit most from this technology, vendors need to have a global installation and support capability. As this Magic Quadrant is intended to inform enterprise purchasing decisions, we have only included vendors that have a specific focus on enterprise customers.

Since this is the fourth iteration of Gartner's WAN Optimization Magic Quadrant, covering substantially the same set of vendors, our focus this time is on informing our clients' vendor selection process. Therefore, we have only included vendors with worldwide 2009 WOC revenue more than $20 million, as measured by our market share methodology.

Added

Circadence has been added, because it meets the inclusion criteria.

Dropped

Expand has been dropped, because it no longer meets the revenue threshold.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT providers' performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their vision. The criteria Gartner uses to evaluate technology providers' ability to execute are described below.

Product/Service

This describes core goods and services offered by the technology provider that serve the defined market. These include current product and service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements and partnerships, as defined in the market definition and detailed in the subcriteria. For the WOC market, this criterion evaluates both the capabilities of the product (as fully released and generally available at 6 July 2010) and the underlying hardware and software platform on which the vendor's products are based, the breadth of the product range, and the products' suitability for supporting additional features in future.

Overall Viability (Business Unit, Financial, Strategy, Organization)

Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue to invest in and offer the product, and advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing

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This describes a technology provider's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel. For the WOC market, the sales execution subcriterion is rated higher than the pricing subcriterion.

Marketing Execution

Marketing execution is defined as the clarity, quality, creativity and efficacy of programs designed to deliver the organization's message in order to influence the market, promote the brand and business, increase awareness of products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities. We consider the success and mind share of products in the WOC market, including the installed base and market share, as well as the maturity and breadth of the organization's distribution channels. Also considered are the quality of customer case studies and the level of interest from Gartner clients.

Customer Experience

Customer experience comprises the relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways that customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), the availability of user groups and SLAs. For the WOC market, the vendor's global installation and support capabilities are key components of the customer experience. Also considered are the quality of customer references and Gartner clients' experience of the vendor.

The following evaluation criteria have not been used:

- Market responsiveness and track record is evaluated under Marketing Execution.

- Operations is covered under Overall Viability.

The weighting we assigned to the various criteria used to evaluate technology providers' ability to execute is shown in Table 1.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	Standard
Overall Viability (Business Unit, Financial, Strategy, Organization)	High
Sales Execution/Pricing	High
Market Responsiveness and Track Record	no rating
Marketing Execution	High
Customer Experience	High
Operations	no rating

Source: Gartner (December 2010)

Completeness of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and

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competitive forces, and how well they map to Gartner's position. Ultimately, technology providers are rated on their understanding of how market forces can be exploited to create opportunities for the provider. The criteria Gartner uses to evaluate technology providers' completeness of vision are described below.

Market Understanding

Market understanding is be defined as the technology provider's ability to understand buyers' needs and translate these needs into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those wants with their added vision. For the WOC market, we expect to see a consistent track record of feature enhancements, together with a sound product road map.

Marketing Strategy

Marketing strategy involves a clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy

This entails the strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base. For the WOC market, as well as a well-developed global distribution strategy, we expect to see a vision to address the increasing importance of managed WOC services.

Business Model

The business model involves the soundness and logic of a technology provider's underlying business proposition.

Innovation

Innovation describes direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes. WOC vendors with a track record of early introduction of new features and capabilities will be highly rated. As well as feature innovation in the four broad categories defined in the inclusion criteria, we expect to see innovation in the scope of product availability (for instance, breadth of product range, including data center, branch and remote access products), in high-availability options, and in manageability and maintainability.

Geographic Strategy

Geographic strategy entails the technology provider's strategy for directing resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market. For the WOC market, we expect to see a sales and support strategy that recognizes the global nature of many user organizations' WOC needs.

The following evaluation criteria have not been used:

- Offering (product) strategy is covered under Market Understanding and Innovation.

- Vertical industry strategy is not relevant, because WOC equipment is being adopted across a broad range of industries, and is a generic technology that is not industry-specific.

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The evaluation criteria and weighting used by our analysts to determine completeness of vision are shown in Table 2.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Standard
Sales Strategy	Standard
Offering (Product) Strategy	no rating
Business Model	Standard
Vertical/Industry Strategy	no rating
Innovation	High
Geographic Strategy	Standard

Source: Gartner (December 2010)

Leaders

Leaders exhibit an ability to shape the market by introducing additional capabilities in their product offerings and by raising awareness of the importance of these features. We expect a Leader to grow the market as a whole and to have solutions that resonate with an increasing number of enterprises. Leaders in the WOC market need to have a broad features set, including QoS, generic compression, protocol acceleration and file system acceleration, with the majority of features proved in substantial real-world implementations. They also need to be able to offer sales and support on a global basis.

Challengers

A Challenger in this market is a follower from a product or innovation perspective, but has demonstrated the ability to take its products into the market and to show their relevance to a wide audience. Challengers may have less-complete feature sets than Leaders, or they may have new products that are as yet unproven in substantial real-world implementations.

Visionaries

Visionaries need to address the whole market and must exhibit strong market understanding and innovation. They can be pointers to the market's future. However, they currently lack the ability to influence a large portion of the market and have yet to expand their sales and support capabilities globally. In addition, they may have new products that are as yet unproven in substantial real-world implementations, or may lack the funds to execute with the same capabilities as a vendor in the Leaders quadrant.

Niche Players

Niche Players provide a more limited set of capabilities, and have not demonstrated enough vision or focused execution to warrant a stronger position in our analysis. They may be indicative of emerging requirements and features. Niche Players may have yet to expand their sales and support capabilities globally. Additionally, they may have new products that are as yet unproved in substantial real-world implementations, or may lack the funds to execute with the same capabilities as a vendor in the Leaders quadrant.

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Vendor Strengths and Cautions

Blue Coat Systems

Blue Coat's WOC appliance software, MACH5, runs on the vendor's range of ProxySG appliances, which can also support Blue Coat's Proxy Edition secure Web gateway software. Blue Coat also offers a software WOC client, and the PacketShaper visibility, control and compression appliances from its 2008 acquisition of Packeteer

Strengths

- Blue Coat has shown sound vision in merging security, visibility, optimization and control into its ProxySG appliances, and with early support of video.

- ProxySG appliances offer integrated acceleration and security for direct Internet access from branch offices.

- The company has a broad feature set that includes QoS capabilities, caching/compression and acceleration, including HTTP, HTTPS/Secure Sockets Layer (SSL), CIFS, FTP, SharePoint, mail and video.

Cautions

- The company has made very slow progress in integrating the PacketShaper into the SG platform.

- There is a lack of specific acceleration capabilities and performance in storage/replication and data-center-to-data-center applications.

- SoftWOC acceleration capabilities are somewhat limited.

- A virtual appliance is currently available for branch deployments only, with no high-performance solution.

Use Blue Coat for branch-office-to-data-center optimization, particularly when direct Internet access or video delivery are a priority.

Circadence

Circadence's product range consists of the MVO 1200 WAN Optimization suite, which includes the MVO appliance, MVO virtual appliance, MVO Cloud Service, MVO SoHo appliance, MVO API and MVO mobile client.

Strengths

- Circadence offers broad support for mobile and traditional clients, including Macintosh, Windows, WinowsCE, Linux, Windows Mobile and Android.

- A broad feature set including good SoftWOC and UDP acceleration. SoftWOC client (less than 8MB) can be dynamically downloaded (a "zero footprint" installation).

- Circadence has a large portfolio of physical and virtual appliances. The virtual appliances work with almost any hypervisor.

- The company's products provide full mesh for optimization and QoS.

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- The MVO platform is preconfigured and deployable to public cloud-computing infrastructures, including Amazon and Azure.

- Circadence products have been proved in large battlefield deployments.

Cautions

- Application discovery is limited.

- Managed service partner deployment options are lacking.

- Throughput from a single appliance is limited to 40 Mbps — the lowest capacity of any vendor featured in this Magic Quadrant (100 Mbps appliance with virtual appliance may deliver higher speeds on high-end platforms).

- There are no acceleration capabilities for storage/replication and data center applications.

- There are no BOB capabilities, SSL compression or latency mitigation for Independent Computing Architecture (ICA), Messaging Application Programming Architecture (MAPI) or Network File System (NFS).

- Circadence is primarily focused on the U.S. market, and lacks significant sales and support capabilities outside of North America.

Use Circadence for branch-to-data-center optimization, especially when a broad client is required.

Cisco Systems

Cisco's WOC product portfolio consists of Wide Area Application Services (WAAS) software, which runs on a range of appliances and on modules for Cisco's Integrated Services Router (ISR), and the WAAS Mobile software client.

Strengths

- Cisco offers the broadest overall network equipment product portfolio in the industry, backed by a strong channel and a very strong balance sheet.

- The company has an excellent reputation for global support.

- Cisco offers broad managed service provider (MSP) partnerships, with announced services from several global and regional carriers including Verizon, AT&T, T-Systems, Orange, Cable & Wireless (C&W), Telefonica and Telstra.

- Cisco has a partnership with Microsoft for Windows Server on WAAS, and a growing list of partnerships with application monitoring vendors.

- Competitive product pricing and competitive total cost of ownership, with its router WOC module, the Cisco WAAS platforms are available as appliances and as integrated modules for Cisco ISR and ISR G2 platforms. The ISR G2 can run a simplified version of WAAS, "WAAS Express," that provides compression, limited deduplication and TCP acceleration. WAAS Express does not provide higher-layer acceleration, but it also doesn't require an SRE.

- Cisco offers broad capabilities, including features for large and small branch networks, and single remote users.

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- Emerging capabilities for acceleration in public cloud applications, with a virtual appliance in addition to a physical appliance.

Cautions

- Apart from in a few areas, including integrating WOC functions into router products, Cisco tends to follow rather than lead. While feature velocity has improved, WAAS's capabilities still lag behind those of some other WOC vendors, particularly in data center replication, storage networking applications and acceleration for protocols such as SMB2, encrypted MAPI, Office 2K10.

- A lack of functional integration makes for a complex and potentially expensive solution. QoS, some monitoring capabilities and SoftWOC are not fully integrated into the WAAS product, and additional monitoring capabilities are provided by other Cisco products and third-party tools. However, the recently released APM 2.0 application now provides application-level visibility, control and optimization integrated across WAAS and several other components.

- Cisco's SoftWOC still requires a separate management station (but not a separate headend server, which was fixed this year).

Use Cisco for branch office to data center WAN optimization, particularly when video distribution is important.

Citrix Systems

Citrix's WOC product range (formerly known as WANScaler) comprises the Branch Repeater and Branch Repeater with Windows Server appliances for branch offices, Repeater appliances for data centers and larger sites, and the Citrix Repeater Plug-in SoftWOC client.

Strengths

- Citrix has shown good vision, particularly on integrated VPN/WOC/HVD client and virtual appliances.

- Citrix offers a broad suite of products sold by a channel with excellent coverage, particularly in small and midsize business (SMB) markets.

- Citrix has partnered with Microsoft for platform and add-on applications.

- Citrix has offered improved feature velocity since the last MQ iteration, including MAPI acceleration, virtual appliances, softWOC clients, SSL acceleration and disk encryption. The company's WOC market share is growing.

Cautions

- The company's demonstrated capabilities in very large and complex networks are still somewhat limited.

- Citrix offers no specific acceleration capabilities for storage/replication and data center-to-data-center applications, and somewhat limited throughput for data centers supporting large networks.

- It lacks managed service partner deployment options.

Use Citrix for branch-office-to-data-center optimization, particularly when optimization of Citrix ICA is important or when a Windows-based appliance is preferred.

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F5 Networks

F5's WOC features are now available under the vendor's Traffic Management Operating System (TMOS) architecture supported on its BIG-IP platforms. Advanced WOC features require BIG-IP's WAN optimization module. Some features are also provided by F5's WebAccelerator, also available as a module for BIG-IP platforms.

Strengths

- The company's vision of integrated application delivery services that are available on a range of platforms, from branch to data center core, and strong integration between WOC and ADC products.

- F5 offers a very-high-throughput device for data-center-to-data-center links, and a wide range of accelerations for data center replication and storage protocols. It also supports lots of general protocols/applications (HTTP, HTTPS, FTP, CIFS, MAPI and other vendor-specific protocols from VMware, Dell/EMC, NetApp and Oracle.

- Since the last Magic Quadrant iteration, F5 has completed the transition of WOC capabilities from the WANjet platform into the vendor's mainstream TMOS platforms, introduced the BIG-IP Edge Gateway platform and optimization profiles for a wide range of protocols, and the LTM virtual Edition, supporting integrated optimization services.

Cautions

- A continued lack of a low-cost, small branch office platform and branch capabilities, including BOB features, will limit applications.

- There is currently no EMC E-Labs qualification for BIG-IP WAN optimization platforms.

- BIG-IP Edge Client SoftWOC capabilities are somewhat limited, lacking CIFS and HTTPS acceleration — although the latter is provided by F5's Web Accelerator product.

- While proved in data center-to-data-center applications, the product lacks demonstrated capabilities in large and complex branch networks.

- F5 lacks managed service partner deployment options.

- F5 offers only limited focus on WOCs and limited market presence.

Use F5 when high-performance data-center-to-data-center optimization is important.

Ipanema Technologies

Ipanema's WOC capabilities are delivered through the vendor's Ip!engine appliances.

Strengths

- The company has a strong vision of WAN optimization delivered as a managed service.

- Ipanema is focused on automation and ease of use, (key for the SMB market) combined with extreme scalability (key for large enterprises)

- It offers sophisticated asymmetrical and symmetrical visibility and QoS control.

- Ipanema has a very credible set of go-to-market MSP partners, including — among others — BT, Orange Business Services, C &W, Belgacom, Swisscom, KDDI and KPN.

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- It offers a highly differentiated "hybrid networking " approach: MPLS and Internet with dynamic traffic/path selection.

- The company has made major progress in CIFS acceleration since the last Magic Quadrant iteration. Ipanema's CIFS has been proved in several fairly large implementations

Cautions

- Feature enhancements appear to be driven by the requirements of Ipanema's service provider customers: the vendor's CIFS implementation is now proved in several fairly large implementations, but the product still lacks SoftWOC, HTTPS/SSL-specific compression and MAPI acceleration, and does not offer BOB capabilities, or virtual appliances.

- Ipanema lacks specific acceleration capabilities for storage/replication and data-center–to-data-center applications, and somewhat limited throughout for data centers supporting large networks.

- Ipanema is a privately held company that had a geographic focus on EMEA, but is now moving toward the U.S. and Asia/Pacific (with partnerships with leading Asian regional carriers, although managed WOC services are not yet mature in this region).

Use Ipanema for branch-to-data-center WAN optimization, particularly when sophisticated application-based point-to-multipoint or any-to-QoS-based (e.g., unified communications and collaboration) and Internet/VPN hybrids are important.

Juniper Networks

Juniper's WOC products include the WXC Series of appliances, the WXC ISM 200 module for the vendor's J-Series routers, and the WX client (SoftWOC).

Strengths

- Juniper offers a broad product suite, from switches to routers to security to WOCs, with an excellent reputation for quality and support, and large deployments.

- Juniper offers competitive basic product capabilities (including UDP acceleration) and competitive prices.

- Juniper has a vision for merging security, visibility and optimization in the branch office box.

- Its service provider partners include Verizon, Orange Business Services. Its global partners include IBM.

- It has a strong foothold with both enterprises and service providers.

Cautions

- The company is nearly invisible in the broad general market, with low and declining market share.

- While Juniper has introduced a capable SoftWOC, since the last iteration of this Magic Quadrant, little progress has been made on accelerations for additional protocols and applications.

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- It offers no specific acceleration capabilities for storage/replication and data-center–to-data center applications, and limited throughout for data centers supporting large networks.

- Juniper lacks BOB capabilities and virtual appliances.

Use Juniper for branch-to-data-center optimization, particularly if you are already using Juniper's branch office routers or VPN/security products.

Riverbed Technology

Riverbed's WOC capabilities are delivered through its Steelhead appliances, and virtual appliances (Virtual Steelhead, Cloud Steelhead and the Steelhead Mobile client software).

Strengths

- Riverbed offers leading vision combined with great brand recognition and an excellent reputation for product and support.

- It features ease of installation, even in complex networks.

- It has broad capabilities, including features for large branch networks, data center replication and storage networking applications and single remote users. It offers good performance at the high end.

- It offers a vision of the evolution of the WOC — BOB/RSP, Virtual Steelhead for virtual appliances, Cloud Steelhead for deployment into infrastructure as a service (IaaS) providers, such as Amazon, as well as virtual edge and storage accelerator features.

- Riverbed has provided good feature velocity since the last Magic Quadrant iteration, including improved QoS, accelerations for Citrix ICA, and enhancements to storage/replication accelerations and virtual appliances.

- It has a broad set of MSP partnerships, including with BT, NTT America, Orange Business Services, AT&T, T-Systems, Verizon, Telefonica, HP and IBM.

- Riverbed is in partnership with Microsoft for Windows on Steelhead and a wide range of other added-value software providers for video, security and network monitoring.

Cautions

- Riverbed's channel and sales force can be perceived as arrogant.

- Its discounting policies can be inconsistent on large deals, sometimes resulting in high prices, compared with other WOC vendors.

- It has been slow to offer UDP acceleration and application visibility on Steelhead (not planned until the first half of 2011).

Use Riverbed for a broad range accelerations (branch-to-data-center, data-center-to-data-center and mobile user applications) and when deployment models are required, particularly when the network topology is complex or when third-party software may also be hosted in the branch.

Silver Peak Systems

Silver Peak's WOC capabilities are delivered through the vendor's NX appliances and VX virtual appliances.

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Strengths

- Silver Peak maintains a strong focus on storage replication, backed up by segment-leading products, and good strategic alliances with data center infrastructure companies.

- It offers differentiated optimizations, including UDP and TCP, and compensation for error-prone links.

- The company has very high performance systems with very low insertion latency.

- It has a large portfolio of appliances, from small branch offices, to data centers.

- Silver Peak has good feature velocity since the last iteration of this Magic Quadrant, including adding SSL acceleration, and physical and virtual appliances for smaller sites.

- It accelerates all IP traffic — TCP and UDP.

- It has good QoS for all IP traffic.

Cautions

- Silver Peak is still lacking in capabilities for home office and mobile users (no SoftWOC). It also lacks application-specific optimizations (such as latency mitigation for MAPI and Citrix ICA) and BOB capabilities except as a "do it yourself" implementation using their virtual appliance.

- While Silver Peak has good strategic alliances with data center infrastructure companies, there are only two service providers (AT&T and Verizon) offering managed services based on Silver Peak's equipment, limiting deployment choices for potential customers.

- Silver Peak is a privately held company just now responding to the global opportunities with limited, but rapidly expanding sales staff and channel partners. Enterprise visibility remains low (low number of inquiries received by Gartner).

Use Silver Peak when data center-to-data center performance is critical and in branch-to-data center networks when UDP traffic and error-prone links are important factors.

RECOMMENDED READING

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"Market Share: Application Acceleration Equipment, Worldwide, 2Q10"

"Forecast: Application Acceleration Equipment, Worldwide, 2006-2014, 2Q10 Update"

Acronym Key and Glossary Terms

BOB   branch office boxes

CIFS   Common Internet File System

DHCP   Dynamic Host Configuration Protocol

DNS   Domain Name System

ECDN   enterprise content delivery network

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HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
ICA	Independent Computing Architecture
ISR	Integrated Service Router
MAPI	Messaging Application Programming Interface
MSP	Managed Service Provider
NFS	Network File System
QoS	quality of service
SLA	service-level agreement
SMB	small and midsize business
TMOS	Traffic Management Operating System
UDP	User Datagram Protocol
WAAS	Wide-Area Application Services
WAN	wide-area network
WOC	WAN optimization controller

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, skills, etc., whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.

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Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message in order to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements, etc.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling product that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including verticals.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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