

WEBROOT®

Smarter Cybersecurity™

2015 North American Cybersecurity for Robotics & Industrial Control Product Leadership Award



F R O S T & S U L L I V A N



50 Years of Growth, Innovation & Leadership

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Background and Company Performance

Industry Challenges

With the introduction of the Internet of Things (IoT) concept, adoption of internet-connected devices is increasing across the world. North America is in the growth stage of this adoption. The industrial space is no exception to this trend, with growth in the implementation of connected embedded devices expected to significantly drive business performance. Though it is no more instrumental to enhancing business efficiency than before, security has emerged as a matter of serious concern for most business houses. While the uncomplicated procedures of real-time data sharing in the industrial space ensure ease of use, they also encounter serious cyber security threats. Business houses look for advanced technologies that can guarantee significant benefits from the evolving Internet of Industrial Things (IoIT) technology. At the same time, businesses look for security solutions that can effectively protect their devices by creating a firewall to hinder remote systems from either tracking or accessing the embedded devices, such as sensors.

Another major concern faced by end users of cyber security solutions is huge hardware space requirement to install a database of currently active online threats. Moreover, the database has to be constantly updated with intelligence on the latest threats, reducing the effectiveness of cyber security solutions.

In such a scenario, companies that can address the growing concern around threats to IoT cybersecurity by engineering advanced fraud-proof and future-proof security solutions are poised to successfully emerge in the North American market.

Product Family Attributes and Business Impact

Match to Needs

With an overwhelming increase in internet-connected devices within the industrial world to drive a better decision-making paradigm than had been possible in the past, businesses are faced with the challenge of guaranteeing superior security. While the unprecedented amount of data, efficient analysis, and ease of information sharing among teams are critical to ensuring unmatched business performance, the vulnerability of the information exposes it to greater risk of theft. Both network and security vendors are faced with the challenge of ensuring the security of data in real time. In alignment with emerging issues and evolving demands owing to the Internet of Industrial Things (IoIT) trend, Webroot Inc. introduced BrightCloud® Threat Intelligence Services and its low system demand, high performance agents for the industrial domain in 2013. The company also announced in 2015 its Webroot IoT Cybersecurity Toolkit.

The BrightCloud Threat Intelligence Platform is a collective threat intelligence architecture that classifies and shares cybersecurity intelligence millions of devices and sensors, and billions of Internet threats emanating from IPs, URLs, files, and mobile applications.

Leveraging a massive Hadoop distributed computing cloud architecture that uses 3rd generation Maximum Entropy Discrimination (MED) technology, the BrightCloud Threat Intelligence Platform continuously scans and classifies the Internet universe to detect the latest cyber threats. Without having to download anything to protected devices, BrightCloud Threat Intelligence can protect internet connected devices from these threats in near real-time. BrightCloud Threat Intelligence Services have been proven as an embedded threat intelligence solution in many of the leading Next Generation Firewall, Unified Threat Management, and other security solutions including products from Cisco, RSA, Palo Alto Networks, F5 Networks, Aruba, A10 Networks, and many others.

The Webroot family of endpoint cybersecurity scales across all device types in the IoT system: sensors, controllers, autonomous machines, routers, IT-OT Gateways, and Servers. The software agents leverage BrightCloud Threat Intelligence to prevent, detect and block new cyber threats targeting IoT type devices and systems, and can be built into the devices at manufacture or deployed while in operation. Designed specifically for small form factor, battery-powered and limited memory IoT devices, the agent boasts a tiny footprint of 750kb. It detects any new or changed executables or files on the device, analyzes their behaviors, and shares that behavioral data with the BrightCloud Threat Intelligence Platform to make a threat determination. The automated machine learning classifies the behavior and determines its intent, and can instruct the agent to remove the threat from the IoT device itself. Webroot agents support many different OS types, and also incorporate an intelligent outbound firewall that can block untrusted internet connections.

Reliability and Quality

One of Webroot's key strengths as a cyber security provider has been its leadership in developing next generation approaches to prevent attacks, and a proven technology base that spans millions of devices.

BrightCloud Threat Intelligence Services thoroughly scan the internet to offer customers actionable intelligence on potential security breaches. The solution's distinct capability to capture data through millions of sensors, automatically protect against new threats within milliseconds using an automated machine learning analysis capability, and deliver actionable threat intelligence to protected devices in near real-time has placed the company at the forefront of the competition.

With an extensive portfolio that covers web, file, and application threats, BrightCloud Threat Intelligence Services leverage a contextual analysis capability that provides customers with the most accurate and up-to-date threat intelligence available. The BrightCloud Threat Intelligence Platform includes a repository of over 600 million domains and 20 billion URLs, both classified and risk scored. It also monitors 4.3 billion IP addresses with constant updating of a known set of approximately 12 million malicious IPs at any given time, of which 85,000 new malicious IPs are detected each day. The

BrightCloud Threat Intelligence Platform also includes over 7 billion file behavior records and over 16 million mobile applications. Webroot maps the relationships between URLs, IPs, files, and mobile applications to predict which seemingly benign entities may be associated with other threats. By combining contextual intelligence and behavioral analysis, Webroot BrightCloud Threat Intelligence Services is an industry leader in its ability to identify newly released threats, predict where the next set of threats will come from, and disseminate that information using a highly reliable and scalable cloud architecture.

The BrightCloud Threat Intelligence Platform is hosted on Amazon's Elastic Compute Cloud (EC2) which is geo load balanced for site and multi-site reliability. BrightCloud Threat Intelligence is embedded in many security industry technology platforms; those partners require SLAs of 99.999% availability of the service.

Product/Service Value

Webroot offers BrightCloud Threat Intelligence Services and the software agents both as standalone and bundled products. As standalone products they can be installed on to existing IoT connected devices. Otherwise these products, as well as other Webroot technologies, are available via a comprehensive Internet of Things security toolkit for organizations/developers that want to develop or embed an integrated cybersecurity solution into their IoT devices.

The Webroot IoT Security Toolkit (WST) is an extensive set of cybersecurity technologies, client, server and web software, software development kits (SDK's), and cloud-based real-time threat intelligence services designed to provide the builder or integrator creating IoT solutions with tools to improve their creations' protection from cyber-attacks and malware. It includes:

Agents: High performance, low system demand, small device footprint agent for detecting new and altered files or anomalous conditions. Agents collect data about files and other system level events and communicate to the BrightCloud Threat Intelligence Platform. Windows®, Android™, and Mac® agents are currently available in the WST, with more planned.

Threat Intelligence Services: Available through API's, BrightCloud Threat Intelligence Services include up-to-the-second intelligence for:

- 20 billion URLs classified and scored
- 4.3 billion IP Addresses monitored
- 7 billion file behavior records
- 16 million mobile applications

Secure Web Gateway: A cloud-based service to inspect and filter all incoming and outgoing traffic between devices and a control system over the Internet. A lightweight web filtering proxy agent is also provided to control web traffic.

Mobile Device SDK's: A development kit for developers to integrate a multitude of options for Android and iOS devices, including the Active Protection Service, Scanner Service, Application Information Module, Device Information Module, the SecureWeb™ Browser, and Device Risk Score.

Pricing is based on either a standalone product license fee or a percentage license fee.

Positioning

Webroot's products are designed to protect from the device outward, through the installation or embedding of a device agent, and from the internet inward, through integration with BrightCloud Threat Intelligence Services. Working together, the solution provides an end-to-end cybersecurity solution for IoT devices. However, for organizations that want to only deploy BrightCloud Threat Intelligence Services, those services are available separately through either the BrightCloud APIs or through a series of enterprise-friendly connectors that have been built to call the API and output the intelligence to a service or a log.

The BrightCloud Threat Intelligence Platform is unique in its use of 3rd generation machine learning technologies to rapidly classify new and different type of cyber threats. While most of the security solutions available in the market deploy Bayesian Networks or Support Vector Machine Models (SVM), which are not very effective and aren't scalable, Webroot's implementation of MED is highly efficient in conducting high speed and accurate threat analysis. It is highly accurate in appropriately identifying new threats and is highly scalable. Using hundreds of automated classifiers, the BrightCloud Threat Intelligence Platform scans over 20,000 URLs per second and finds an average of 85,000 brand new malicious IPs each day.

The agent is based on core technology from Webroot SecureAnywhere® Business Endpoint Protection. It does not use static signatures, but instead employs monitoring behavior in which it allows a suspicious or unknown file to execute on the device, records its behaviors and any changes it makes, and then shares the behavioral data with the BrightCloud Threat Intelligence Platform for determination. If the file is determined to be malicious, the agent will remove it and undo the recorded changes.

Webroot entered the industrial space in 2013 with its primary focus on point of sale, manufacturing, and electronics industries, among others. Its standalone products have been offered as cyber security solutions for industrial control devices that are connected to the internet, along with point-of-sale devices. The company is also working with several large multi-nationals on cyber security for their Smart City initiatives, and is aggressively pursuing partnerships with IoT device manufacturers and systems integrators.

Customer Acquisition

While continuous innovation to address evolving needs is Webroot's forte, the company boasts a strong portfolio of customers. Webroot BrightCloud Threat Intelligence Services and its endpoint agent solutions have been designed to address varied industries, which include automotive, manufacturing and electronics, among others. The company's advanced security service can be deployed on control functions for robotics, flow meters, and other industrial controls. The robust security capability has proven to be of immense benefit for point-of-sale devices in the retail space.

Furthermore, Webroot partners with nearly 30 renowned OEMs, who rely on BrightCloud Threat Intelligence to ensure security for their customers. These include Cisco, RSA, Aruba, F5 Networks, and HP, among others. Intent on strengthening its footprint in the industrial domain, within a short span of time Webroot has achieved one million licensed devices in the industrial space leveraging its BrightCloud Threat Intelligence Platform.

Growth Potential

In order to build a strong presence in the North American cyber security market, Webroot has demonstrated unmatched capabilities in taking the right strategic initiatives at the right time. Webroot identified the growing need for an advanced security solution for IoT in the industrial space and entered the market in 2013. With a strong presence in North America, Europe, and Asia Pacific, the company is focusing on establishing itself in the IoT cyber security market by partnering with companies in the US and continuously improving its product suite to deliver advanced security solutions to its customers.

Conclusion

Webroot currently offers one of the industry's most comprehensive cyber security solutions. Aware of the overwhelming implementation of internet-connected devices, the company identified the need for a superior and more versatile protection. Leveraging an industry-leading MED approach, Webroot's BrightCloud Threat Intelligence Services are highly efficient in detecting threats across all vectors and protecting customer networks. With its entry into the industrial space in 2013, Webroot already claims a strong partner list and expects to further strengthen its position across global industrial markets through the effective implementation of its inorganic growth strategy.

With its strong overall performance, Webroot has earned Frost & Sullivan's 2015 Product Leadership Award.

Significance of Product Leadership

Ultimately, growth in any organization depends upon customers purchasing from your company, and then making the decision to return time and again. A comprehensive product line, filled with high-quality, value-driven options, is the key to building an engaged customer base. To achieve and maintain product excellence, an organization must strive to be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Product Leadership

Demand forecasting, branding, and differentiation all play a critical role in finding growth opportunities for your product line. This three-fold focus, however, must be complemented by an equally rigorous focus on pursuing those opportunities to a best-in-class standard. Customer communications, customer feedback, pricing, and competitor actions must all be managed and monitored for ongoing success. If an organization can successfully parlay product excellence into positive business impact, increased market share will inevitably follow over time.

Key Benchmarking Criteria

For the Product Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Product Family Attributes and Business Impact—according to the criteria identified below.

Product Family Attributes

- Criterion 1: Match to Needs
- Criterion 2: Reliability and Quality
- Criterion 3: Product/Service Value
- Criterion 4: Positioning
- Criterion 5: Design

Business Impact

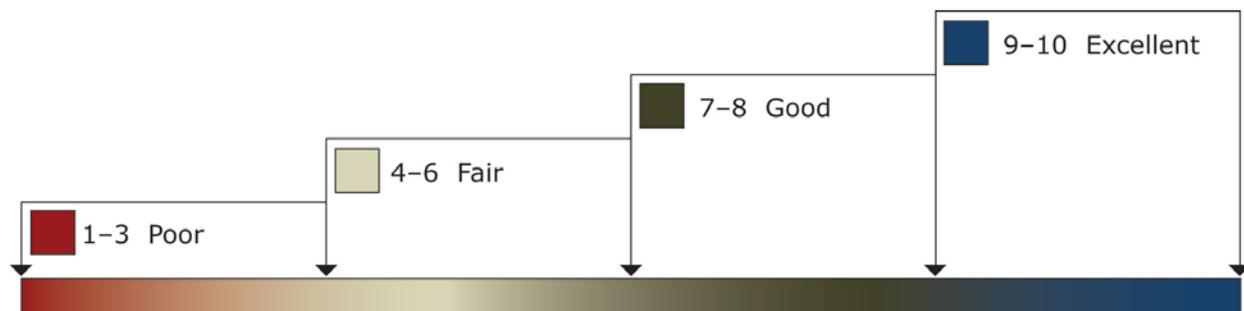
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practice Award Analysis for Webroot

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

RATINGS GUIDELINES



The Decision Support Scorecard is organized by Product Family Attributes and Business Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criteria are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, we have chosen to refer to the other key players as Competitor 2 and Competitor 3.

DECISION SUPPORT SCORECARD FOR PRODUCT LEADERSHIP AWARD

<i>Measurement of 1–10 (1 = poor; 10 = excellent)</i>			
Product Leadership	Product Family Attributes	Business Impact	Average Rating
Webroot	10.0	9.0	9.5
Competitor 2	8.0	8.0	8.0
Competitor 3	6.0	7.0	6.5

Product Family Attributes

Criterion 1: Match to Needs

Requirement: Customer needs directly influence and inspire the design and positioning of the product family

Criterion 2: Reliability and Quality

Requirement: Products consistently meet or exceed customer expectations for performance and length of service

Criterion 3: Product/Service Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market

Criterion 4: Positioning

Requirement: Products or services unique, unmet need that competitors cannot easily replicate or replace

Criterion 5: Design

Requirement: The product features an innovative design, enhancing both visual appeal and ease of use

Business Impact

Criterion 1: Financial Performance

Requirement: Strong overall financial performance in terms of revenues, revenue growth, operating margin and other key financial metrics

Criterion 2: Customer Acquisition

Requirement: Product strength enables acquisition of new customers, even as it enhances retention of current customers

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard

Criterion 4: Growth Potential

Requirements: Product quality strengthens brand, reinforces customer loyalty and enhances growth potential

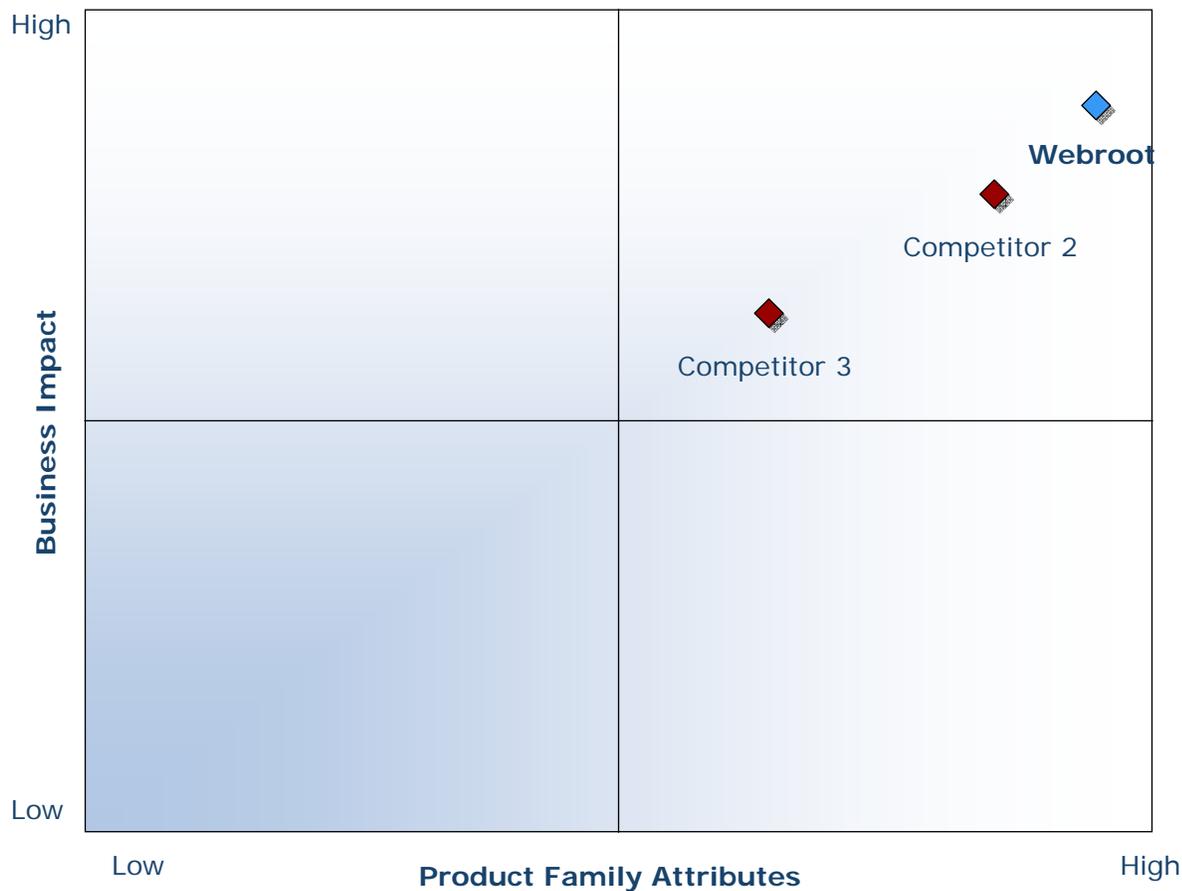
Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to product quality and customer impact, which in turn enhances employee morale and retention

Decision Support Matrix

Once all companies have been evaluated according to the Decision Support Scorecard, analysts can then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.

DECISION SUPPORT MATRIX FOR PRODUCT LEADERSHIP AWARD



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 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 over 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>.