Network Security Audits for automated discovery of vulnerabilities and third-party verification of security policy.

Vulnerability Management for protecting networks from worms, hackers and other types of attacks.
On-Demand Business: Global Opportunities, Increased Risks

Technology has transformed the way we all do business. With on-demand technology, today’s companies enjoy huge opportunities for improving productivity and reaping the benefits of data sharing with customers, suppliers and business partners. As a business enabler and operational necessity, open systems are flexible, responsive and global. However, this same technology brings associated security risks without proper management.

The key challenge is data security—safeguarding the company’s information assets. Data such as strategic plans, customer information and R&D results are both crucial to operational success and lucrative targets for attackers. Even generic security threats such as worms and viruses can interrupt business continuity and significantly lower profitability.

Network Security – A Critical Business Success Factor

The most recent CSI/FBI survey discovered that the average financial loss from security violations was $380 thousand. Losses for theft of proprietary information averaged $2.7 million per company. Civil liabilities for violations of consumer privacy and security regulations can be much higher. Loss of customer confidence is incalculable. Because of its financial impact, network security has become a critical success factor for businesses and can make or break any-sized organization.

Dozens of new vulnerabilities are found daily in operating systems, applications and critical network assets. Left undetected or improperly corrected, these vulnerabilities provide an open door for 99% of all network attacks. Despite firewalls, virus detection software and intrusion detectors, today’s attacks bypass these layers of protection and directly target network weaknesses. By exploiting these known issues, worms, hackers and thieves cause billions in damage each year.

Compounding these risks, sophisticated worms are appearing faster with nearly instant propagation. As a result, security teams have a reduced window of opportunity to identify and fix issues before they can be compromised by an attack.

Compression of The Discovery/Attack Life Cycle
Addressing On-Demand Security Requirements

IT departments can reduce threats and prevent intrusions with frequent assessments of their rapidly changing network infrastructure, quickly locating critical asset risks, accurately identifying security issues, and implementing corrective actions. Sounds simple, yet implementation is difficult, even impossible with typical software tools that generate volumes of unmanageable data with questionable integrity.

Qualys meets the on-demand requirements of business by supplying ongoing network security audits and vulnerability management, delivered as an independent, third-party Web service called QualysGuard. QualysGuard resolves traditional barriers of software tools and provides an end-to-end process for vulnerability management.

Discovery: Network Understanding and Control

The Discovery phase provides an understanding of the constantly changing network topology and identifies which critical assets may be at risk and warrant assessment.

Assessment: Detect Network Weaknesses

Accurately and comprehensively testing the network for any potential weakness that could be exploited is the foundation of vulnerability assessment.

Analysis: Reviewing and Interpreting Audit Results

Security professionals to corporate executives all need instant access to reliable reports that can provide unbiased answers concerning the security of the network and actions required to effectively reduce risks.

Remediation: Managing Corrective Actions

In large organizations, the remediation process requires the coordinated efforts of security professionals and administrators to resolve vulnerabilities. The final stage of the vulnerability management process involves remediating issues and re-testing applied fixes.

The QualysGuard Web service automates the vulnerability management process, saving time, money, and providing the comprehensive network security testing required for today’s on-demand businesses.

“Using QualysGuard to audit business-critical assets in order to protect our brand and our shareholders against potential financial risks. As a web service, QualysGuard Enterprise allowed us to align our information security with our core business strategies.”

Dan Klinger, Manager of Information Security
Hershey Foods

“When we considered the performance, accuracy, ease of use, and deployability of the QualysGuard Web service, it yielded a very cost-effective solution for our network.”

Peter Albert, Director of Operations
iPass Inc.

“The increasing frequency of cyber attacks requires us to perform more frequent, more reliable security audits in order to stay ahead of vulnerabilities and ensure that our network is protected. Qualys allows us to conduct daily security audits while significantly reducing our costs.”

Robert Noakes, Security Specialist
California State Lottery
Architecture Enables Security On-Demand

Qualys has built a Global Web Service Architecture from the ground up to automate network security auditing and vulnerability management. The infrastructure for Qualys Web services gives companies an automated system to audit network security from any Internet browser. Since the Qualys solution is delivered over the Web, customers can run network security audits anytime, without the cost or complications associated with software-based solutions. This unique architecture is the first of its kind.

QualysGuard’s extensive architecture enables accurate vulnerability scanning, data integrity, and ease of use while delivering the lowest total cost of ownership.

QualysGuard Secure Operations Centers (SOCs)

Process vulnerability data with n-tiered high availability architecture with load balanced servers, secure databases and encrypted storage.

KnowledgeBase

Intelligence for QualysGuard services. The industry’s largest and most accurate database of vulnerability audits containing more than 3,200 unique, non-intrusive audits. Automated updates ensure that QualysGuard users test for the latest network security threats.
Qualys architecture enables security on demand. The Qualys Global Web Service Architecture consists of:
- Web User Interface for anytime, anywhere access
- Secure Operations Centers to redundantly store encrypted customer data
- KnowledgeBase of vulnerability signatures, updated daily with new audits, patches, and fixes
- Internet Remote Scanners to conduct network perimeter audits
- QualysGuard Scanner Appliances to conduct internal network audits

Customer’s Network

Web User Interface QualysGuard Log In
Browser used to launch scans, read reports, access fix information and track vulnerability tickets from any location at any time.

Internet Remote Scanners

For fast, efficient external (perimeter) scanning, embedded on Qualys servers in Qualys Secure Operations Centers, honeypot-based scanning engine for highly accurate vulnerability detection and minimization of false-positives.

Internet Remote Scanners

Remote Location
QualysGuard Scanner Appliance

Headquarters
QualysGuard Scanner Appliance

Branch Office
QualysGuard Scanner Appliance

QualysGuard Scanner Appliances
Appliance versions of Internet scanners enable internal network auditing. Snap-in and scan, no user maintenance required. Fully automated with the latest vulnerability signatures. Employs secure communications with SSL encryption.
The QualysGuard Advantage

Highly Accurate

Accuracy of the scanner is a primary requirement in choosing a network security auditing solution. Components of accuracy involve the depth and quality of the audits in combination with a vendor’s ability to eliminate false-positives.

QualysGuard leads the industry in scanning accuracy, delivering:

- 99.997% overall accuracy (.003% false-positive rate)—certified by independent auditors and based on over 1 million customer-performed scans each quarter
- 3,300+ unique vulnerability audits — 2x nearest competitor
- Fingerprints over 500 unique applications, operating systems and protocols — 3x nearest competitor
- New audits added daily and available in real-time to customers
- Disciplined audits only check applicable systems — no unnecessary scans
- Non-intrusive audits

Easy to Use / Robust Management Console

The QualysGuard Web User Interface was designed by business users and security experts. This makes using QualysGuard intuitive, yet sophisticated enough to both answer high-level business security questions and provide asset-level data for detailed needs of administrators.

“Ensuring maximum protection against the latest security threats of the day is a growing concern within our organization. The Qualys on-demand Web services platform allows us to audit our security status at any moment and manage network vulnerabilities on a centralized, enterprise-wide level with a fraction of the resources and cost.”

Mark Iovinelli, Enterprise Design and Implementation Team Manager
RR Donnelley

“QualysGuard enables us to perform security audits as often as necessary, sort vulnerabilities immediately as they are added to the QualysGuard database, and work proactively to remediate them. This helps us secure all of our network entry points, enforce PCI security policies and assist us in meeting federal requirements.”

Paul Simmons, Director of Global Information Security
Imperial Chemical Industries

* Average reported false-positives across Qualys customer base, per survey of over one million scans.
The privacy and security of our patients’ information is a fundamental requirement at Cedars-Sinai. Qualys provides us with a third-party capability to audit our networks for vulnerabilities and provide verified fixes immediately. With an automated process, we have significantly reduced our costs for network security audits.”
Ray Duncan, Director of Technology and Architecture Cedars-Sinai Medical Center

"The ease-of-use, its automated scanning capability, and the overall value combine to make QualysGuard an important tool for us in securely protecting our network and its data.”
Stephan Mueller, Sr. Security and Business Systems Continuity Manager Fujitsu Siemens Computers

**Instantly Deployable**
The QualysGuard Web service requires no software, existing hardware or software infrastructure, or specific technical expertise. Implementing QualysGuard is simple, fast, and immediately effective. Whether you scan the network perimeter or test the entire infrastructure of remote offices, QualysGuard can be up and running in minutes, and be used instantly from any location via the QualysGuard Web interface.

QualysGuard Scanner Appliances can be added effortlessly to securely audit internal networks.

**Trusted, Third Party Results**
Because QualysGuard is a Web service, Qualys maintains the operational integrity, KnowledgeBase, and security architecture of the complete network auditing and vulnerability management system. Unlike user-owned and operated software tools, QualysGuard security audit data is tamper-resistant and satisfies regulatory requirements of mandates such as Gramm-Leach-Bliley, Sarbanes-Oxley, SB1386, and HIPAA.

**QualysGuard Web Service Benefits vs. Software Solutions**

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>QUALYSGUARD WEB SERVICE</th>
<th>SOFTWARE SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment</td>
<td>Immediate, automated</td>
<td>Manual, time-consuming</td>
</tr>
<tr>
<td>Scalability</td>
<td>Increase scale with no additional overhead</td>
<td>Raises management cost</td>
</tr>
<tr>
<td>Quality</td>
<td>Fewer bugs, fast response on issues and new threats</td>
<td>Many bugs, slow to fix, manual threat updates</td>
</tr>
<tr>
<td>Reporting</td>
<td>Centralized, dynamic, customized</td>
<td>Static, hard to customize, not centralized</td>
</tr>
<tr>
<td>Security</td>
<td>Encrypted storage, transit encryption</td>
<td>No encrypted storage</td>
</tr>
<tr>
<td>Management</td>
<td>Automated process, no system management</td>
<td>Maintain hardware, software, database, security</td>
</tr>
<tr>
<td>TCO</td>
<td>Lowest TCO, proven ROI</td>
<td>Higher TCO</td>
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QualysGuard Solution Offerings

**QualysGuard Enterprise**
QualysGuard Enterprise automates the process of vulnerability management—from network discovery and assessment to on-demand reporting, remediation tracking and enforcement of security policies. QualysGuard Enterprise eliminates traditionally labor-intensive audit practices, saving time and simplifying large-scale vulnerability management. As a highly scalable enterprise solution, the Web service supports distributed security auditing, centralized reporting from distributed scans, and many customization options for flexible reporting and scan configuration.

**QualysGuard Express**
QualysGuard Express offers an accurate, automated security audit and vulnerability management service without the substantial cost, resource, or rollout issues associated with software solutions. QualysGuard Express is easy to use and can be deployed instantly. The service is ideal for small to medium sized organizations (or departmental operating units) seeking protection against vulnerabilities, including the latest worms and network security risks.

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Analyst’s Choice Award — eWeek (July/2003)
“[QualysGuard] consistently identified the most potential exposures and identified the most serious problems, earning it our eWEEK Labs Analyst’s Choice Award.”

Winner, TechWorld Recommended (Sept/2003)
“Qualys scores above and beyond the competition as it uses an extensive database which lists many thousands of weaknesses and these are regularly updated whenever a new threat is identified. [Qualys is] a very sophisticated vulnerability scanning service that delivers a huge amount of easily accessible information about the state of your local network.”
QualysGuard Consultant enables auditors to reduce their time on-site by scoping and performing detailed vulnerability assessments remotely—anytime and anywhere. QualysGuard Consultant allows network security auditors to conduct engagements faster and more efficiently through easy setup and accurate, comprehensive results. Web-based reporting makes audit results immediately available from any location. Customization options enable consultants to easily create client-specific reports, and to configure scans for optimal performance on client networks.

QualysGuard MSP

QualysGuard MSP allows managed security providers (MSPs) to immediately deploy a comprehensive vulnerability assessment service as part of an integrated suite of managed services. QualysGuard Web service delivery is ideally suited to meet the needs of MSPs, enabling central operations to securely scan internal and external networks in real-time, and provide on-demand vulnerability management services as part of a differentiated managed security program.
Company Expertise

Qualys is the market-leading Web Service Provider offering on-demand network security audits and vulnerability management. The Qualys flagship service, QualysGuard, performs more than 1 million scans per quarter on networks owned by thousands of organizations, including some of the world’s largest enterprises.

Qualys has built from the ground up the first automated Web service. The QualysGuard Global Web Service architecture uniquely provides companies with an automated system to audit network security at any time from any Internet browser. QualysGuard users can immediately identify, prioritize and remediate vulnerabilities before exploitation by worms or attackers. This automated solution provides organizations with instant use of methods for reliably detecting and eliminating vulnerabilities more frequently and accurately than traditional software solutions.

Qualys’ automated Web service platform leverages a foundation of automation to solve the biggest challenges in security auditing: immediate and up-to-date knowledge of vulnerabilities, high scalability of scanning, and accuracy and reliability of network audits. With the increasing sophistication and shortened lifecycle of attacks, automating and auto-provisioning vulnerability assessment is critical in fighting the threats that define today’s security climate.

With its extensive experience identifying and detecting vulnerabilities on real world networks, Qualys has developed the world’s largest and most accurate vulnerability signature database, adding dozens of new vulnerability signatures each week. Qualys publishes a predictive index of vulnerabilities that are at the greatest risk for compromise called the Real Time Top 10 (RV10). This dynamic list of vulnerabilities is updated automatically and continuously from a statistically representative sample of thousands of networks. The RV10 scan helps security administrators prioritize their remediation efforts by focusing on the most dangerous threats.

As a company, Qualys serves thousands of enterprise customers, including ABN Amro, Hershey Foods, Hewlett Packard and The Thomson Corporation. Qualys security experts frequently speak at industry events and advise Congress on development of national policy for digital security. Qualys is headquartered in Redwood Shores, California, with global offices in France, Germany, U.K. and the Pacific Rim.

To learn more about how Qualys can help your organization immediately reduce network threats, call 1 (800) 745 4355 or visit www.qualys.com for a free trial of QualysGuard services.