

BrightCloud® Web Classification Service

OVERVIEW

The BrightCloud® Web Classification Service:

- » Categorizes the largest URL database of its kind across 83+ categories
- » Analyzes uncategorized sites using advanced machine learning at rate of 2,500 URLs/second
- » Enables partners to develop solutions for setting company usage policies that:
 - Protect the organization from legal liabilities around web usage and compliance
 - Protect employees and improve their productivity
 - Free up bandwidth

Web classification continues to be challenging for anyone trying to offer secure web access to enterprises. New websites are emerging at astonishing rates and most lists are unable to keep up with volume and speed to provide accurate classifications of new and changing sites. In addition, many don't have sufficient security to protect themselves or their users, while others are purposely designed to take advantage of visitors. Internet users are also exposed to phishing, keyloggers, spyware, drive-by malware and the many other types of malicious code, which are only increasing in prevalence as new websites appear. Even legitimate sites are compromised regularly, while others shift rapidly between malicious and benign to avoid detection.

Webroot Threat Intelligence redefines cybersecurity. Our advanced, self-learning architecture continuously scans the internet, leaving no place for threats to hide. The BrightCloud Web Classification Service offers network and security vendors the most effective way to help enterprise customers secure their users against web threats. By providing the broadest, most up-to-date and accurate website intelligence across 83+ site security categories, this service significantly improves visibility into all internet usage. Additionally, with the superior coverage and visibility offered by this service, providers can address customers' key concerns including; employee productivity, IT and bandwidth resources, legal liabilities around web usage and compliance. With the BrightCloud Web Classification Service, enterprises can secure users against online threats, control internet usage, and ensure compliance by implementing sensible web access policies.

BrightCloud Classification Stats

- » 600+ million domains and 27+ billion URLs classified
- » 83+ site categories, including high risk categories
- » 45+ languages
- » 12 million dangerous IPs correlated with URLs

BrightCloud Threat Intelligence Services are powered by the Webroot® Threat Intelligence Platform. To date, BrightCloud services have scored and classified over 95% of the internet (over 27 billion URLs) to generate by far the largest URL database of this type.

Using a highly sophisticated combination of global threat sensors, machine learning algorithms and human classification, the Webroot® Threat Intelligence Platform continuously maintains and expands its knowledge of website classifications and integrates this information for our partners.

The BrightCloud Web Classification Service offers over 83 website categories to provide the granular insight customers need. Sites in the primary security risk categories that propagate malware, spam, spyware, adware, and phishing attacks are made known to all connected endpoints and services in real time. When users attempt to visit uncategorized sites, the sites are categorized dynamically using the automated Webroot classification process, which is supported by a global, multilingual team. At this time, the Webroot analysis engine classifies 2,500+ URLs per second with an error rate of less than 2% (versus an average human error rate of 5-15%). In addition, URL data is correlated with with IPs, files, and mobile apps to provide a comprehensive view across the threat landscape. Mapping the relationships between these different data points enables Webroot to provide partners with highly accurate intelligence that is always up to date.



BrightCloud® Web Classification Service

PARTNER BENEFITS

- » **Differentiate yourself from your competition.** Block unwanted content to keep users safe and productive, and improve network performance with granular classification categories
- » **Leverage Webroot® Threat Intelligence.** Harness collective intelligence from millions of sources via the world’s most powerful cloud-based security network
- » **Flexible integration options.** Simple, flexible integration options let you use the latest web classification intelligence, however it suits your needs
- » **Compliance without user impact.** End users are protected with minimal impact to their online experience, while you and your customers ensure compliance through sensible access policies

BRIGHTCLOUD WEB CLASSIFICATION IN ACTION

Integrating the BrightCloud® Web Classification Service into network solutions not only provides insight into the types of websites being accessed, it also adds a layer of protection by guarding against categories that often host malicious content. In addition, this service helps:

- » Improve network speed by blocking unwanted content
- » Power parental URL classification within a consumer internet security suite to help parents protect children against harmful content
- » Power the URL filtering available on next-generation firewall and IPS systems, offering enhanced visibility and improved control of web browsing

About Webroot

Webroot delivers next-generation endpoint security and threat intelligence services to protect businesses and individuals around the globe. Our smarter approach harnesses the power of cloud-based collective threat intelligence derived from millions of real-world devices to stop threats in real time and help secure the connected world. Our award-winning SecureAnywhere® endpoint solutions and BrightCloud® Threat Intelligence Services protect tens of millions of devices across businesses, home users, and the Internet of Things. Trusted and integrated by market-leading companies, including Cisco, F5 Networks, Aruba, Palo Alto Networks, A10 Networks, and more, Webroot is headquartered in Colorado and operates globally across North America, Europe, and Asia. Discover Smarter Cybersecurity™ solutions at webroot.com.

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PARTNER INTEGRATION OPTIONS

Using our intuitive software development kit (SDK), REST services, and an API, partners can easily integrate the BrightCloud Threat Intelligence into their own solutions. The BrightCloud Web Classification Service integrates with existing security solutions through the same SDK as other BrightCloud services, making integration of multiple services easy. Depending on the business need, BrightCloud Threat Intelligence Services may be integrated in different modes, enabling partners to select the integration and deployment type best suited to their needs. The options are:

- » **Hosted.** All URL queries are sent over the internet to the Webroot® Threat Intelligence Platform
- » **Local Database.** A database is downloaded to the endpoint, no queries are sent to the Webroot® Threat Intelligence Platform, and the database is updated once daily
- » **Hybrid Model.** A local database is downloaded and a URL query first looks into the locally cached database. If the BrightCloud classification is not stored there, then the query is forwarded to the Webroot® Threat Intelligence Platform

The BrightCloud Web Classification Service can also be supplemented by the BrightCloud Web Reputation Service and BrightCloud Threat Investigator. The BrightCloud Web Reputation Service provides independent reputation scores for all sites, regardless of category, while the BrightCloud Threat Investigator provides additional data on the primary URLs, IPs, files, and mobile apps which impact a URL, to better understand why a score was given and proactively protect against associated malicious actors.

BrightCloud® Web Reputation Service

OVERVIEW

- » The percentage of URLs which are malicious continues to grow year-over-year
- » Organizations need finely tuned security to protect their users from malicious websites
- » The BrightCloud® Web Reputation Service scores website risk regardless of internet category

With the proliferation of malware, traditional, static, list-based internet protection is increasingly obsolete. Dynamically generated user content, mashups, rapid deployments, website structure, and links change very quickly, providing fertile ground for malware authors and creating a serious security gap.

The BrightCloud Web Reputation Service, available as an addition to the BrightCloud® Web Classification Service, delivers an up-to-date security check of the websites users are visiting. This enables network and security vendors to add a layer of real-time security to their customers' web defenses by accurately assessing the risk posed when opening a URL. This layer of proactive protection helps defend against emerging threats by determining a website's risk level, independent of its site category. This is critical as Webroot found that in 2015 11% of URLs were High Risk, including those in non-malicious categories.¹

The BrightCloud Web Reputation Service is powered by the Webroot® Threat Intelligence Platform. Through cloud-based analytics and the most advanced machine learning in the industry, BrightCloud services have classified over 95% of the internet (over 600 million domains and 27 billion URLs) to date. Through the power of collective threat intelligence, data on new and known sites is continuously created and refreshed, ensuring that reputation scores are always as current as possible. Any time a user visits an uncategorized site, the site is dynamically crawled and scored and each website's score, known as the BrightCloud Web Reputation Index (WRI), is checked and adjusted over time.

While the complementary BrightCloud Web Classification Service provides site classification across 83+ categories, BrightCloud Web Reputation provides an additional lens through which a site can be evaluated as a potential threat. In addition to category, it uses site history, age, rank, location, networks, links, real-time performance, as well as other contextual and behavioral trends to determine a site's WRI.

The contextual analysis correlates the site's relationship to other scored URLs, files, IPs, and mobile apps. A website that is well-trafficked, well-known and associated with numerous trusted IPs is more likely to be secure. A relatively unknown URL may present a hazard. A URL associated with an IP that is suspicious is likely a danger.

Partners can integrate the WRI to protect their customers through rich web filtering policies. WRI scores range from 1 to 100, with tiers split into Trustworthy, Low Risk, Moderate Risk, Suspicious, and High Risk. These reputation tiers enable enterprises to finely tune their security settings based on their risk tolerance, and proactively prevent attacks by limiting the risk of end user exposure to inappropriate or malicious web content.

BrightCloud Web Reputation Index

01-20 High Risk		These are high risk sites. There is a high predictive risk that the user will be exposed to malicious links or payloads.
21-40 Suspicious		These are suspicious sites. There is a higher than average predictive risk that the user will be exposed to malicious links or payloads.
41-60 Moderate Risk		These are generally benign sites, but have exhibited some characteristics that suggest security risk. There is some predictive risk that the user will be exposed to malicious links or payloads.
61-80 Low Risk		These are benign sites, and rarely exhibit characteristics that expose the user to security risks. There is a low predictive risk of malicious links or payloads.
81-100 Trustworthy		These are well known sites with strong security characteristics. There is very low predictive risk that the user will be exposed to malicious links or payloads.

¹Webroot 2016 Threat Brief, February 2016

PARTNER BENEFITS

- » **Differentiate yourself from your competition**
Offer industry-leading protection against malicious websites, using WRI to finely tune security settings
- » **Leverage Webroot® Threat Intelligence**
Harness the world's most powerful cloud-based security analysis platform
- » **Flexible integration options**
Simple, flexible integration options let you use the latest web reputation intelligence to suit your needs
- » **No impact on user experience**
Users are protected from malicious sites via real-time intelligence that won't impact online experience

THE BRIGHTCLOUD WEB REPUTATION SERVICE IN ACTION

Integrating the BrightCloud® Web Reputation Service into network solutions not only provides an additional layer of web filtering protection from sites that host malware or spyware, but also offers enterprises far more granular security management.

- » This service enhances a partner's network security products to increase real-time protection against known malicious threats, unauthorized network access and Denial of Service (DoS) attacks
- » Integrating this service enables enterprises to allow users to access reputable sites, while preventing access to low reputation sites that are more likely to host malware or phishing threats

PARTNER INTEGRATION OPTIONS

The BrightCloud Web Reputation Service integrates with existing security solutions through the Webroot® software development kit (SDK). This service may be integrated in three modes, allowing partners to select the integration and deployment type best suited to their needs. The options are:

- » **Hosted.** All URL queries are sent over the internet to the Webroot Threat Intelligence Platform
- » **Local Database.** A database is downloaded to the endpoint, no queries are sent to the Webroot Threat Intelligence Platform and the database is updated once daily
- » **Hybrid Model.** A URL query first examines a locally cached database. If the URL category and WRI are not stored there, then the query is forwarded to Webroot Threat Intelligence Platform for classification and scoring

The BrightCloud Web Reputation Service can also be supplemented by the BrightCloud Threat Investigator. This service provides additional data on the primary URLs, IPs, files, and mobile apps which impact the score of a URL, to better understand why a score was given and proactively protect against associated malicious actors.

About Webroot

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