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Magic Quadrant for Application Delivery Products, 2007

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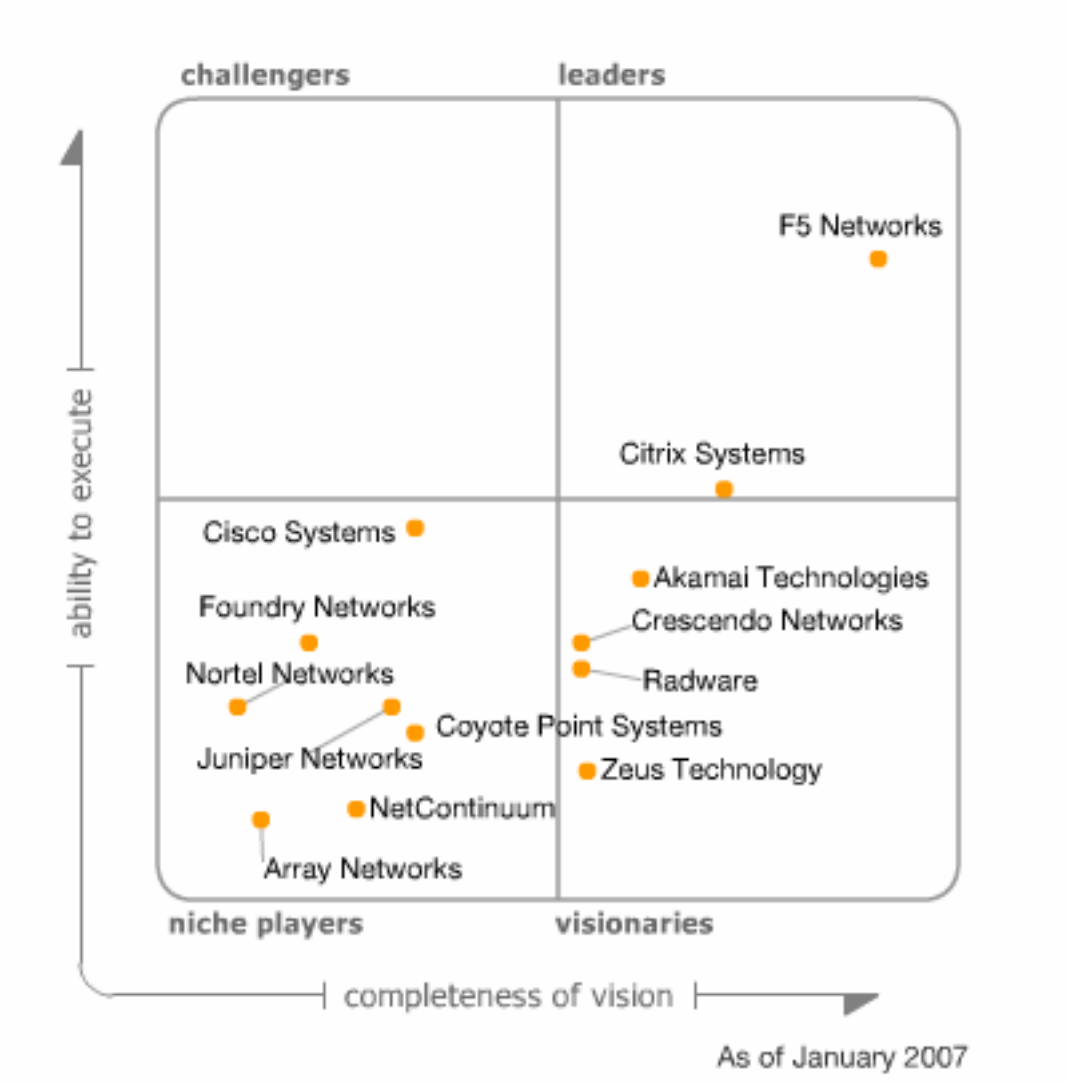
The market for products to improve the delivery of application software over networks remains dynamic and innovative. Vendors focused on solving enterprises' most pressing application problems have become the top players.

WHAT YOU NEED TO KNOW

The key criterion in the Magic Quadrant for Application Delivery Products focuses on a vendor's ability to solve important application challenges within the enterprise. Vendors that have been at the forefront of this change will emerge as the more viable and stronger vendors in the market.

MAGIC QUADRANT

Figure 1. Magic Quadrant for Application Delivery Products, 2007



Source: Gartner (January 2007)

Market Overview

The market for network-based solutions to optimize the delivery of applications across the network continues to develop rapidly and our expectations increase with each revision of the Magic Quadrant. As a result, the Magic Quadrant axis witnesses a noticeable shift up and to the right with each revision. Consequently, vendors must progress to maintain their position on the new Magic Quadrant.

Please note that a fuller description behind each vendor's positioning on the Magic Quadrant can be found in "The Rational Behind the 2007 Application Delivery Products Magic Quadrant."

New applications of the technology continue to emerge, reflecting the significant innovation in the market. These technologies apply across a growing base of applications in the enterprise that may (or may not) use the Internet at all, or have little or no roots in Internet and browser-based technologies. While the market emerged from load-balancing solutions to improve the availability and reliability of Web sites, we are now a long way from the days where load balancing and Secure Sockets Layer (SSL) termination for basic HTML traffic are viable by themselves. Browser-based applications are often a major impetus to invest in these technologies, but many enterprise applications that look browser-based actually employ thick clients that run within the browser, and that don't run over HTTP(S) or have the ability to bypass standard browser capabilities like compression. The emergence of Ajax and other rich client interfaces further complicates the environment. As a result, there is a need for solutions with broader payload parsing, and inspection and optimization techniques, including client-resident software. Due to this continued development, an updated set of criteria is required to analyze this market (see below).

Application delivery controllers (ADCs) reside in the data center, typically in front of frontline Web servers. They are deployed asymmetrically (only at the data center end) and are designed to improve the availability, performance and security of Web- or Internet Protocol-based applications. ADCs enhance the performance of Web-based and related applications for end users by providing a suite of services at the network and application layers. These services can include:

- Layer 4 through Layer 7 redirection and load balancing and failover.
- Transmission Control Protocol (TCP) connection multiplexing.
- Server offload (for example, SSL termination and TCP connection management).
- Data compression.
- Network-address translation.
- Network-level security functions, distributed denial-of-service protection and server cloaking.
- Selective compression.
- Caching.
- Content transformation and rewrite.
- Application firewall.
- Transaction assurance.

- Rules and programmatic interfaces.
- HTML (and other application protocol) optimizations — "pre-fetching" or selective encoding.
- Virtualization.

There are two categories of ADC. Basic ADCs operate on a per-packet or per-flow basis and are primarily focused on improving application availability, through the use of L4-7 redirection, SSL offload, network-address translation (NAT) and basic network-level security functions. Other than L7 redirection, most of the functions of basic load balancing (LB) are network-based.

A more advanced class of ADCs (Advanced Platform ADCs [AP ADCs]) operate on a per-transaction basis and achieve *application fluency.* These devices become actively involved in the delivery of the application and provide sophisticated capabilities, including:

- Application layer proxy, which is often bidirectional and stateful.
- Content transformation.
- Selective compression.
- Selective caching of dynamic content.
- HTML or other application protocol optimizations.
- Web application firewall.
- XML validation and transformation.
- Rules and programmatic interfaces.

AP ADCs provide simplified deployment and extensibility and are now being deployed between the Web server tier and the application or services tier (for service-oriented architecture [SOA]) servers.

Most AP ADCs incorporate rule-based extensibility that enables the customer to customize the behavior of the AP ADC. For example, a rule might enable the AP ADC to examine the response portion of an e-commerce transaction and strip off all but the last four digits of credit card numbers. In some cases, organizations are using these capabilities as an alternative to modifying Web applications.

Most AP ADCs incorporate a programmatic control interface (open APIs) that allows them to be controlled by external systems, including application servers, data center management and provisioning applications, and network/systems management applications. This capability may be used for regular periodic reconfigurations (end-of-month closing) or may be even driven by external events (taking an instance of an application offline for maintenance). In some cases, the APIs link the AP ADC to server virtualization systems and data center provisioning frameworks in order to deliver the promise of real-time infrastructure.

Market Definition/Description

Application delivery provides a set of functions to optimize enterprise applications. The market evolved from the load-balancing systems that were developed specifically to ensure the availability of Web sites. Today, application delivery is used by enterprises to optimize reliability, end-user performance, data center resource utilization and security for a variety of enterprise

applications. In most cases, an equipment-based solution is used — such as an ADC — although network-based services are now available and are gaining initial acceptance in the market.

Inclusion and Exclusion Criteria

Criteria for inclusion on the Magic Quadrant for Application Delivery Products include:

- The vendor has released products for general availability and has demonstrated commitment to the market.
- The vendor must meet many of our expectations for this market, either with current products or via its vision and commitment to the market.
- The vendor must demonstrate relevance for our clients.
- The vendor must have sustainable business models.

Added

We have added Crescendo, as it has rapidly emerged from startup status in 2005 to becoming a strong player in today's market.

Dropped

We have removed Netli due to its acquisition by Akamai. We removed Stampede Technologies because it is more focused on the WAN optimization controller (WOC) market and is covered in that Magic Quadrant.

Evaluation Criteria

Ability to Execute

We analyze the vendor's capabilities across broad business functions including: product/service, overall viability, sales execution/pricing, market responsiveness and track record, and customer experience. Vendors that have expanded their products across a wider range of protocols and applications, have improved service and support capabilities and have a focus on improving enterprise applications will be more highly rated in the Magic Quadrant analysis.

Product/Service evaluates the capabilities of the products or solutions offered to the market. Key items to be considered for the application delivery market are how well the products address enterprise application needs, the breadth of the product (in terms of different functions) and scale, from entry-level products to high-end ones. We also look at the level of integration, flexibility and innovation the vendor demonstrates in its products. We include products that provide load balancing, SSL termination, connection management, compression, protocol manipulation, global redirection, some aspects of security enforcement and other related technologies, including Ajax and other rich-client technologies. A key aspect that demonstrates continued execution in this area is how the vendor expands the types of application that are optimized. Although we don't expect vendors to have every technology option in their products, we expect them to offer a comprehensive and flexible solution for enterprises that clearly demonstrates a focus on enhancing enterprise applications.

Overall Viability measures a vendor's proven commitment to devote sufficient resources to this market. While we expect vendors to demonstrate the financial viability for continued operations and investments in their business, larger vendors with significant financial resources don't necessarily have an advantage. The key attribute is demonstrated investments in products and services for this market.

Sales Execution/Pricing looks at the vendor's ability to get the product into the market in an efficient manner. In this market we look for specialist capabilities — that is, a vendor and associated channels that can understand and deliver solutions for optimizing a range of data center applications. Having strong field sales and engineering to supplement specialist channels will help vendors in this area. As product complexity grows a comprehensive professional services offering has emerged as an important factor. Another factor is partnerships with leading application providers or systems integrators (SIs) that provide bundled solutions to the enterprise. In this emerging market, to date, pricing is a secondary decision criterion, although as the market matures and expands to include small or midsize businesses (SMBs), customer pricing will become more important.

Market Responsiveness and Track Record focuses on how the vendor positions its products, the messages it uses and whether these messages are getting through to the market at large. For marketing performance, we look for messages that target the key enterprise requirements of application performance, security and reliability. One of the metrics to evaluate market responsiveness is the number of client interactions that we receive about a vendor and the trend of those interactions. Track record is a method of measuring a vendor's sustained performance in the market.

Customer Experience looks at a vendor's ability to deal with post-sale issues. Because of the specialized nature of the application delivery market and the impact of product bugs on an enterprise's ability to conduct critical business functions, vendors are expected to escalate and respond to issues in a timely fashion with dedicated and specialized resources, and have detailed expertise in a number of specific application environments. Another consideration is a vendor's ability to deal with increasing global demands. Additional support tools and programs would be signs of a maturing approach to the market.

In short, Ability to Execute reflects the market conditions and, to a large degree, is our analysis and interpretation of what we hear from the market. Our focus is to assess how a vendor participates in the day-to-day activities of the market.

Table 1. Ability to Execute Evaluation Criteria

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

Source: Gartner

Completeness of Vision

The criteria used for the horizontal axis on the Magic Quadrant have been fine-tuned to reflect the expanding use of these technologies in the enterprise. They include product direction, innovation, market commitment and investment, and understanding of future market requirements.

Market Understanding looks at a vendor's long-term view of the market. An understanding of future requirements, an ability to adjust quickly to changing dynamics and a clear vision on how

the dynamics will influence the market are key elements to this rating. Are they organized in a way to best meet the needs of the market, do they have the correct leadership in place to exploit market opportunities, are they investing appropriate resources to ensure continued participation and success in the market? As an example of the expectations in this category, we look at how vendors have made the switch from dot-com to enterprise requirements, and how they will address additional application environments in the future.

Marketing Strategy examines the vendors' messages and methods used to disseminate these messages. Are the messages clear and differentiated, and consistently communicated throughout the organization and externally through the Web site, advertising, customer programs and positioning statements?

Product Strategy looks at a vendor's product road map and architecture, which we map against our view of enterprise requirements. We expect product direction to focus on optimizing enterprise application performance and security. Specific technologies can include connection management, security enforcement, application enhancements, and emerging solutions for enterprise WAN deployment and related technologies. Timely incorporation of new application architectures, like SOA, Web services, Ajax, and Session Initiation Protocol (SIP) also contribute to this score.

Business Model assesses a vendor's approach to the market. Does the vendor have an approach that allows it to scale the elements of its business (for example, development, sales/distribution and manufacturing) cost-effectively from startup to mature company? Does it understand how to leverage key assets to grow profitably? Can it gain additional revenue by charging separately for optional, high-value features. Other key attributes in this market would be reflected in how the vendor uses partnerships to increase sales. The ability to build strong partnerships with a broad range of application vendors and associated SIs would demonstrate leadership.

Innovation measures a vendor's ability to move the market into new solution areas, and define and deliver new technologies. In the application delivery market, innovation is key for meeting rapidly expanding requirements and keeping ahead of new, often more agile, competition.

Completeness of Vision distills a vendor's view of the future, the direction of the market and the vendor's role in shaping that market. We expect the vendor's vision to be compatible with our view of the market's evolution. A vendor's vision of the evolution of the data center and the expanding role for ADCs within an SOA is an important criterion. In contrast to how we measure the Ability to Execute criteria, more of the rating for vision is based on direct vendor interaction and our analysis of the vendor's view of the future.

Table 2. Completeness of Vision Evaluation Criteria

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

Evaluation Criteria	Weighting
Geographic Strategy	no rating

Source: Gartner

Leaders

A Leader will have exhibited an ability to shape the market by introducing additional capabilities in its product offering and by raising the awareness of the importance of these features. We expect a Leader to be growing market share, or the market as a whole, and to have solutions that resonate with an increasing number of enterprises. Expertise in complex data center application deployment is a necessity to be a leader in the Magic Quadrant for Application Delivery, 2007.

Challengers

A Challenger in this market would be a follower from a product or innovation perspective, but have demonstrated the ability to take its products into the market and demonstrate the relevance of those products to a wide audience.

Visionaries

Visionaries are vendors that have provided key elements of innovation and can be illustrative of the future of the market. However, they currently lack the ability to influence a large portion of the market, have not yet expanded their sales and support capabilities to a global basis or do not yet have the funding to execute with the same capabilities as a vendor in the Leaders quadrant. Examples of innovation would be an ability to deal with XML traffic or an early developer of client capabilities.

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.

Vendor Strengths and Cautions

Akamai Technologies

Strengths

- Easy to deploy service option to accelerate Web-based applications.
- Broadening technology base and vision.
- Helps solve challenges of cross-Internet performance reliability.

Cautions

- Currently limited to Internet-facing applications.
- Does not provide the same off-load advantages as a hardware-based ADC.

Array Networks

Strengths

- Competitively priced midrange server load balancing (SLB)/ADC with a good mix of features, including N+1 clustering and basic application firewall.
- Good SSL off-load performance.
- Good presence in Asia.

Cautions

- Lack of client code to accelerate non-browser-based applications such as Oracle Forms.
- Lacks strategic vision of data center evolution and Array's role in that evolution.

Cisco Systems

Strengths

- Installed base of Content Services Switch/Content Switching Module (CSS/CSM).
- Virtualized services on Application Control Engine (ACE).
- Cisco's overall market presence.

Cautions

- Lack of expertise in complex data center application deployments.
- Difficult integration of ACE and Application Velocity System (AVS).
- Lack of features and extensibility of ACE.

Citrix Systems

Strengths

- Solid AP ADC with very good performance combined with leading client code.
- Broad product line.
- Global presence (channel partners and direct) for sales and support.
- Aggressive marketing, highly regarded support and strong reference accounts including large public Internet sites, as well as large corporate intranet applications.
- Excellent understanding of the market and its needs, today and going forward.

Cautions

- The recent loss of key executives (such as B.V. Jagadeesh) in the Application Networking Group (ANG) may hurt development of key initiatives.
- NetScaler's software and merchant silicon-focused design may be unable to keep pace with competitors that integrate custom silicon to boost performance, particularly for deep packet examination.

Coyote Point Systems

Strengths

- Aggressively priced low-to-midrange SLB/ADC with a good mix of features and good performance.
- Ease of installation.
- Boot-strap mentality enables Coyote Point to do a lot with very little resources.
- Focus on low-to-midrange applications has given Coyote Point a strong position in an emerging and fast-growing market segment.

Cautions

- Coyote Point may find it difficult to support multinational deployments.
- Lack of an AP ADC may cause Coyote Point customers to look elsewhere as their needs become more sophisticated.
- The technical barriers to entry are much lower at the low end of the market, which could leave Coyote Point vulnerable to competition, particularly from Asia.

Crescendo Networks

Strengths

- Feature-rich AP ADC with "auto-optimize" capability makes Crescendo easy to install and configure.
- Hardware/microcode-based design maintains excellent performance as additional features are enabled.
- Partnerships with Oracle and IBM.

Cautions

- Despite rapid growth, Crescendo is still a small company with limited resources. It needs to be much more visible if it is to succeed long term.
- Global deployments may require involvement of multiple channel partners.
- Crescendo is competing with large vendors that have broad product offerings, including link load balancing, global load balancing and system virtualization.

F5 Networks

Strengths

- Offers the most feature-rich AP ADC, combined with excellent performance and programmability via iRules and a broad product line.
- Strong focus on applications, including long-term relationships with major application vendors, including Microsoft, Oracle and SAP.
- Strong balance sheet and cohesive management team with a solid track record for delivering the right products at the right time.

- Strong underlying platform allows easy extensibility to add features.
- Support of an increasingly loyal and large group of active developers tuning their applications environments specifically with F5 infrastructure.

Cautions

- The Big-IP product is so feature-rich it can be intimidating to some customers.
- Lacks a product for the emerging SMB market.

Foundry Networks

Strengths

- Reliable, high performance, low-cost ADC platform.
- New features add basic application performance optimization.

Cautions

- Lack of application expertise and focus.

Juniper Networks

Strengths

- Broad feature set for application performance options.
- ActiveN feature allows Juniper to scale using a cluster of DX platforms.
- Some pre-configured application environments and a solid list of application partners (SAP being a good example).

Cautions

- Difficult to use and expand base platform.
- Performance does not compare well with top end vendors.
- No overarching vision for Juniper's position in the broader application fluent marketplace.

NetContinuum

Strengths

- Best-in-class Web application firewall combined with solid AP ADC.
- Excellent understanding of applications and protocols and how they will evolve.
- Powerful, easy-to-use security policy definition language.

Cautions

- NetContinuum's lack of financial resources has prevented it from exploiting its technical advantages in the marketplace.
- Too much focus on the small application firewall market.

Nortel Networks

Strengths

- A reasonably priced, basic featured platform.
- Security integration with Symantec.

Cautions

- Lack of data center application deployment expertise.
- Little focus in this area results in a lack of advanced capabilities to deal with increasingly complex application needs.

Radware

Strengths

- Solid understanding of the ADC market and a clear vision for future development.
- Innovative operational tools.
- Strong integration of application security into ADC product.

Cautions

- Upcoming software releases must resolve outstanding product transition issues.
- Need to demonstrate that operational investments have solved support issues.

Zeus Technology

Strengths

- Feature-rich AP ADC that delivers excellent performance and scalability via very highly optimized software running on clustered off-the-shelf hardware.
- Excellent understanding of applications and their evolution, particularly XML-based applications, combined with thought leadership on how to address the needs of these applications.

Cautions

- Zeus is a very small company with very limited resources.
- Its channel program has not generated the sort of growth that Zeus needs. As a result, Zeus is forced to sell direct, which is a non-scalable model.

RECOMMENDED READING

"The Rational Behind the 2007 Application Delivery Products Magic Quadrant."

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

Acronym Key and Glossary Terms

ADC application delivery controller

AP ADC Advanced Platform ADC

NAT network-address translation

SI systems integrator

SIP Session Initiation Protocol

SMB small or midsize business

SOA service-oriented architecture

SSL Secure Sockets Layer

TCP Transmission Control Protocol

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, and so on, 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.

Sales Execution/Pricing: The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales 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, and so on.

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 Web site, 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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