



The Security Division of NETSCOUT

2015 Global Distributed Denial-of-Service (DDoS) Mitigation Market Leadership Award



FROST & SULLIVAN



50 Years of Growth, Innovation & Leadership

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Background and Company Performance

Industry Challenges

Distributed Denial of Service (DDoS) attacks continue to advance in frequency and scale. Cyber criminals, activists, state sponsored groups, and amateurs are using DDoS attacks to harass, embarrass, and sabotage online organizations. Furthermore, the methods used to launch DDoS attacks have evolved to be more effective on two completely different vectors:

1. massive scale volumetric attacks
2. difficult to detect attacks requiring minimal resources

These advancements in DDoS attack technologies challenge conventional and basic DDoS mitigation procedures.

Demand for purpose-built DDoS mitigation solutions has grown rapidly as DDoS attack risk has increased. However, a wide range of solutions are now available to meet the wide array of customer environments, vastly different technical and budgetary considerations, and a broad range of attack types. The DDoS mitigation market is now highly competitive and DDoS mitigation vendors must continue to innovate in order to gain advantage in the competitive landscape.

Market Leadership of Arbor Networks

Frost & Sullivan's industry analysis found that Arbor Networks maintained its position as the leading provider of purpose-built solutions in the DDoS mitigation market in 2015. Arbor Networks' ability to retain its market leadership position, despite increased levels of competition, is a testament to the company's ongoing innovation and thought leadership.

Brand Strength

Arbor Networks DDoS mitigation solutions are used to protect many of the largest cloud service providers, hosting providers, social media networks, and financial institutions. The Arbor Networks SP solution is widely deployed in hundreds of service provider networks today including more than 90% of Tier 1 service providers. Arbor Networks has been entrusted to protect some of the largest Web properties such as the Olympic Games and multiple FIFA World Cups.

Arbor Networks has earned a strong reputation by investing heavily in security research and product development, delivering high performance appliances, developing new form factors such as virtual appliances, and expanding its solution set to include cloud services.

Product Quality

Arbor Networks solutions provide the scalability and reliability required for use in large service provider networks and global enterprise environments. Additionally, Arbor Networks solutions are supported by its Active Threat Level Analysis System (ATLAS) research. ATLAS collects and analyzes network intelligence and metadata from service provider networks around the world. The Arbor Networks large install base, particularly among service providers, provides a tremendous amount of data with which to better understand DDoS attack trends, botnets, malware and targeted attack campaigns. Over 330 service providers contribute to the ATLAS research, providing insight into as much as 120 Tbps of global Internet traffic.

ATLAS research and intelligence is used to improve the accuracy and security effectiveness of Arbor Networks attack detection engine. The Arbor Security Engineering and Response Team (ASERT) also uses this data to produce annual security reports, intelligence briefs, and alerts on the latest security trends and advanced threats.

Product Differentiation

Arbor Networks offers the industry's broadest DDoS mitigation portfolio, and continues to expand its capabilities. Arbor Networks first added the Pravail solution (now called Arbor Networks APS) for inline and real-time detection of DDoS attacks. Arbor Networks APS provides customers with the ability to detect and block sophisticated application layer attacks that can evade volume-based detection systems. Additionally, this solution is able to perform SSL inspection to detect encrypted threats. This is often a challenge for other solutions that are unable to see the contents of network traffic.

The addition of Arbor Cloud services in November 2013 provided a valuable new option for businesses considering a hybrid, end-to-end DDoS solution. The Arbor Cloud service leverages four high capacity attack scrubbing data centers around the world which are supported 24 hours a day by Arbor Networks security experts at the Arbor Security Operations Center (SOC).

This holistic solution uses on-premises Arbor Networks DDoS mitigation appliances to detect and mitigate attacks up to a certain preset threshold, up to 40 Gbps in the APS solution. Once attack traffic reaches a sufficient volume, network traffic is rerouted to the Arbor Cloud using cloud signaling. The Arbor Networks hybrid solution uses Cloud Signaling to reduce time to mitigation to as little as five seconds. The Arbor Cloud is responsible for removing attack traffic before returning clean traffic to the customer's network. This hybrid solution enables businesses to detect and mitigate stealthy application layer attacks as well as the massive volumetric attacks. Arbor Networks also offers Arbor Cloud as a turnkey, white-label solution to enable service providers to offer DDoS mitigation as a cloud-based managed security service.

Technology Leverage

Arbor Networks continues to develop new technologies for DDoS mitigation. In 2015, the company announced the development of its DDoS Virtual Services Module (VSM) for use in Cisco ASR 9000 routers. The Arbor Networks DDoS VSM for Cisco ASR 9000 routers enables in-network detection and removal of attack traffic. The Arbor Networks DDoS VSM can be used to mitigate attacks at the network edge peering and transit points, thereby reducing the wasted costs and performance degradation associated with backhauling attack traffic to dedicated scrubbing centers.

Additionally, Arbor Networks continues to advance its products in terms of scalability. In 2015, Arbor Networks expanded the attack ingest capacity of its Arbor Cloud service up to 2 Tbps. Arbor Networks also grew its TMS and APS appliances capabilities four times in magnitude in terms of attack mitigation capacity. A single Arbor Networks TMS appliance can process 160 Gbps of attack traffic and 8 Tbps per deployment. Additionally, the company maintains a high level of research and development in order to continue to detect attacks effectively, including new or sophisticated attack types.

Growth Strategy Excellence

Arbor Networks updated its pricing and licensing model to improve deployment flexibility and to enable customers to grow their deployments along with their networks. Arbor Networks Flex Licensing offers platform licensing, software licensing, and virtual machine licensing. These new licensing options will lower capital expenses, enable faster deployments, streamline upgrades, and lower total cost of ownership.

Arbor Networks is now offering managed security services for its on-premises DDoS mitigation appliances. By lowering these barriers to entry, Arbor Networks makes its solutions more accessible to a broader range of customers, including small and medium size businesses.

In 2015, NETSCOUT (NASDAQ: NTCT) acquired Arbor Networks from Danaher Corporation. Arbor Networks will now be the network security division of NETSCOUT, which also offers tests and measurements solutions from Fluke Networks and monitoring, analytics, and big data solutions from Tektronix Communications. Arbor Networks is a natural fit within this broader security, monitoring, and analytics portfolio and is well positioned for future growth.

Conclusion

Arbor Networks continues to display a deep understanding of DDoS attacks, trends, and mitigation strategies. Furthermore, Arbor Networks has demonstrated the ability to anticipate future market requirements and make strategic adjustments, develop new mitigation technologies, and enhance existing products.

With its strong overall performance, Arbor Networks has achieved a leadership position in the DDoS mitigation market, with the greatest market share, and Frost & Sullivan is proud to bestow the 2015 Global DDoS Mitigation Market Leadership Award to Arbor Networks.

Significance of Market Leadership

Ultimately, growth in any organization depends upon customers purchasing from your 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.



Understanding Market Leadership

As discussed on the previous page, driving demand, strengthening the brand, and competitive differentiation 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, Frost & Sullivan analysts focused on specific criteria to determine the areas of performance excellence that led to the company's leadership position. The criteria that were 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, 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 like 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

The Intersection between 360-Degree Research and Best Practices Awards

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 players and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



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

Frost & Sullivan Awards follow a 10-step process to evaluate award candidates and assess their fit with select best practice criteria. The reputation and integrity of the 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 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 winner 	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 may 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

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 almost 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.