EQUINIX CUSTOMER SUCCESS STORY
OPENDNS

OpenDNS

Network security innovator OpenDNS leverages Platform Equinix™ to deliver non-stop, low latency service processing 50 billion daily DNS queries for 50 million users worldwide

Executive Overview

OpenDNS is focused on inventing new methodologies to eradicate malware, botnets, and phishing through the Domain Name System (DNS). By leveraging 10 Equinix data centers worldwide, the OpenDNS Global Network ably fields more than two percent of the world's Internet requests daily with 100% uptime. In addition to partnering with Equinix for reliable data center operations, OpenDNS also appreciates the ease with which it can peer with the more than 975 network providers within Platform Equinix.

The number and diversity of Equinix data center locations helps ensure that OpenDNS's own DNS servers are as close to its customers as possible in order to enable low latency connections and rapid response to DNS queries. As a result, by distributing the nodes of the OpenDNS Global Network around the world, the impact of being targeted by denial of service (DoS) attacks are mitigated which keeps service uptimes close to 100%.

The Customer

Launched in 2006, OpenDNS has built the world's fastest and most reliable DNS service and introduced a unique set of Internet security innovations that complement the conventional perimeter security solutions deployed by businesses. OpenDNS now delivers security to more than 50 million users from 160 countries, processing about 50 billion Internet requests each day through 23 data center locations worldwide.

As it expanded, the company realized that the sheer volume of traffic it was tracking gave it an unprecedented advantage to stay ahead of advanced attacks. Automated analysis of this data could generate valuable insight into Internet attacks, forming the basis of a unique service that could protect their customers by filtering out malware before it caused damage. In 2012, OpenDNS launched its flagship enterprise security platform, Umbrella, which now serves more than 10,000 customers worldwide.

Business Challenge

DNS is one of the most critical services on the Internet and is used by more than 3.7 billion public Internet protocol version 4 (IPv4) addresses and even more IPv6 addresses. If there are DNS malfunctions, however, the impact can be widespread. The risk exists for hackers to exploit DNS server vulnerabilities, hijacking the domain-to-IP address process to send users to the wrong destinations from which further attacks can be launched.

OpenDNS founder David Ulevitch was well aware of these issues and saw the business opportunity to "do DNS right." Thus, giving individual Internet users and businesses a better alternative to the DNS servers operated by the ISPs or in-house within a business network.

To succeed, it was essential from the outset that OpenDNS provide 100% uptime to ensure service continuity to the world's largest enterprises. It was also important to locate its DNS servers as close to its potential customers as possible, in order to enable low latency connections and rapid response to DNS queries. And it was necessary for the OpenDNS infrastructure to be well-distributed to mitigate the risk of being targeted by DoS attacks.

Equinix Advantage

Continuous service availability supported by 99.9999% data center uptime record and location diversity

Scalable data centers located close to 50 million global users helps deliver low service latency

Cloud solution built securely in Platform Equinix

Peering with hundreds of network carriers worldwide via low latency Ethernet cross connects

EQUINIX

Solution and Value Realized

Currently, OpenDNS locates infrastructure at 10 key Equinix International Business Exchange™ (IBX®) data centers–in Sydney, Singapore, Frankfurt, Chicago, Dallas, Los Angeles, Ashburn, Seattle, San Jose, and Toronto. Each Equinix IBX data center is equipped with full UPS power, backup systems, and N+1 (or greater) redundancy, with a proven, industry-leading uptime record of more than 99.9999%. For OpenDNS, that means never having to worry about service outages due to issues in the data center environment.

Beyond the unsurpassed reliability, OpenDNS understands the power of leveraging the relationships with more than 975 network providers within 100+ Platform Equinix locations. They can peer with leading ISPs worldwide via a simple, low latency cross-connect within data center Ethernet fabrics. To deliver its services across the globe OpenDNS currently connects with 382 network carriers through 1,781 BGP peering sessions as of May 2014.

"We are currently utilizing Equinix facilities for a rangeof services from our Internet exchange connections, for peering, physical hosting of our systems and even equipment installation," said Tim Baur, Senior Director of Infrastructure Engineering at OpenDNS.

"With Equinix's geo-reach, OpenDNS is able to reduce latency as well as the number of hops that an international user takes. We house our internal business-related services in Equinix facilities as well."

Why Equinix

"As the data center facility is the only part of the OpenDNS stack that we don't explicitly own and manage for ourselves, we need to partner with a premium global facility operator from a quality-of-service perspective. Equinix fits that bill perfectly," said Baur.

"Connecting to PAIX from Equinix San Jose–and to other major Internet crossroads from other Equinix facilities around the world–has given us a unique view of the virtual world which we've been able to leverage through big data analytics to provide proactive security," he said.

In each OpenDNS Global Network expansion location, Equinix has been available with high-quality data centers and low latency Ethernet connectivity to the networks OpenDNS needed to peer with.

Future Plans

As OpenDNS continues its fast track expansion, it is currently evaluating additional international sites and looking at Equinix for partnerships in Brazil, India and other locations in Asia.

"As we grow and turn up more data centers, process more requests, and expand our services, we need to maintain that core determination of 100% uptime with low latency performance. Equinix has served us well in both regards and we fully expect them to continue to do so as we move into other markets and service areas," said Baur.

"Going forward, big data analytics is set to become an even more important part of our service game plan and the Equinix locations are proving to be a great benefit in this regard. We leverage Amazon Web Services as well, and in many locations that's just a cross connect away from us on the Equinix Ethernet fabric."

About OpenDNS

OpenDNS provides a cloud delivered network security service that blocks advanced attacks, as well as malware, botnets and phishing threats regardless of port, protocol or application. Their predictive intelligence uses machine learning to automate protection against emergent threats before a customer's organization is attacked. OpenDNS protects all devices globally without hardware to install or software to maintain.

About Equinix

Equinix, Inc. (Nasdaq: EQIX), connects more than 4,500 companies directly to their customers and partners inside the world's most networked data centers. Today, enterprise, cloud, networking, digital media and financial services companies leverage the Equinix interconnection platform in 32 strategic markets across the Americas, EMEA and Asia-Pacific. By connecting directly to their strategic partners and end users, customers are forming dynamic ecosystems inside Equinix. These interconnected ecosystems enable companies to optimize the performance of their content and applications and protect their vital digital assets.

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