

LICENSED FOR DISTRIBUTION

Gartner

## Magic Quadrant for the Wired and Wireless LAN Access Infrastructure

13 June 2012 ID:G00234282

Analyst(s): Tim Zimmerman, Mark Fabbi

### VIEW SUMMARY

Connectivity at the edge of an enterprise network is more than just a wired or wireless LAN infrastructure. Enterprises must choose infrastructure vendors that support network services, including security and management, and can integrate wired and wireless networking products.

### Market Definition/Description

**This document was revised on 15 June 2012. The document you are viewing is the corrected version. For more information, see the [Corrections](#) page on gartner.com.**

The wired LAN and wireless LAN (WLAN) access layer market consists of vendors that supply standard networking components that provide connectivity to the infrastructure access layer, from the edge of the enterprise network to the end user. Vendors have significantly narrowed the performance gap between the divergent wired and wireless environments, and now offer wired and wireless connectivity options directly, or through strategic partners. Additionally, vendors continue to integrate management, security, guest access and planning services. Their solutions combine wired and wireless functionality, as well as spawned multivendor capabilities, to simplify and optimize infrastructure administration to provide a solid foundation and continuity in networking communication at the edge of the network.

#### Critical Components

WLAN access points (APs) provide connectivity for wireless clients, and connect to switches that provide the connectivity point for wired clients. Controllers, typically used for wireless solutions, are optional, depending on the vendor's architecture.

The 802.11n capable radios embedded in APs are the mainstay requirement for most enterprise environments especially in North America and Europe, though some applications may perform at well over 802.11 a/b/g. Prevailing solutions also have controllerlike functionality that may be integrated into different networking components, or may reside separately and sit behind the APs to consolidate functions. However, vendors are transitioning the controller from a physical appliance to an application (depending on the vendor and environment). The market remains bifurcated, as more cost-effective, two-radio 802.11n APs are now available for a list price per AP of less than \$500, compared with three- and four-radio APs that continue to command a premium, but can support additional functionality, such as wireless backhaul for mesh networking or wireless intrusion detection. Most full-service vendors provide APs that can be used outdoors, and supply various antenna and power options.

Edge switches typically have a requirement to be stackable, although some smaller wiring closets deploy fixed-form-factor switches, while some larger wiring closets still deploy chassis switches. Although the number of ports can vary from 24 to 48 or more, a key feature is support of Power Over Ethernet (PoE) and PoE+ to provide a range of power options to various devices, including power APs, Internet Protocol (IP) telephony sets and video cameras. Power planning continues to be important, not only to deal with power budgets, but also to ensure that adequate power is available in wiring closets. While 10 Mbps and 100 Mbps wired connectivity remains more than adequate for most users and still commands roughly 50% of the ports shipped for enterprise edge deployment, we continue to see growth in 1 gigabit access switches. This demand will continue to grow as access switches take on the additional role of wireless aggregation in the converged access layer, since 802.11n wireless APs can require up to 525 Mbps or half-duplex bandwidth. Depending on the transaction density of the APs, IT organizations need to be aware that switches must support 1 Gigabit Ethernet (GbE) capabilities for wireless APs, and that they must aggregate multiple APs upstream through multiple 1 GbE ports or, increasingly, 10 gigabytes. Aggregation continues to be an issue, whether the traffic requirement is generated by wireless access or wired connectivity, such as video security cameras or network printers. Enterprises must remain aware of oversubscription at the network edge.

Managed services for wired switches are not new; however, during the past 12 months, WLAN managed services has broken into the market to supplement managed security. WLAN managed service offerings enable enterprises that do not have the time or skills to implement the complexities of WLANs to enjoy their benefits in conference rooms, as well as small or remote offices, while ensuring that they maintain compliance for PCI requirements and don't open the door to security threats.

#### Increasing the Role of Network Services

On a more frequent basis, vendors are providing network services and applications beyond the physical connection, including:

- Role provisioning and guest access administration for wired and wireless guests
- Firewall
- Policy enforcement
- Network management integrated with system management that is aware of wired components, and is WLAN-vendor-independent
- Onboarding and network access control (NAC), including authentication and authorization services
- WLAN forensics

### 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 that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**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 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 initiatives, 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 website, advertising, customer programs and positioning statements.

**Sales Strategy:** 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.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes

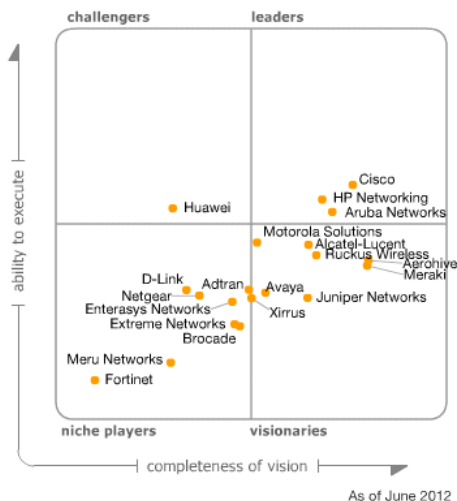
- Intrusion protection for wired LANs and WLANs
- Voice services that enhance the application, including integrating with unified communications (UC) services
- Video services that enhance the application
- Location-based services, context-oriented services and asset management

As vendors continue to expand their functionality, they will provide additional information to enterprises, enabling clients to maximize the productivity and ROI of all access-layer connectivity.

[Return to Top](#)

## Magic Quadrant

Figure 1. Magic Quadrant for the Wired and Wireless LAN Access Infrastructure



Source: Gartner (June 2012)

[Return to Top](#)

## Vendor Strengths and Cautions

### Adtran

While Adtran has historically had a strong presence in the distributed enterprise and service provider market, it expanded its wired and wireless offering in the enterprise market with the acquisition of Bluesocket in 2011. Bluesocket's virtual WLAN (vWLAN) solution will be added to the existing robust catalog of networking components, which includes its NetVanta and Total Access wired and wireless offering, and is part of Adtran's Internetworking Solutions, which is sold globally through its worldwide network of over 3,300 reseller partners.

Adtran's horizontal marketing approach means that the messaging may extend broadly across multiple vertical markets as it focuses on solutions such as for distributed enterprises, VMware's installed base, and service providers offering managed services or hosted services for enterprise connectivity.

#### Strengths

With a strong carrier heritage, Adtran has extensive experience with enterprise-targeted carrier managed services, as well as enterprises looking to deploy a wired or wireless last-mile mobile offload or backhaul application.

Adtran can deploy a single network management application, integrated firewall and guest access for wired and wireless connectivity, as well as a single-policy-enforcement application for enterprises looking for one vendor.

Adtran has an extensive reseller channel and has ramped up its marketing communication, but Gartner rarely sees the company on the shortlist for wired or wireless inquiries regarding opportunities within the enterprise.

#### Cautions

Since Adtran's product has been designed to address a broad horizontal marketplace, enterprises with specific needs or advanced guest access or policy enforcement capabilities should review the available vendor capabilities on application functionality.

Adtran has a large global channel, but with the introduction of new capabilities through the Bluesocket acquisition, enterprises should request references to ensure that the channel partner has been adequately trained on the new capabilities.

[Return to Top](#)

### Aerohive

Aerohive Networks is one of the smaller vendors covered in this report that has been an innovation leader with products such as its Bonjour Gateway and its cooperative control architecture, which eliminates the need for a dedicated controller and provides a cost competitive solution without sacrificing functionality. Aerohive primarily sells in North America and EMEA. Its focus has been on

differentiation, functionality, methodology and feature sets 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 vertical markets.

**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.

WLANs, but it currently ships switching platforms for its small, midsize and remote office solutions, and will introduce a line of larger switches in 2H12.

Aerohive should be considered for any overlay WLAN enterprise opportunities in North America, Western Europe or Australia/New Zealand, especially in the education, healthcare and retail markets. Its controllerless, mesh-based architecture provides an easy-to-use and robust solution with lower operational costs, which makes it a standard bearer for market pricing of equivalent functionality. Aerohive's innovation and market messaging are driving annual growth of ~130% higher than the 30% compound annual growth rate (CAGR) the WLAN part of the access layer market is currently experiencing. Network service applications for security, guest access, network management and policy enforcement can be defined on an appliance or in the cloud before being deployed to the edge of the enterprise network.

#### Strengths

Aerohive continues to be strongly positioned for growth at the edge of the network, due to the innovation provided by the Bonjour Gateway and its breadth of internally developed network service applications for security, network management, policy enforcement, client remediation and the stateful firewall.

Aerohive offers clients options as to where the network-based services will reside — either within the AP on-premises or in the cloud. This gives Aerohive customers a wide range of choices for deploying wired or wireless architectures.

Customers gave Aerohive high marks for its experience, including sales, support and solution performance.

#### Cautions

Aerohive continues to grow faster than the market, but it is still a smaller, private company. It needs to increase its marketing communication campaign to gain more visibility, and to help clients understand the benefits of its cooperative control architecture.

Aerohive has a limited sales channel that is 100% indirect, which can cause issues in explaining differentiating features; this is more complex now that wired switching has been added to the product line. However, expansion of the channel can help Aerohive drive its products into new geographies and vertical markets. Enterprises should request references to ensure that channel partners are adequately trained.

[Return to Top](#)

### Alcatel-Lucent

Alcatel-Lucent (ALU) has a strong campus and enterprise portfolio. The company has a global, direct-touch sales organization that supports roughly 85% of sales through its distribution channel, complemented by a direct sales organization that supports the remainder of its sales through direct fulfillment. We typically see adoption of ALU's LAN portfolio most often in EMEA, though a split of global revenue is roughly 45% in EMEA, 30% in the Americas and 25% in Asia/Pacific.

ALU's marketing focus has been on the enterprise market and installed-base opportunities, augmented by sales of its enterprise solutions to carriers, managed service providers and strategic vertical industries such as government, energy, utilities and transportation. ALU should be on the shortlist for any European wired or wireless infrastructure decisions, with consideration for other geographical areas.

The introduction of ALU's Application Fluent Network approach ties the network infrastructure together from end to end. While the OmniSwitch LAN portfolio and its Safe Network Access Control solution provides ALU with strong authentication and policy enforcement applications, tighter integration is needed for other applications such as network management, currently supplied as a separate application for wired LANS and WLANs.

#### Strengths

ALU has a strong networking strategy and is executing not only with platform development, but also with a strong orchestration message that integrates network applications that complement its offering.

ALU has a full range of stackable switches that provides flexibility at the edge of the network.

The release of ALU's Multimedia Fluency capabilities will enhance its strong voice capabilities by capturing information that allows mean opinion score (MOS), latency and jitter information to monitor the infrastructure.

#### Cautions

Better known for its European presence, ALU continues to have limited exposure in North America, although it has recently seen faster-than-market-rate growth in North America due to its efforts to improve visibility in that region.

ALU's access layer solution uses Aruba WLAN technology. Lack of an internal control for this important access layer capability limits ALU's ability to respond to market needs, especially if the requirements differ from the target markets Aruba is looking to penetrate.

[Return to Top](#)

### Aruba Networks

Aruba Networks' strength is in its ability to recognize market trends, and to provide solutions that meet business needs at the edge of the enterprise network. In addition to its AirWave network management application, Aruba launched ClearPass as a wired and wireless multivendor identity-based access management device profiling and client onboarding platform to address corporate-owned and bring your own device (BYOD) client products. Aruba's launch of a family of access layer switches provides a one-stop capability to meet the needs at the edge of the network.

Aruba has gained market share and has penetrated further into leading vertical industries like healthcare, retail, financial services and the federal government. It has taken an aggressive approach

to converting customers to an increasingly wireless-centric view of the networking world through its rightsizing campaign. The company is an appropriate choice for enterprises where security, multivendor management or teleworking are high-priority decision criteria.

#### Strengths

Aruba maintains one of the largest catalogs of access layer components in terms of APs and switches appealing to nearly all network design types and price points.

Aruba's robust multivendor wired and wireless network service applications include a management suite of well-integrated products that provides users with a universal interface for managing the network with Airwave or security features, wireless intrusion prevention systems (WIPs), guest access administration and remediation with ClearPass.

The launch of the Aruba Instant AP family allows enterprises to choose between existing controller-based architectures and newer controllerless ones, which have been well-received in the small or midsize business (SMB) market, resulting in new customers and able to scale to over 8,000 APs.

Aruba's aggressive channel expansion, coupled with its low-priced APs, have enabled the company to sell effectively to a wide range of enterprises, from the largest Global 2000 to small businesses of fewer than 50 people.

#### Cautions

Aruba's strong growth and rapid channel expansion have sometimes led to inconsistent implementations. While new sales and channel training programs are aggressively bringing updates to the field organization, users should make sure that any proposed solutions not only meet their business needs, but also are optimized for future requirements.

Aruba has made substantial progress and investments in end-to-end voice solutions, including its partnership with Microsoft and other UC vendors. Aruba also continues to work with the Wi-Fi Alliance for the new Wi-Fi Certified Voice-Enterprise and Wi-Fi Certified WMM-Admission control programs. However, the company needs to sustain this level of investment to compete effectively with Avaya, ALU, Cisco and Motorola as the voice over WLAN market grows within the enterprise.

[Return to Top](#)

### Avaya

Avaya continues the push to provide end-to-end networking solutions not only for its clients, but also internally as it leverages the strength of its global UC footprint. Building on its strong UC and networking product portfolios, the company continues to leverage messages of mobile collaboration and collaborative cloud solutions.

Avaya is a global vendor, although the U.S. and EMEA are the strongest geographies and align with a strong global Avaya Connect channel program that sells 90% of the company's products. With over 450 new global partners in 2011 and an updated training program, Avaya focuses on healthcare, financial services, education, hospitality and state/local government markets to deliver end-to-end solutions. Consider Avaya for any access layer requirements in its key markets, any products that are complementary to other Avaya solutions or any Nortel Networks refresh projects.

Avaya provides wired switches, including the ERS 2000, ERS 3000, ERS 4000 and ERS 5000 for campus network edge opportunities. It also offers a WLAN solution combined with its Identity Engines network authentication and authorization suite, which provides policy enforcement, guest access, network access and client remediation.

#### Strengths

Virtual Enterprise Network Architecture (VENA) offers a well-integrated wired and wireless one-stop access layer strategy for enterprises looking for an access layer solution with a strong security play.

Avaya's heritage with voice communications means that it measures not only quality of service (QoS) performance, which is important for data and video applications, but also latency with its SLA Mon solution.

Avaya supports real-time client location tracking with its E-911 emergency location service capability, in conjunction with all Avaya call servers.

Avaya supports a strong Ethernet stackable portfolio, with recent introductions such as the ERS 4800 series products for enterprise wiring closets, and the ERS 3500 series for SMBs and branch offices.

#### Cautions

Network management is an important evaluation criterion. Wireless components need to be managed by Avaya Configuration and Orchestration Manager (COM) for continuity of an end-to-end solution.

Avaya's large, wired installed base has declined over the past three years, and we do not often see it on RFP shortlists in the U.S. and EMEA.

The Avaya Identity Engines portfolio comprises a number of software applications to support different network services (guest management, access compliance, etc.). Once the enterprise requirements are defined, make sure you are not paying for additional functionality that may not be needed. The solution is vendor-neutral, and Avaya allows the applications to run on separate application servers for a lower-cost implementation that is not dependent on other Avaya components, such as the 8100 platform.

[Return to Top](#)

### Brocade

Brocade provides wired switching through its new ICX and FastIron series, and wireless capabilities through a strategic relationship with Motorola. The Brocade sales force and Alliance Partner Network (APN) channel partners focus on education, healthcare, regional service provider and U.S. government markets. Clients with existing Motorola WLANs or Brocade switches at the edge of the network should

consider a complete solution.

Brocade Network Advisor (BNA) manages wired and wireless infrastructures, although guest access and intrusion detection are provided separately — by Brocade for wired switching connectivity, and by Motorola for the wireless functionality.

#### Strengths

A single network management system supporting one unified access policy management application for wired and wireless is a big step toward simplifying compliance and reducing administration costs at the edge of the network.

Brocade's HyperEdge functionality supports mixing and matching of premium and entry-level switches in a single stack, propagating services and features to all stack members, which can lower initial capital expenditures and provide investment protection. HyperEdge also provides single-point management across multiple switch stacks to reduce management time and operating costs, while helping eliminate human error through process simplification.

Brocade's vision is for the next-generation campus solution, called The Effortless Network, which includes HyperEdge technology and BNA for converged wired and wireless management, policy enforcement and monitoring, and Brocade's portfolio of switch and mobility products.

#### Cautions

While Motorola provides a strong WLAN solution, it needs to be more integrated with Brocade components and applications at the edge of the network to simplify the role of IT and optimize the solution.

Although Brocade's controller platforms may be aggressively priced, its bids may be more expensive than others, especially in small, midsize, remote and branch office wired and wireless solutions, where competitors can offer controllerless solutions.

[Return to Top](#)

### Cisco

Cisco is the largest vendor and market share leader in the enterprise wired and wireless infrastructure market. A strong channel in the industry, combined with a global presence, means Cisco continues to be on shortlists for all access layer opportunities. Its reorganization to focus on the wired and wireless access layer has resulted in a renewed focus on and progress at the edge of the enterprise network.

Cisco's release of Prime and the Identity Services Engine (ISE) provides strong management, security and policy network service application functionality for wired LANs and WLANs. The functionality coincides with a new marketing message "One Policy, One Management, One Network" to educate end users. Cisco focuses on the public sector, healthcare, education and retail markets, but should be considered for any large enterprise opportunity.

#### Strengths

The launch of the AP3600 AP family is a strong wireless component that should be deployed in any BYOD environments, and shows how quickly Cisco can rise to meet market needs.

Cisco has made good progress in consolidating network management options at the edge of the network for managing wired and wireless components. Enterprises should review the functionality in Prime Network Control System (NCS) and Prime LAN Management Solution (LMS) before making a decision and, if necessary, should wait for the consolidation of both applications into one solution.

Good service provider relationships with carriers in the U.S. and worldwide, as well as efforts with the Hotspot 2.0 initiative and Wireless Broadband Alliance (WBA), mean that Cisco should be considered for transaction-dense environments, such as stadiums, or cellular offloading opportunities.

Cisco has refreshed and extended its access switching portfolio to address customer needs with the Catalyst 2K product, and has added new services to its existing Catalyst 3K and 4K platforms. While features like PoE+ and stacking have become baseline, Cisco has added new capabilities through innovations such as TrustSec, MediaNet and Universal PoE.

#### Cautions

Cisco can deploy wireless solutions without a physical controller appliance (i.e., controller functionality resides within special APs, or virtually within data centers for multiple remote sites). Cisco Flex 7500 Series Wireless Controllers provide an option to virtualize controller functionality within the enterprise data center. Even with these capabilities, Cisco bids may be more expensive for small to midsize deployments, depending on the controller type deployed.

Over the past two years, Cisco has implemented various measures, including training and certification, to improve the consistency of reseller proposals and implementations for complex infrastructure solutions. However, given the company's huge number of resellers, this process will take time.

As a company, Cisco is in a state of development and transition, and enterprises should verify that the functionality they need to meet their business metrics is part of the proposed solution. While Prime has separate components, until it is consolidated, guest access can be implemented either in ISE, or for wireless guests in the wireless controller (where it is provided at no additional charge). Enterprises should understand Cisco's planned migration path for all components in transition (functionality and pricing) beyond the initial installation.

[Return to Top](#)

### D-Link

D-Link continues to grow its enterprise WLAN business with a strong channel that provides wired and wireless business solutions. It is one of the few vendors whose 802.11a/b/g sales still outnumber 802.11n. D-Link has a broad global presence, with nearly 60% of its wireless revenue coming from outside North America and Europe.

The controller-based architecture integrates many of its network services into the platform, such as

Wireless Intrusion Detection System (WIDS), basic guest access, client remediation and client forensics. It is an appropriate choice for SMBs or branch offices, as well as education, government, hospitality and retail market sectors.

#### Strengths

D-link has a large market share in the SMB market, chiefly as a result of providing incremental scalability by growing its installed base through autonomous APs, with the ability to grow into a controller-based architecture as more network services are needed.

D-Link's Unified Access System provides N + 1 and N + N redundancy not only for mission-critical applications, but also for growing requirements in enterprises where wireless provides edge connectivity.

#### Cautions

D-Link can provide cost-effective 802.11a/b/g solutions, which have comprised the majority of its business. Enterprises looking for 802.11n solutions should test D-Link's newer products to ensure that they meet the usage scenario requirements for the environment.

Enterprises that require network services should understand which functions are integrated and which are resident in additional modules. For example, the D-View wireless management functionality is resident as a module that may be purchased, but wireless intrusion protection system (WIPS), firewall, meshing and location services are integrated into the unified wired and wireless switch platform.

Organizations seeking to address BYOD onboarding where multiple end-user roles such as guests, contractors and consultants are needed, or to implement policy enforcement that additionally defines network access based on the device and user credentials, including context-aware variables such as location and time/date, should evaluate current D-Link functionality to ensure that it meets their business needs.

[Return to Top](#)

### Enterasys Networks

Enterasys Networks has a broad networking portfolio, and is continuing to grow its wired and wireless business with an established networking-edge story that combines wired and wireless access. The company's marketing team remains aggressive in market messaging, and in pricing the end-to-end solution for clients in target vertical markets.

Enterasys has struggled to establish a strong brand, and while we only see the company in certain geographies, it continues to expand its channel, which provides 96% of the company's total revenue. Target markets include five major vertical industries: higher education, K-12, healthcare, manufacturing and government (federal, state and local). Enterasys remains an appropriate choice for enterprises with Enterasys data networking products, or that are within its target markets. The company also is a good fit for "greenfield" networks with a requirement for integrating wired LANs and WLANs.

#### Strengths

Enterasys Networks is one of the few vendors that can deliver on an integrated wired and wireless value proposition, with single-security-policy enforcement, including WIDS (with applications providing sensor capabilities), guest access applications across wired/wireless/voice/data products, and single-point provisioning for voice, data, wired and wireless scenarios.

The vendor has continued its strong presence in core markets in Western Europe, and in the healthcare and hospitality vertical markets.

#### Cautions

Despite the strength of the products and increased channel presence, when we discuss Enterasys with Gartner clients, few outside the vendor's core markets, such as healthcare or data networking customers, are aware of its solutions.

The value of integrated wired and wireless network services, such as guest access and redundancy, needs to be better communicated to customers, or broken out as line items as they are with other vendors, since we do not see Enterasys on vendor shortlists when this functionality is required.

Although Enterasys has virtualized its controller application in public and private clouds and has aggressively priced its APs for wireless connectivity, enterprises should evaluate its end-to-end functionality and the total cost of wired and wireless connectivity.

[Return to Top](#)

### Extreme Networks

Extreme Networks targets the education, hospitality, local government, healthcare and transportation markets largely through distributors to enterprises around the globe. Consider Extreme when extending existing installations, or when WLAN is being added as an overlay on campus environments in the company's target markets.

While policy enforcement for all of Extreme's installed wired and wireless components will benefit from its Ridgeline solution, network management is still separate for Extreme and Motorola products. Extreme needs to develop greater synergy with Motorola as a strategic partner to create a more unified solution that is differentiable to enterprises evaluating access layer functionality.

#### Strengths

Extreme Networks continues to invest at the edge of the network, with a vision toward a converged wired and wireless access layer. XOS, through the SummitStack portfolio and in conjunction with Motorola, focuses on an architecture that guarantees the quality of the user experience.

The Motorola relationship brings to Extreme the AirDefense applications, which provide value against WLAN offerings that may be developed in-house by competitors. Enterprises should understand their requirements when looking at all network service applications, since Motorola has

several options for applications such as WIDS/WIPS.

Extreme Networks has invested higher-layer security with passive snooping of Windows Active Directory domain user identities that can provide better security for mobile clients.

#### Cautions

Extreme has a small footprint for vendors tracked by Gartner in the enterprise LAN switching marketplace, and does not appear on RFPs from Gartner clients where enterprises are considering an overlay WLAN solution. However, we have seen an increase in inquiries from our clients in the education vertical industry during the last year.

Extreme needs to develop more synergy with Motorola so that clients have less difficulty pulling the respective components apart and bidding on them separately.

Wireless still fits well within the Extreme mobility marketing campaign, but the company is arriving late to the market with differentiating functionality.

[Return to Top](#)

#### Fortinet

Fortinet is one of the smaller and newer WLAN vendors in this research, but has competitive switching products as part of its security offering. Fortinet has a global presence geographically distributed through resellers that deliver almost 99% of its global revenue.

Fortinet's corporate focus has been on providing unified threat management (UTM) through its FortiGate product family. As a vendor, it offers switches and a controller-based wireless architecture for retailers with its FortiAP, or as a stand-alone appliance with its FortiWiFi. Fortinet is an appropriate choice for SMBs and branch offices, as well as retail environments, including the retail banking or hospitality market sectors.

#### Strengths

Fortinet's wired and wireless offerings are attractive for small- or medium-footprint organizations that use FortiGate security applications.

The breadth of the Fortinet product family provides an affordable solution that focuses on simplicity for configuration and management of wired and wireless products at the edge of the network.

#### Cautions

Competitive vendors can deploy wireless solutions without a dedicated controller with more network application functionality, such as guest access or policy enforcement. Enterprises need to ensure that the Fortinet offering addresses their business needs.

Fortinet has a strong name in security, but Gartner does not see it on the shortlist for wired or wireless inquiries for opportunities within the enterprise.

[Return to Top](#)

#### HP Networking

HP Networking has established itself as a wired switching global leader with its FlexNetwork Architecture, while doubling the number of APs sold for wireless connectivity. In 2011, HP Networking grew its revenue by 40%. While HP clearly showed a vision for the access layer and made good progress on network applications, it did not make as much progress in optimizing the solution, such as integrating the wireless control plane into its own switching components to make an end-to-end HP solution more cost-effective.

HP Networking has a strong global sales force that focuses on education, hospitality and government markets, but should be considered for all opportunities where the entire access layer (wired and wireless connectivity) is being replaced. Every organization should at least consider and include HP on all network evaluations of any size. We have mainly seen HP used in SMBs, although the integration of HP Networking into HP's broader Enterprise Servers, Storage and Networking (ESSN) organization has increased its presence in enterprise accounts.

HP's Intelligent Management Center (IMC) also delivers a "single pane of glass" for wired and wireless solutions. The IMC integrated security and policy enforcement application provides a flexible solution across wired and wireless components.

#### Strengths

HP's sales channel and service/support provide global reach and access to opportunities that few companies can match.

The company's continued focus on the integration of the wired and wireless networking product delivers a solution that provides single-pane-of-glass management, security administration, policy enforcement and guest access capabilities.

As the market increases its focus on application services and software, HP's long history of selling services and delivering profitable software and services will enable it to continue to gain market share from traditional vendors.

#### Cautions

While HP is aggressively driving portfolio rationalization based on its FlexNetwork architecture, work is needed to integrate the 3Com networking products into a more cohesive product family.

NAC is integrated into the IMC application, and supports Windows, Linux, MAC clients and iOS fingerprinting. More advanced iOS and Android support is under development during 2012.

[Return to Top](#)

#### Huawei

Huawei has a strong presence in the service provider market, and is expanding its presence in the

enterprise market round the world, including in North America and EMEA. Wired and wireless products are integrated into Huawei's Enterprise Network Solution, which is part of a holistic, expansive vision for converged access. Huawei's Enterprise Business Group is responsible for the solutions, which are sold globally through its worldwide network of over 7,000 reseller partners.

Huawei Enterprise provides an information and communication technology (ICT) solution for healthcare, education, financial services, transportation, energy and the public sector/government (outside the U.S.).

#### Strengths

With a strong carrier heritage, Huawei has a rich portfolio of products and the resources to deliver to new markets.

Huawei can deploy a single architecture with its Enterprise Network Solution, which includes network management, security, firewall and guest access for wired and wireless connectivity, as well as a single-policy enforcement application for enterprises looking for one vendor.

Huawei has an extensive reseller channel, but is rarely seen on shortlists for enterprise wired or wireless inquiries.

#### Cautions

Enterprises looking to deploy Huawei in carpeted office environments should review the available information on network service functionality to ensure that it meets their specific needs for guest access, onboarding and policy enforcement.

Since Huawei currently has limited adoption at the network edge outside its home region, organizations should request references for implementation, service and support.

[Return to Top](#)

### Juniper Networks

Juniper Networks' introduction of the virtual-chassis-capable EX3300 fixed and EX6200 modular access switch families in 2011 shows that the company continues to invest at the edge of the enterprise network. However, architectural changes and the move to Junos for WLAN solutions limit Juniper's ability to quickly garner new customers.

As a global vendor that sells primarily through its channel, Juniper has wired and WLAN product lines that offer scalable solutions appropriate for organizations seeking simple and secure connectivity for campus and branch networking deployments. Juniper's five core markets are the public sector, healthcare, education, financial services and service providers. Consider Juniper for all campus upgrade and refresh requirements in its target vertical markets; Juniper or Trapeze components in particular are being refreshed at the edge of the network.

Juniper's policy enforcement application, as well as its client remediation and forensics capabilities, support wired and wireless clients across the edge of the network. Currently, Juniper provides separate security and network management functions for wired and wireless installations; organizations should plan accordingly.

#### Strengths

Juniper's Pulse Mobility is an integrated, multiservice network solution for mobile and nonmobile devices that serves as an integration and delivery platform for security, connectivity and optimization services.

Juniper's policy enforcement application, Unified Access Control (UAC), part of its "One Network, One Policy, and One Management" vision, allows organizations to define and apply one policy for users, devices and sessions independent of wired or wireless connectivity.

Juniper's Virtual Chassis technology helps scale wired and wireless access deployments, and has helped Juniper increase its traction in enterprise accounts.

Juniper is the only vendor to develop and leverage its own location monitoring and management platform, including the concept of a radio frequency (RF) firewall. The technology can be seamlessly integrated into other third-party applications.

#### Cautions

Distribution channels and account coverage continue to limit Juniper's opportunities and market share expansion.

Although Juniper's wired and wireless components are aggressively priced, the required WLAN controller may make the overall solution more expensive than competitors' products.

Juniper continues to rationalize wired and wireless network service applications at the edge of the network. Currently, network management (RingMaster and Space), as well as guest access (Smartpass and Enterprise Guest Access) are separate offerings. Since Juniper plans to continue merging these applications, enterprises need to understand the company's road map for them.

[Return to Top](#)

### Meraki

Meraki is a young, innovative vendor that offers its solution globally, although it is heavily installed in North America and has good references for Latin America. A unique, cloud-based WLAN architecture coupled with intuitive mesh networking capabilities have won it a loyal customer base.

Meraki provides wired and wireless components, but focuses primarily on wireless connectivity for SMBs and remote and branch offices (although the solution is scalable to larger enterprises). The company focuses on the education, retail/distributed enterprise, hospitality, manufacturing and service provider sectors. Meraki should be considered by organizations seeking managed services, and those with many branch offices or remote sites.

#### Strengths

Meraki's cloud-based management architecture enables low total solution costs for enterprises. Alternatively, enterprises can buy wired or wireless at monthly rates. Combined with in-depth and



responsive customer service, the pricing strategy is one of the more flexible purchase/deployment methods in this market.

Meraki excels in the delivery of network service applications beyond typical vendors, including device profiling and user fingerprinting. It provides WAN optimization/acceleration, branch routing and content filtering, which are integrated in the MX Series Cloud Managed Security Appliances, with no additional licenses needed. Organizations should understand their requirements while evaluating these applications as part of their solutions.

Security and management applications are multitenant and cloud-based, which enable seamless updates and changes to be implemented networkwide on a scheduled basis or immediately.

With a customer-focused organization and a high-touch sales and support model, Meraki continues to score very high marks from customers we have spoken to.

#### Cautions

Government agencies and clients with high-security profiles that require Federal Information Processing Standard (FIPS) 140-2 or higher should review the capabilities of the proposed Meraki solution.

Meraki continues to grow faster than the market, but is still a smaller, private company. It needs to increase its marketing communication campaign to gain additional visibility in emerging markets. Clients should verify local support capabilities within emerging markets as part of their evaluation process.

[Return to Top](#)

#### Meru Networks

Meru Networks is a wireless overlay vendor that provides global sales and support largely through its indirect sales organization. With over 1,000 partners, Meru targets education, hospitality, healthcare and retail supply chain markets. Meru is a good choice for opportunities within its target vertical markets, as well as enterprises with high-density requirements. Meru's wireless architecture requires a dedicated control function that can be located at a centralized headquarters site or branch office, and can be deployed as a physical controller appliance or as a virtualized application over VMware. While Meru provides internally developed network, guest and policy enforcement manager applications, it is reliant on technology partnerships such as SolarWinds, Palo Alto and Bradford to supply additional network services that are often used for differentiation.

#### Strengths

Meru's Identity Manager suite provides guest access and policy enforcement functionality for managing onboarding and BYOD requirements for employee-owned devices, visitors, contractors and consultants.

Meru has developed a loyal, geographically diverse customer base, particularly among IT departments with limited resources, due to easy methods of setup and troubleshooting. This is further enhanced by good customer support and service.

#### Cautions

Gartner clients rarely ask about Meru in inquiries; accordingly, the company has made an extensive commitment to improving its marketing, and will need to continue investing to gain brand and message awareness.

As a wireless-overlay-only vendor, Meru must establish better relationships with its wired networking partners for customers that will increasingly require end-to-end management and support.

The focus on Meru's virtual cell architecture makes it appear proprietary to clients, especially when the major marketing feature of being easy to use is met competitively by managed service or cloud offerings with functionality and pricing.

Meru is a relatively small vendor with limited sales resources, but its products are being installed globally through partners. Although current reports of support capabilities are favorable, large enterprises should ensure that Meru can continue to provide the required levels of support.

[Return to Top](#)

#### Motorola Solutions

Motorola Solutions is a wireless overlay vendor with limited wired-port connectivity that can provide end-to-end solutions through strategic wired partnerships with Brocade and Extreme. Motorola has a strong global channel organization that delivers approximately 80% of its revenue.

Motorola is a clear leader in WLAN within the retail and government vertical industries, but also services hospitality, manufacturing, healthcare, transportation and logistics. Motorola should be on the shortlist for any WLAN requirements in retail, government and other vertical industries that have data collection or heavy security and analytical requirements.

#### Strengths

Motorola Solutions is a leader in delivering market-leading, vertical-market-based solutions in retail and state/local governments, many based on an end-to-end product offering, including infrastructure, voice and data handheld devices, and management, security and forensics software. Organizations in these vertical industries should include Motorola on their shortlists.

Motorola is one of the few vendors that offers best-of-breed infrastructure planning, management, security and analytics software, much of it gleaned from acquisitions (AirDefense, Wireless Valley and Mesh Networks), the majority of which has been integrated into one software suite.

Motorola continues to have a strong and loyal channel organization that has the ability to deploy globally. Many channel partners can provide value-added services that allow them to deploy end-to-end solutions in target vertical markets, such as retail in-store applications or transportation direct to store delivery.

#### Cautions

When choosing security options, enterprises should evaluate the various tiers of security offerings

Motorola provides native to its WING 5 Controllers and APs, in addition to the AirDefense Solution.

Motorola and its OEM partners have been slow in executing a wired LAN and WLAN strategy, and do not currently deliver a differentiated level of integration or single-pane-of-glass management for enterprises looking to converge their access layers.

Motorola offers controller/branch-in-a-box and controllerless solutions. Customers should ask for details on pricing when investigating these solutions for their requirements. Enterprises also should evaluate Motorola's cloud-based and managed service offerings when evaluating solutions.

While Motorola has guest access and policy enforcement capabilities, enterprises with these requirements should require the vendor to supply sufficient documentation or demonstrations of its capabilities, because the company's standard documentation on this functionality for enterprise deployments, including on its website, is sparse.

[Return to Top](#)

### Netgear

Netgear is one of the smaller WLAN vendors in the market, but has a competitive switching business delivered 100% through a global channel. North America and European partners deliver almost 90% of the company's revenue. Netgear had significantly more revenue on 802.11n than on 802.11a/b/g, but had more unit shipments of 802.11a/b/g.

The controller-based architecture integrates many network services into a controller platform, such as guest access, authentication, authorization and network management. It is an appropriate choice for SMBs and branch offices, as well as the education, government, hospitality and retail market sectors.

#### Strengths

Netgear's lifetime warranty and inclusion of on-site support mean that enterprises can implement a known brand with a low risk of failure, which is very important in the small, midsize, remote and branch office market.

The breadth of the Netgear product family provides an affordable solution that focuses on simplicity for configuration and management of wired and wireless products at the edge of the network.

#### Cautions

Competitive vendors can deploy wireless solutions without a dedicated controller, causing Netgear bids to be more expensive than other offerings, especially in small, midsize, remote and branch office wired and wireless solutions.

Netgear has a strong global reseller channel, but Gartner rarely sees it on the shortlist for wired or wireless inquiries for opportunities within the enterprise.

Organizations looking to address onboarding for BYOD or to implement policy enforcement need to evaluate current Netgear functionality to ensure that it meets their business needs.

[Return to Top](#)

### Ruckus Wireless

Ruckus Wireless has been bolstered by continued success in its carrier business, and by an aggressive strategy for capturing carrier offload business. It also has added wired switches and enterprise-class APs for midsize and large enterprise installations. Ruckus's engineering continues to focus on pushing the wireless envelope to improve the performance, capacity and reliability of the radio link between the client and AP.

Ruckus is a good solution for enterprises in hospitality, education and healthcare, as well as service providers. It has done a good job with internally developed WIDS/WIPS, the firewall and guest access as part of its ZoneDirector application.

#### Strengths

Ruckus understands its markets, and provides network service applications that meet its clients' needs. The SpeedFlex performance testing application, as well as internally developed planning tools for Apple and Android clients, show good innovation.

In our client reference survey, clients gave Ruckus high marks for its service and support experience across all target markets, and solid performance for small and large installations.

Ruckus offers a limited lifetime warranty as an option for its wireless solution, matching that of many larger vendors' offerings and further underlining the cost-based advantages the company communicates.

#### Cautions

Ruckus is a pure-play Wi-Fi supplier and, to date, provides no unified access policy controls for wired and wireless networks.

Given the multiple markets in which the company competes (carrier and enterprise), Ruckus is often late to market, due to the added antenna design and software control required.

[Return to Top](#)

### Xirrus

Xirrus is a wireless vendor that continues to increase its revenue in the WLAN market with its modular array architecture, which includes integrating controller and network service functionality such as security. Originally designed for highly user- and transaction-dense environments, such as campuses, convention centers and hospitals, the Xirrus modular array architecture has seen the launch of additional arrays that provide radio scalability from two radios in one array up to 16 integrated radios. This enables Xirrus to better address a broader range of enterprise environments, such as branch offices.

Xirrus is a pure-play vendor with a direct sales force, and recently transitioned to a primarily

channel-based model. Xirrus relies on focused marketing to achieve its growth in education, healthcare, retail and hospitality, and for expansion into the enterprise. Xirrus is strong in outdoor-coverage events, such as stadiums, as well as highly dense user environments, such as classrooms, auditoriums and entertainment venues, where the array can provide a large coverage area and serve high-density and high-performance needs.

Xirrus has historically provided excellent network service applications, such as security, spectrum analysis, location-based services and guest access through its integrated array architecture, requiring no centralized controllers.

#### Strengths

Dual-homed GbE ports on each array, a meshing capability and hot standby mode enable Xirrus to provide redundancy for mission-critical applications and dense environments.

A built-in firewall, WIDS/WIPS, a spectrum analyzer, guest access and other performance tools, as well as an integrated controller and network service capability, mean that users need fewer appliances or servers for the wireless solution. They also have the ability to integrate two radios up to 16 radios in a single array for less wiring at the edge of the network.

Xirrus customers continue to give it high marks for service and support. Many use Xirrus to solve unique coverage and density issues.

#### Cautions

As Xirrus continues to expand into the enterprise market, users need to evaluate their requirements against current guest access and policy enforcement capabilities.

Xirrus has made recent progress in market awareness, but must continue to increase sales and marketing activities to gain additional visibility in the enterprise, and to help clients better understand the benefits of the array architecture.

As with other pure-play WLAN vendors, Xirrus needs to articulate its wired networking strategy for enterprises looking for end-to-end access layer capabilities.

[Return to Top](#)

### 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.

[Return to Top](#)

#### Added

None

[Return to Top](#)

#### Dropped

None

[Return to Top](#)

### Inclusion and Exclusion Criteria

Vendor inclusion and exclusion criteria include:

The previous-year revenue of enterprise-class wired and/or wireless products must be more than \$25 million.

Vendors must be the manufacturer of the enterprise-class wired or wireless components that are supplied to their clients.

Vendors must have a considerable volume of Gartner inquiries specific to their access layer networking solutions.

#### Inclusion Criteria for Unified Access Layer Connectivity Solutions

Equipment-based solutions evaluated in this Magic Quadrant must demonstrate two clear capabilities to be included in our analysis.

The first capability is to deliver enterprise-class, unified access layer connectivity for wired and wireless clients. Vendors must design and manufacture the enterprise-class wired or wireless components supplied to their clients. Components not designed or manufactured by the vendor may be provided through a documented, strategic relationship to provide end-to-end connectivity:

Access layer switches must minimally support 10 Mbps or 100 Mbps Ethernet devices, support PoE with the ability to address PoE+ requirements, and have 10 Mbps and 100 Mbps, GbE uplink or WAN uplink connectivity.

An AP-based WLAN infrastructure must be accomplished through one of three architectures: centralized controller/switch, decentralized (cloud-based) controller or intelligent mesh. All vendors must have 802.11a/b/g/n standard products available in the market.

The second capability is that all vendors must, at a minimum, provision equipment and provide network management and security for an entire wired and wireless access layer solution that they provide through one or more applications, whether the equipment is available through an OEM or is manufactured.

[Return to Top](#)

## Evaluation Criteria

### Ability to Execute

We continue to adjust the weighting and criteria for this Magic Quadrant as buyers' requirements and market forces shift what is important for vendors to provide.

Gartner evaluates technology providers on the quality and efficacy of the processes, systems, methods and procedures that enable IT provider performance to be competitive, efficient and effective, and to have a positive effect on revenue, retention and reputation. Technology providers are ultimately judged on their ability and success in capitalizing on their vision.

**Product/Service:** We evaluate wired and wireless infrastructure products consisting of switches, APs, controller functionality, management and security software, and network services.

**Overall Viability (Business Unit, Financial, Strategy, Organization):** This includes an assessment of the organization's overall financial health, the financial and practical success of the business unit, and the likelihood that the organization will continue to invest in access layer technology and product development.

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

**Market Responsiveness and Track Record:** This includes the quality and effectiveness of the organization's marketing messages in communicating to the market the advantages and unique capabilities of the vendor's product lines, company and supporting partners/services. This evaluation includes the history of the vendor's marketing messages, and its ability to react to changes in market requirements.

**Market Execution:** This focuses on how the vendor is perceived in the market, and how well its marketing programs are recognized. The evaluation addressed how well the vendor can influence the market on key messages and attributes related to important areas in the market. An additional indicator for this criterion is how often Gartner clients consider a vendor as a possible supplier in a shortlist evaluation. The change in momentum in this indicator is particularly important.

**Customer Experience:** This criterion addresses how customers and partners view the vendor. This evaluation includes significant input from Gartner customers in inquiries, face-to-face meetings and written responses about the vendors. We include the results of surveys that were sent to vendor-supplied references.

**Operations:** This addresses the vendor's ability to meet its goals and commitments. Factors include the quality of the organizational structure, such as skills, experiences, programs, systems and other vehicles that enable the vendor to operate effectively and efficiently.

**Table 1. Ability to Execute Evaluation Criteria**

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

Source: Gartner (June 2012)

### Completeness of Vision

Gartner evaluates technology providers on their ability to convincingly articulate logical statements about current and future market directions, innovation, customer needs and competitive forces, as well as how they map to the Gartner position.

Technology providers are rated on their understanding of how to exploit market forces to create opportunities for themselves.

**Market Understanding:** This looks at the vendor's ability to gauge the future, and to drive new ideas into product road maps and offerings.

**Marketing Strategy:** This criterion addresses whether the vendor's marketing message articulates a clear, understandable message that answers the market requirements for technologies and services. It looks at the vendor's message and supporting products, and whether these lead in access layer market requirements, or merely fulfill them.

**Sales Strategy:** This looks at the vendor's sales strategy support for a wide range of customers with different requirements for the access layer and the supporting networking products. It considers whether the vendor has the best value-added resellers and integrators to deliver sales and product support. It also addresses price, and whether the vendor bundles its products to effectively compete with other vendors.

**Offering (Product) Strategy:** This criterion addresses whether the current and future planned product line meet the needs of buyers now, and whether it will do so in the future. It also considers whether the vendor is simply building products the buyer is asking for, or is anticipating the issues

those buyers will face, and allocating resources to address them.

**Business Model:** This includes the process and success rate for developing features and innovation, and service delivery capabilities.

**Vertical/Industry Strategy:** This looks at whether the vendor's strategy, direct resources, skills and offerings meet the needs of the market segments, including vertical industries.

**Innovation:** This criterion considers what the vendor has done to address the future requirements of the access layer infrastructure, including needs for tighter integration with wired networking products, voice, video and applications support. It looks at whether the vendor has successfully differentiated current and future product lines to better address customer requirements now and two to five years from now.

**Geographic Strategy:** This looks at whether the vendor's strategy, direct resources, skills and offerings meet the needs of regions outside the vendor's home or native area directly or through partners, channels and subsidiaries, as appropriate for that region and market.

**Table 2. Completeness of Vision Evaluation Criteria**

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

Source: Gartner (June 2012)

## Quadrant Descriptions

### Leaders

A vendor in the Leaders quadrant will have demonstrated the ability to fulfill a broad variety of customer requirements, the ability to provide an end-to-end infrastructure-based solution, and the financial viability to continue that support beyond a single installation. Leaders should have demonstrated the ability to shape the market, maintain strong relationships with their channels and customers, and have no obvious gaps in their portfolios.

Enterprises need to continue to understand the various usage scenarios that exist in their environments. One size does not fit all, even for best-of-breed vendors. In some cases, the best vendor for a particular enterprise may be a Niche Player or Visionary.

[Return to Top](#)

### Challengers

A vendor in the Challengers quadrant will have demonstrated sustained execution in the marketplace, and will have clear and long-term viability in the market. However, it will not have shown the ability to shape and transform the market.

[Return to Top](#)

### Visionaries

A vendor in the Visionaries quadrant has demonstrated the ability to increase the features in its offering to provide a unique and differentiated approach to the market. A Visionary will have innovated in one or more key area of access layer technologies (e.g., convergence, security, management or operational efficiency).

[Return to Top](#)

### Niche Players

A vendor in the Niche Players quadrant has a complete or near-complete product offering, but does not have strong, go-to-market capabilities, or innovation in its product offerings. Besides a capability to fulfill mainstream technology requirements, a Niche Player often has deep vertical knowledge, and will be an appropriate choice for users in those vertical markets.

[Return to Top](#)

## Context

Enterprises with existing wired switches understand the issues associated with adding wireless to the edge of the network, and the vendors that can provide completed solutions.

Enterprises with wireless LANs understand access layer issues and the synergies their WLAN vendor, whether on its own or with partners, can provide in an end-to-end solution with its own switching technology.

Enterprises looking to deploy connectivity at the edge of the network understand the importance of

network service applications, and their ability to manage and secure wired and wireless connectivity.

[Return to Top](#)

## Market Overview

Limited IT resources, increased mobility and reduced IT budgets are providing catalysts for the buying behavior at the edge of the network. The number of switching ports deployed at the edge of the network is decreasing, as enterprises continue to rightsize their infrastructures, and as growing mobility requirements change the way enterprises look at the edge of the network. In a recent Gartner survey, 76% of enterprises noted that a single IT resource was used to manage these changes. As a result of these changes, Gartner is seeing the emergence of a single buying decision for wired and wireless connectivity at the edge of the network.

The consolidation of wired and wireless networks has been gradual, but has continued since the days when organizations handed over control of their WLANs to IT. Larger vendors, such as Cisco, made acquisitions early in the market cycle to provide an end-to-end solution, but were not the only vendors in this area, as HP has made several acquisitions to gain entry into the market. Even within the last couple of years, this trend has continued for single-vendor wired and wireless connectivity, as Juniper Networks and Adtran both acquired wireless technology. This is not seen only by larger switching vendors, but also by wireless vendors such as Aruba, Aerohive and Meraki, which also launched switches. While having the capability for physical connectivity was key for the advance of this technology, it was not the chief catalyst. The main drivers continue to be the convergence of network service applications, and the need for a single pane of glass for each functional application by IT administrators, who must use these tools 24/7. This trend also has been identified by our research on segmenting organizations' network decisions, "Clients That Don't Segment Their Networks will Have Higher Costs and Increased Vendor Lock-In," where the entire edge of the network — wired and wireless — needs to be viewed as one infrastructure foundation. We also document this in "A Unified Access Layer Forces Changes to Infrastructure Thinking at the Edge of the Network."

Network service applications reduce the complexity and costs needed to provision, manage, authenticate and locate end users across one or multiple enterprise facilities. As switching and AP hardware continue to commoditize, vendors will continue to provide innovation around network service functionality, especially security, reliability and guest access capabilities that are not only wired and wireless, but also support multiple vendors/products, such as Aruba's ClearPass. Vendors understand that IT organizations have fewer resources, and that they need to make the IT experience — whether it is onboarding BYOD clients, managing the infrastructure or defining role-based policy — as simple and easy as possible. We are also seeing many enhancements to network management applications where applications proactively identify potential issues, and resolve them against address-reduced IT resources, such as the 360-degree capabilities of Cisco's Prime. Additional services that provide improvements in voice, video, intrusion detection, network management and security are just the beginning of these trends as vendors search for new areas of differentiation.

[Return to Top](#)

---

© 2012 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. or its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. The information contained in this publication has been obtained from sources believed to be reliable. Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information and shall have no liability for errors, omissions or inadequacies in such information. This publication consists of the opinions of Gartner's research organization and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice. Although Gartner research may include a discussion of related legal issues, Gartner does not provide legal advice or services and its research should not be construed or used as such. Gartner is a public company, and its shareholders may include firms and funds that have financial interests in entities covered in Gartner research. Gartner's Board of Directors may include senior managers of these firms or funds. Gartner research is produced independently by its research organization without input or influence from these firms, funds or their managers. For further information on the independence and integrity of Gartner research, see "Guiding Principles on Independence and Objectivity" on its website, [http://www.gartner.com/technology/about/ombudsman/omb\\_guide2.jsp](http://www.gartner.com/technology/about/ombudsman/omb_guide2.jsp).

---

[About Gartner](#) | [Careers](#) | [Newsroom](#) | [Policies](#) | [Site Index](#) | [IT Glossary](#) | [Contact Gartner](#)