

FROST & SULLIVAN



2017 Global Network Firewall Market Leadership Award

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BEST
2017 PRACTICES
AWARD

GLOBAL NETWORK FIREWALL
MARKET LEADERSHIP AWARD

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Background and Company Performance

Industry Challenges

The firewall, one of the earliest network security tools invented, remains a foundational component of any security infrastructure. Its original purpose is still valuable today: the firewall allows the creation and enforcement of network boundaries through pre-defined policies, and therefore, the creation of trusted network environments.

However, the technology has evolved significantly from its earliest forms. This evolution is in direct response to the constant innovation by threat actors, who remain vigilant in their work to discover new hacking techniques and continue to abuse any new security gap that they can find.

Today's advanced, sophisticated malware has demonstrated an ability to circumvent traditional "pattern-matching" approaches to detection and mitigation. Though dedicated point products have emerged to combat these advanced malware types, the reality is that the firewall represents the network boundaries, which are ideal logical locations in the network to perform threat detection.

The security challenge is compounded further when factoring in the emergence of technologies such as cloud computing, virtualization, and the Internet of Things (IoT). These new technologies offer businesses exciting new prospects for growing and automating their networks, as well as empowering end-users to be more productive. The drawback: new technological trends such as public clouds and IoT now expose the enterprise network to unprotected and uncontrolled environments and systems.

Firewall vendors have had to adapt their products to provide consistent protection in the face of these new modern threat vectors. And increasingly, the firewall is expected to protect not solely the traditional network perimeter, but the entire distributed and diverse enterprise network. As a result, the firewall market is large and growing, but also very competitive. Market leaders must continue to innovate or risk losing market share to entrepreneurial challengers.

Market Leadership of Cisco Systems

Few companies have the tenure or name recognition as Cisco Systems in terms of networking and IT equipment. This much is evidenced by the fact that the company reported \$48.7 billion in revenue for fiscal year 2016. Cisco is rapidly earning a similar reputation in the security industry as well. Security is the fastest growing segment in Cisco. In particular, Cisco earned the market leadership position in the network firewall market with nearly 19% of market revenue in 2016. This success is owed to a focus on high product quality and aggressive product development.

Product Leadership

Cisco offers its line of Firepower Next-Gen and ASA multi-role enterprise firewalls available for a range of environments. These firewalls can be deployed in any one of a number of possible roles: as dedicated Next Gen IPS and advanced malware sensors, or as Next

Generation Firewalls (NGFWs), or as virtual firewalls that work with firewall appliances in hybrid cloud use cases.

Breadth of Product Line

Cisco offers a range of ASA with FirePOWER Services firewalls for small and medium-size businesses (SMB), branch offices, and enterprise networks. The company also offers the Firepower 2100 Series for Internet edge use cases, the Firepower 4100 Series for data centers, and Firepower 9300 for campuses and service providers. The Cisco security portfolio also includes Meraki UTM appliances, capable of performing a full suite of security services including application control, IPS, content filtering, and VPN.

Additionally, Cisco offers the Firepower NGFWv and ASAv virtualized firewalls to protect virtual and cloud environments. These virtual firewalls can be used to protect Cisco and non-Cisco data centers, traditional networks, software-defined networks (SDN) and Cisco Application Centric Infrastructure (ACI) environments. They supports Amazon Web Services (AWS), Microsoft Azure, Microsoft Hyper-V, and VMware.

Businesses must protect critical data regardless of where it lives by implementing consistent security policies and leading threat detection capabilities across the complete extended enterprise network. The range of deployment options and form factors provides customers with a wealth of options with which they can use to secure the many facets of their networks. Support for cloud and virtual form factors is of critical importance as enterprises look to adopt these new technologies without also opening up new attack vectors.

Customer Value Enhancement

Cisco NGFWs provide value in two ways. First, through superior threat defense that stops more threats and enables consolidation, replacing multiple point products (firewall, IPS, and malware sandbox). Second, Cisco lowers operational costs by providing simplified management for single instance, centralized, and cloud managed customer requirements.

Additionally, Cisco includes free limited-time trial functionality along with its firewalls as part of its Security Everywhere strategy. For example, Cisco NGFW firewalls include application visibility and control (AVC) functionality standard for free, and include 90-day trial licenses of the other Firepower services (NGIPS, URL, AMP) and its Threat Grid advanced malware sandbox protection. This offering provides greater protection for customers, and provides an easy path for smart licensing the full solution if the customer requires it.

Continued Product Development

Security is of critical importance for Cisco's overall corporate strategy. Security enables Cisco customers to pursue cutting-edge technologies and business practices to gain a competitive advantage. As a result, Cisco continues to aggressively expand its security portfolio through a mix of internal innovation and external acquisition. In recent years, Cisco has made numerous strategic acquisitions of emerging and market leading security

companies including Sourcefire, ThreatGrid, Cognitive Security, OpenDNS, Lancope, and CloudLock. The company remains aggressive in its development strategy as it looks to solve future security challenges stemming from changing technologies and threats.

Conclusion

Cisco has made great strides to understand and adapt to the key security challenges that their customers face today. The firewall plays a key role in this modernized security infrastructure and Cisco has made significant investments in its firewall product line. As a result, Cisco firewalls are able to aid customers in their digital initiatives and in adapting to new technologies, while defending against advanced malware and sophisticated threats.

With its strong overall performance, Cisco has achieved a leadership position in the firewall market with a market share of nearly 19% and Frost & Sullivan is proud to bestow the 2017 Market Leadership Award to Cisco Systems.

Significance of Market Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company, and then making the decision to return time and again. Loyal customers become brand advocates; brand advocates recruit new customers; the company grows; and then it attains market leadership. To achieve and maintain market leadership, an organization must strive to be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition. This three-fold approach to delivering market leadership is explored further below.



Understanding Market Leadership

As discussed on the previous page, driving demand, strengthening the brand, and differentiating from the competition all play a critical role in a company's path to market leadership. This three-fold focus, however, is only the beginning of the journey and must be complemented by an equally rigorous focus on the customer experience. Best-practice organizations, therefore, commit to the customer at each stage of the buying cycle and continue to nurture the relationship once the customer has made a purchase. In this way, they build a loyal, ever-growing customer base and methodically add to their market share over time.

Key Performance Criteria

For the Market Leadership Award, we focused on specific criteria to determine the areas of performance excellence that led to the company's leadership position. The criteria we considered include (although not limited to) the following:

Criterion	Requirement
Growth Strategy Excellence	Demonstrated ability to consistently identify, prioritize, and pursue emerging growth opportunities
Implementation Excellence	Processes support the efficient and consistent implementation of tactics designed to support the strategy
Brand Strength	The possession of a brand that is respected, recognized, and remembered
Product Quality	The product or service receives high marks for performance, functionality, and reliability at every stage of the life cycle
Product Differentiation	The product or service has carved out a market niche, whether based on price, quality, or uniqueness of offering (or some combination of the three) that another company cannot easily duplicate
Technology Leverage	Demonstrated commitment to incorporating leading-edge technologies into product offerings, for greater product performance and value
Price/Performance Value	Products or services offer the best value for the price, compared to similar offerings in the market
Customer Purchase Experience	Customers feel they are buying the most optimal solution that addresses both their unique needs and their unique constraints
Customer Ownership Experience	Customers are proud to own the company's product or service, and have a positive experience throughout the life of the product or service
Customer Service Experience	Customer service is accessible, fast, stress-free, and of high quality

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Our analyst team strives to follow a 10-step process (illustrated below) to evaluate Award candidates and assess their fit with our best practice criteria. The reputation and integrity of our Awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify Award recipient candidates from around the globe	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> • Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> • Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> • Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles 	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> • Share findings • Strengthen cases for candidate eligibility • Prioritize candidates 	Refined list of prioritized Award candidates
6 Conduct global industry review	Build consensus on Award candidates' eligibility	<ul style="list-style-type: none"> • Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates 	Final list of eligible Award candidates, representing success stories worldwide
7 Perform quality check	Develop official Award consideration materials	<ul style="list-style-type: none"> • Perform final performance benchmarking activities • Write nominations • Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best-practice Award recipient	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select recipient 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award recognition	<ul style="list-style-type: none"> • Present Award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share Award news with stakeholders and customers	<ul style="list-style-type: none"> • Coordinate media outreach • Design a marketing plan • Assess Award's role in future strategic planning 	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.