CASE STUDY

Yahoo! Ensures Performance, Security and Stability of Network Equipment and Cloud Infrastructure

Company
Yahoo!
Internet, Computer Software

Key Issues
Yahoo! needed a powerful solution that could effectively tackle its unique network and ensure performance, availability, and security to avoid potential disasters.

Solutions
BreakingPoint and Application and Threat Intelligence (ATI)

Results
BreakingPoint is the only solution able to truly identify the otherwise unidentifiable vulnerabilities within Yahoo!'s network to ensure that it hardens its network and application infrastructure and protects it's global audience from harm.

CHALLENGE

With one of the world's largest network and cloud infrastructures supporting millions of users throughout the world, Yahoo! is focused on delivering fast and reliable commerce, communications, and social networking services. Yahoo!'s vision is to be the center of people's online lives by delivering personally relevant, meaningful Internet experiences.

Yahoo!'s traffic volume and application complexity has grown rapidly over the past decade, driving the company to build out a massive network and application infrastructure to support more and more load—resulting in higher-capacity servers, load balancers, routers, and switches, plus massive firewalls. Because of the demands of cloud computing and increasing stress on applications, Yahoo! needed to invest in the equipment necessary to build out a resilient infrastructure, designed to handle extreme load and operate effectively in an increasingly-treacherous cyber landscape.

Previously, however, Yahoo!'s security team had no way to stress and measure the resiliency of the company's enormous infrastructure to ensure performance, availability, and security. According to Yahoo!, the most important aspect of the proposed solution was to validate the performance, functionality, and capacity of its systems. However, before making an investment, it was critical for the security team to fully understand the performance and functionality of the equipment by subjecting it to a wide mix of applications, including video, instant message, web, and more, as well as live security attacks and load from millions of users.

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Yahoo! relyies on the BreakingPoint solution to stress its infrastructure with the load of millions of users.

SOLUTION

Yahoo! turned to BreakingPoint to recreate realistic Internet-scale network conditions to validate the performance and security of the company's network, data center, and application infrastructures. In particular, the security team used the solution to:

- Standardize the validation of deep packet inspection (DPI)–based network and security products prior to purchase and prior to deployment in the production network
- Understand in advance how high-performance, content-aware products will perform when faced with Yahoo!'s unique architecture and mix of application traffic and network conditions
- Establish a standardized, deterministic, and vendor-neutral method for evaluating and certifying the resiliency of network and data center devices using the scientific BreakingPoint Resiliency Score™
- Simulate real application traffic and user load to produce a series of measurements of server farms on the other end of server load balancers
- Anticipate the real-world effects of malicious attacks and malformed packets with the BreakingPoints protocol fuzzing capabilities and live security attacks

RESULTS

By relying on the BreakingPoint solution to stress its infrastructure with the load of millions of users, Yahoo! is able to:

- Measure and add capacity to withstand peak load by subjecting applications, servers, and network infrastructure to application traffic from millions of users as well as cyber attacks
- Conduct repeatable and deterministic network equipment evaluations with the company's own network conditions to improve return on IT investments
- Use thorough and comprehensive protocol fuzzing to probe every possible weakness in the infrastructure
- Validate defenses against large-scale distributed denial of service (DDoS) attacks

ABOUT THE BREAKINGPOINT PRODUCT LINE

The powerful combination of Ixia's BreakingPoint application and security test software and PerfectStorm ONE appliance delivers an enterprise-wide, easy-to-use, and cost-effective solution that provides advance insight into how applications, network devices, networks, and data centers will perform under peak load and attack. This enables organizations to make informed decisions about device purchases, application rollouts, data center consolidation, and other risky IT challenges.

PerfectStorm ONE appliances are developed specifically for enterprise personnel to ensure security resiliency and perform PoC testing.

PerfectStorm ONE appliances are developed specifically for enterprise personnel to ensure security resiliency and perform proof-of-concept (PoC) testing against vendor claims and architectural changes. Test and validate infrastructure, a single device, or an entire system with:

- Powerful yet portable form factor application and security testing platform
- Scalability from 4Gbps to 80Gbps of application traffic with support for 245+ application protocols and 35,000+ malicious attacks to simulate millions of real-world end-user environments
- Buy-only-what-you-need licensing to align with IT budgets while protecting future expansion

With PerfectStorm ONE PoC-in-a-Box, enterprises maximize investments:

- See exactly how changes will impact network and application performance and security in your particular network
- Get the best value and performance from network and security investments with real data, going beyond vendor datasheets and third-party reports
- Gain ongoing actionable insight into the performance, system limitations, and security resiliency of your infrastructure
- Measures packet latency with 10-nanosecond resolution to validate high-performance devices used in low-latency environments such as financial exchanges.

ABOUT THE BREAKINGPOINT APPLICATION AND THREAT INTELLIGENCE PROGRAM

The BreakingPoint ATI program provides updates every 2 weeks, ensuring delivery of the industry's most up to date application and threat intelligence, including 240+ stateful application protocols, 6,000+ real-world attacks, and 35,000+ live malware samples found in enterprise, core, and mobile networks.

Schedule an Evaluation Today!

Learn more at: www.ixiacom.com

For more information on Ixia products, applications or services, please contact your local Ixia or Keysight Technologies office. The complete list is available at: www.ixiacom.com/contact/info

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