

FROST & SULLIVAN



## 2017 Global DDoS Mitigation Products Market Leadership Award

FROST & SULLIVAN

BEST  
*2017* PRACTICES  
AWARD

GLOBAL DDoS MITIGATION PRODUCTS  
MARKET LEADERSHIP AWARD

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## Background and Company Performance

### *Industry Challenges*

The distributed denial-of-service (DDoS) attack has emerged as one of the top concerns of the digital transformation era. Digital transformation describes the global trend of smart devices, hyper-connectivity, and big data and analytics that will usher in vast public economic and social benefits. The Internet-of-Things (IoT) is one aspect of this new world, where all manner of consumer devices, industrial systems, and communications systems are interconnected, interoperable, and able to intercommunicate without any need for human intervention. This array of sensors and controllers, combined with big data collection and analytics holds tremendous potential for optimization and automation in industries such as agriculture and manufacturing. For consumers, IoT offers a standard-of-living improvement that, once experienced, will become a common expectation worldwide, much as smartphones are now.

Unfortunately, the interdependent nature of the digitally transformed world is also a tremendous vulnerability—one that could allow a handful of malicious actors, nation-states, criminal organizations, or even individuals to affect the world in profound ways.

Already, threat actors have shown that they can capitalize on the often reckless rush to adopt new technologies. In 2016, attackers exploited unsecured IoT devices to launch a DDoS attack generating a record-shattering attack volume of up to 1.2 Terabits per second (Tbps). As a result, access to some of the largest online brands was disrupted or degraded for several hours, including Twitter, CNN, The New York Times, Netflix, and many others.

With DDoS risk already at an all-time high and enterprises of all sizes are preparing their defenses and response strategies, the market for DDoS mitigation products has grown precipitously in recent years. However, as attackers continue to modify their strategies and refine their techniques, the needs and expectations of customers of DDoS mitigation solutions are also changing rapidly.

The rapidly changing technology and the nature of attack trends and customer needs is a challenge for every DDoS mitigation vendor. Vendors that can understand and adapt to these changing trends will be able to excel in the marketplace. As a result, market share leadership is a sign of successful strategy to date. However, true market leadership is achieved through a near-prescient understanding of future customer needs and a solid strategy to deliver.

## *Market Leadership of Arbor Networks*

Since its founding in 2000, Arbor Networks has established itself as the definitive market leader in DDoS mitigation products, as confirmed by its 61% market share in the DDoS mitigation products market in 2016. Arbor was acquired in 2015 by NetScout Systems, making Arbor Networks the official security division of NetScout.

Arbor Networks' success is the result of a strict dedication to innovation, product quality and customer value, with a long-term vision for the company and the market.

### **Product Quality**

DDoS attacks are becoming more frequent and difficult to detect and mitigate. Vendors must offer an array of high quality solutions, incorporating advanced technologies in order to provide complete, accurate and timely protection.

The Arbor Networks DDoS mitigation portfolio is diverse and deep. Arbor Networks SP solutions provide scalable on-premises detection of attacks, and can be deployed as hardware appliances or software. The company also offers Arbor APS for real-time detection of application-layer attacks, including stealthy attacks such as Slowloris.

Arbor Networks TMS appliances can be deployed in-line for instant detection and mitigation of attacks, offering up to 160 Gbps of performance per single appliance or clustered to make a scrubbing center with up to 8 Tbps of dedicated bandwidth for attack mitigation. Arbor TMS is the DDoS mitigation solution of choice for global network operators.

Arbor Cloud is a fully managed DDoS mitigation service promoting best practice hybrid defense. It includes a suite of on-premise appliances and virtual offerings that are connected to an on-demand scrubbing service with up to 4 Tbps of attack mitigation capacity (and the company plans to expand this to 8 Tbps in 2017). Via Arbor's unique cloud signaling capability, when on-premise mitigation products are under duress, they can send a signal to the cloud for mitigation support. This integrated and automated capability significantly reduces time to mitigation for DDoS attacks. Arbor Cloud is backed by Arbor's experienced incident responders and provides transparency throughout all of its operations, from event mitigation to post-incident reporting and attack forensics.

Arbor Networks continues to hone its attack detection capabilities across its entire portfolio. Arbor Networks products benefit from constant collection and analysis of threat data. The company has a wealth of resources from which to gather threat intelligence, including its massive installed base. Four hundred service provider customers share attack information from their deployments into the ATLAS threat intelligence system. Arbor Networks uses this intelligence to monitor botnets and threat campaigns at internet scale. The Arbor Networks research team then develops threat protections that are automatically propagated to its products via the ATLAS Intelligence Feed. Combined, this product and

services portfolio, intelligence, and included features provide customers with a robust defense against DDoS threats.

### **Growth Strategy Excellence**

The DDoS mitigation market is constantly changing and becoming increasingly competitive. As a result, vendors must continue to develop new technologies and solutions to address the latest threats and customer requirements.

Chief amongst customers' concerns is the trend towards ever larger DDoS attacks capable of overwhelming even the most fortified on-premises defenses. Attackers can turn just a few resources into some of the largest volumetric attacks, as evidenced by the Mirai attacks. As a result, DDoS mitigation plans must include cloud-based services to be considered complete.

Arbor Networks has embraced this new market dynamic completely, and developed Arbor Cloud in response. The company is dedicated to the Arbor Cloud strategy as evidenced by the company's plan to expand the cloud architecture from over 4 Tbps of attack mitigation capacity today up to 8 Tbps within the year. To help achieve this scalability, Arbor Networks has expanded its cloud architecture, investing in 17 scrubbing centers around the world for more efficient mitigation of attack traffic near its point or points of origination.

As a result, the Arbor Cloud service is gaining significant momentum. Since its launch, Arbor Cloud now counts hundreds of customers, with 90% of these customers utilizing Arbor Cloud as part of a hybrid protection model.

### **Focus on Customer Value**

DDoS attacks are becoming more frequent and difficult to detect and mitigate. As businesses prepare to invest in new DDoS mitigation products or expand existing deployments, they are also concerned about value.

Arbor Networks announced its "availability protection for all" strategy to meet these value-centric concerns. The strategy focuses on updated pricing models, deployment flexibility and fully managed services. Arbor has virtualized its entire DDoS portfolio for support of customer SDN and NFV environments, introduced low cost appliances and new virtual solutions that start at sub-100Mb capacity. In the era of IoT botnets, Arbor has also added mitigation capacity to its solutions, increasing on-premises capacity by 4X at 1/3 the cost per gig of protection.

Additionally, Arbor Networks DDoS mitigation technology can be deployed as a virtual blade on Cisco ASR 9000 Series Aggregation Routers for an added layer of DDoS protection.

DDoS mitigation solutions can be a challenge to deploy and monitor for many organizations including businesses with limited IT staff or technological maturity. To help lower these barriers to adoption, Arbor Networks also introduced Arbor Cloud as a fully managed service called Arbor Managed APS (Arbor mAPS).

In terms of pricing, Arbor Network now offers low cost appliances, perpetual appliances and virtual license pools, in addition to managed security services subscriptions. Arbor offers the industry's broadest portfolio of DDoS protection products and services.

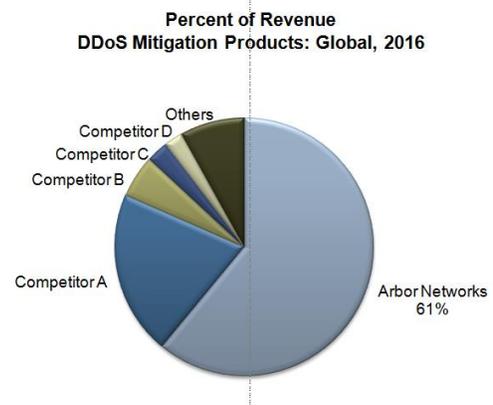
### Brand Strength

For years, Arbor Networks has been the name synonymous with leading DDoS detection and mitigation solutions. Proof of its quality and brand strength, Arbor Networks counts nearly all major ISPs amongst its customer base. Parent company NetScout is a leading provider of application and network performance management solutions.

### Conclusion

Arbor Networks has established itself firmly as the DDoS mitigation products market leader by delivering a robust and integrated portfolio of products, services, and features. Furthermore, the company's attention to customer value and a clear strategy to mitigate future attacks indicates the company's staying power as the leading provider of DDoS mitigation products.

Based on its strong overall performance, Arbor Networks achieved a market share of 61%, and Frost & Sullivan recognizes Arbor Networks with the 2017 DDoS Mitigation Products Market Leadership Award.



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