

Leading DDoS Protection with the Widest Security Coverage

Radware's Cloud DDoS Protection Services provide a full range of enterprise-grade DDoS protection services in the cloud. Based on Radware's industry-leading DDoS protection technology, it gives organizations the widest security coverage, the most accurate detection and the shortest time to protect from today's most dynamic and evolving DDoS attacks.



**BEST MANAGED
SECURITY SERVICE 2016**

Radware offers a multi-vector DDoS attack detection and mitigation service, handling attacks at the network layer, server-based attacks, and application-layer DDoS attacks. The solution includes protection against volumetric and non-volumetric attacks, SYN flood attacks, low & slow attacks, HTTP floods, SSL-based attacks and more.

Cloud DDoS Protection that Meets Your Needs

Radware's Cloud DDoS Protection Services offers the full range of services that can provide organizations optimal cloud protection service to meet the unique needs of their networks and applications. The services include always-on, on-demand or fully managed hybrid services that are easily deployed to help organizations assure the SLA of their data centers and applications.

Fully Managed Security Service

Fully managed, 24x7 service provided by Radware's Emergency Response Team (ERT) – a dedicated group of security experts that assume full responsibility to configure and update protections as well as actively monitor, detect, alert and mitigate attacks in real time.



Figure 1: Cloud Security Services Portal Dashboard

Automated 0-Day DDoS Attack Protection

With a patent-protected real-time signature creation technology, Radware provides the only cloud service that can automatically generate protection for zero-day and unknown attacks. The service creates baselines of normal network, application, and user behavior. When an anomalous behavior is detected as an attack, a real-time signature is created based on the attack characteristics. The service can generate and block zero-day attacks immediately, within 18 seconds.

Behavioral-Based Detection for Highest Accuracy

The service is based on Radware's patented behavioral-based detection technology that can detect attacks in a very short timeframe with minimal false positives. The behavioral-based detection algorithm processes multiple parameters, determines their degree of anomaly, and correlates between them to reach conclusions in real time. Using this algorithm, Radware's Cloud DDoS Protection Service can perform more in-depth traffic analysis and come to conclusions quicker and more accurately than traditional methods.

Smart SSL Attack Mitigation

Radware's Cloud DDoS Protection Services offers the only SSL-attack mitigation in the cloud that maintains user data confidentiality and removes operational dependencies between the service provider and the organization when keys are changed. Radware performs the HTTPS validation with independent certificate management. This means that once a user is validated as legitimate, the HTTPS session resumes with the customer's certificate, which is unknown to Radware. As a result, user data remains fully encrypted and confidential and customer certificate management remains unchanged. In addition, the solution allows usage of wildcard certificates to reduce operational complexity when needing to protect a large number of subdomains.

Synchronized Operations for Increased Protection

DefenseMessaging between Radware's security CPE and cloud security nodes share real-time information on normal traffic baselines, protections and attack footprints, thereby eliminating blind spots and protection gaps across the organization's disaggregated network.

Robust Global Cloud Security Network

Radware's global cloud security network scales over 2Tbps of mitigation capacity. This capability is spread strategically across scrubbing centers around the world for instances when volumetric attacks threaten to saturate customers' link capacity. Radware scrubbing centers are designed to serve major markets with minimal latency and are constantly being expanded and upgraded based on the growth of the customer base and changes in DDoS attack trends.

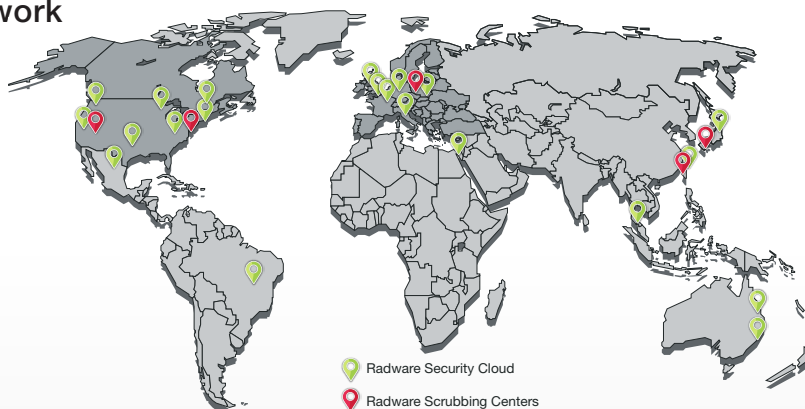


Figure 2: Radware's Global Cloud Security Network

Segregation Between Clean and Attack Traffic

In addition to its scrubbing centers, Radware also supports multiple cloud POPs for always-on DDoS protection service. Radware is the only service provider that has dedicated scrubbing centers that segregate clean traffic from volumetric attack traffic – further securing the organization's legitimate traffic.

Multi-Layered DDoS Protection

Radware's Cloud DDoS Protection offers multi-layered protection which is optimized for online business and data center protection and provides protection from all types of DDoS attacks.

DoS Protection – protection from all types of network DDoS attacks including:

- UDP flood attacks
- SYN flood attacks
- TCP flood attacks
- ICMP flood attacks
- IGMP flood attacks
- Out-of-state flood attacks

NBA – the network behavioral analysis module prevents application resource misuse and zero-minute malware spread. Protection against attacks, including:

- HTTP page flood attacks
- DNS flood attacks
- SIP Flood attacks
- Brute force attacks
- Network and port scanning
- Malware propagation

IPS – This module protects against:

- Application vulnerabilities and exploits
- OS vulnerabilities and exploits
- Network infrastructure vulnerabilities
- Malware such as worms, Bots, Trojans and Drop-points, Spyware
- Anonymizers
- IPv6 attacks
- Protocol anomalies

SSL Attack Mitigation – provides protection from SSL based-DDoS attacks.

- Uniquely mitigates floods that are directed to HTTPS pages
- Provides unlimited SSL decryption and encryption capabilities
- Operates in symmetric and asymmetric environments

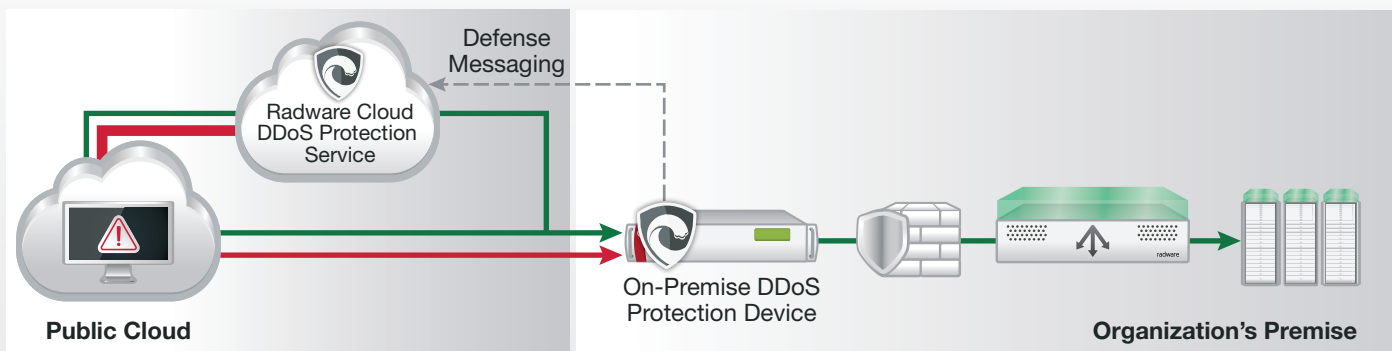
Cloud DDoS Protection Flexible Offering

Radware's Cloud DDoS Protection Service offers multiple service options to meet an organization's specific needs:

Hybrid Cloud DDoS Protection Service

Radware's Hybrid Cloud DDoS Protection Service integrates with Radware's on-premise DDoS protection device to provide a hybrid DDoS protection service. The service provides the most comprehensive DDoS attack mitigation coverage and is recommended for organizations that can deploy an on-premise device in their data center.

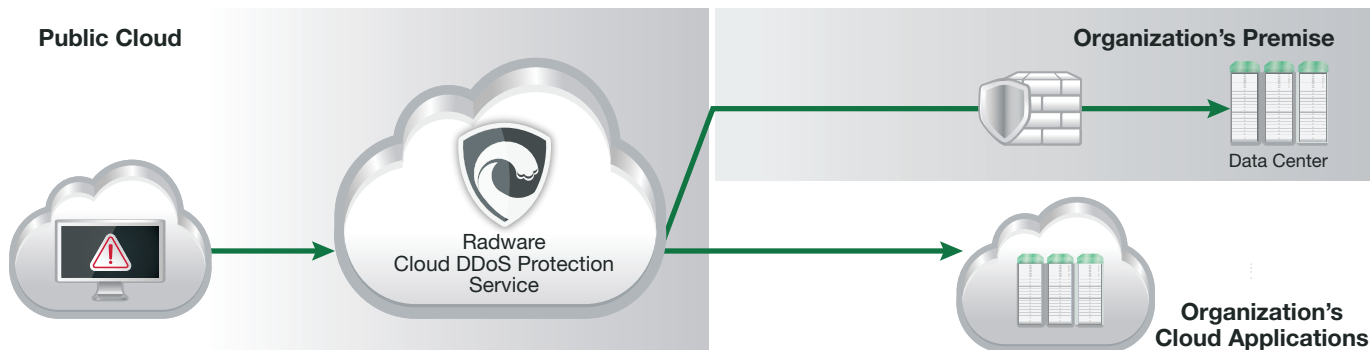
- Minimal induced latency in peacetime as traffic is diverted only upon volumetric DDoS attack that aims to saturate the Internet pipe.
- Shortest time to protect with mitigation starting on-premise in real time.
- No protection gap when traffic is diverted to the cloud through real-time sharing of traffic baselines and attack footprints between Radware's on-premise device and cloud protection service.
- Optional end-to-end managed service that includes the on-premise device, in an OPEX-based subscription model, leaving the ownership, monitoring and mitigation with Radware's security experts.
- Single point of contact and extensive managed services by battle proven security and DDoS experts.



Always-On Cloud DDoS Protection Service

Radware's Always-On Cloud DDoS Protection Service offers organizations complete cloud-based DDoS protection with minimal need for customer involvement. It is an always-on cloud service where all of the organization's traffic is routed through Radware's network of cloud centers, keeping the organization fully protected at all times. The service is recommended for organizations that have applications hosted in the cloud or those organizations that are not able to deploy an on-premise attack mitigation device in their data center.

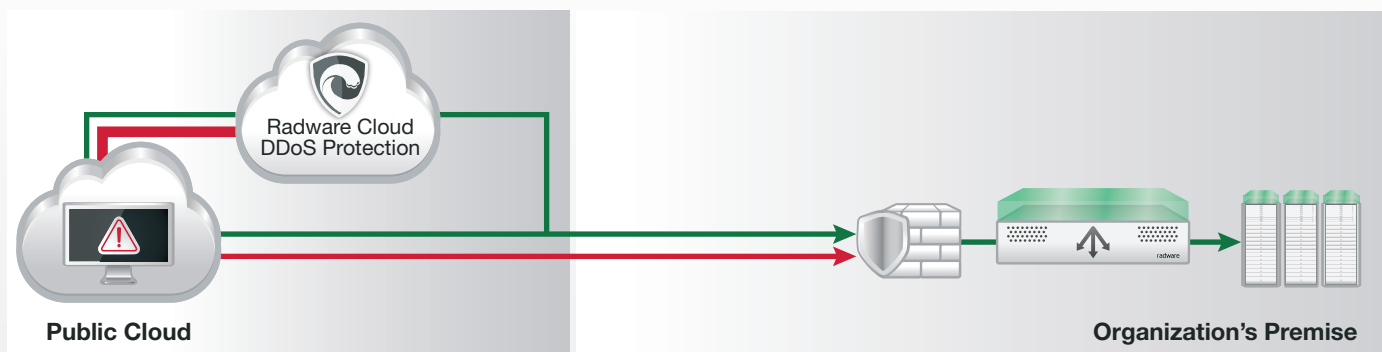
- Shortest time to protection as traffic is continuously routed through Radware's DDoS protection services.
- Minimal customer involvement - proactively fully-managed by Radware's battle proven security experts.
- Unlimited service - provides support for unlimited number of attacks, size of attacks and attack duration.



On-Demand Cloud DDoS Protection Service

Radware's On-Demand Cloud DDoS Protection Service protects against Internet pipe saturation caused by cyber-attacks. The service includes monitoring of traffic flow data and upon detection of a volumetric attack, the on-demand cloud service is activated and traffic is diverted to Radware's cloud scrubbing center. Once traffic is diverted to Radware's cloud scrubbing centers, the organization's traffic is cleaned from malicious traffic and only clean traffic is sent to the organization's network. This service options is best fit for organizations that are looking for the lowest cost solution and are less sensitive to real-time detection of application-level and SSL-based DDoS attacks.

- Traffic diverted to cloud only upon volumetric DDoS attacks.
- Diversion based on link utilization thresholds, flow statistics, or manually.
- Attack volume unlimited, but limitation on annual number of diversions
- ERT Standard service only - supporting attack mitigation on-demand
- Limited ability to detect application-level DDoS attacks.



Summary of Cloud DDoS Protection Service Offerings

The following table summarizes and compares the three different service options offered under Radware's Cloud DDoS Protection Services. Together these offer the full range of deployment options and can also be deployed by organizations in tandem to provide optimal protection that meets the unique needs of the organization's network and applications.

Service	Description	Recommended For	Details
Hybrid Cloud DDoS Protection Service	Cloud DDoS protection that integrates with on-premise detection & mitigation to provide hybrid DDoS protection solution.	For organizations that can deploy an on-premise device in their data center.	<ul style="list-style-type: none">• Most comprehensive DDoS attack mitigation coverage• Minimal induced latency in peacetime• Traffic diverted only when volumetric attacks aim to saturate the Internet pipe• Unlimited # of attacks, size and duration• ERT Standard or Premium (managed service)
Always-On Cloud DDoS Protection Service	Always-on cloud service where all of the organization's traffic is routed through Radware's cloud Point of Presence (POPs), at all times.	For organizations that have applications hosted in the cloud or organizations that are not able to deploy an on-premise attack mitigation device in their data center.	<ul style="list-style-type: none">• Complete cloud-based DDoS protection• Minimal need for customer involvement; No on-premise device is required.• Unlimited service - provides support for unlimited number of attacks, size of attacks and attack duration• ERT Premium – proactively, fully-managed service level
On-Demand Cloud DDoS Protection Service	On-demand cloud service to protect against Internet pipe saturation caused by cyber-attacks.	For organizations that are looking for the lowest cost solution and are less sensitive to application-level DDoS attacks.	<ul style="list-style-type: none">• Traffic diverted to cloud only upon volumetric DDoS attacks.• Lowest cost; Simplest deployment• Diversion based on link utilization, flow statistics, or done manually• Attack volume unlimited, but limitation on annual number of diversions• ERT Standard service only• Limited ability to detect application-level DDoS attacks.

Via its flexible deployment options coupled with leading DDoS technology offered in a robust network of cloud centers around the world, Radware offers a full suite of Cloud DDoS Protection Services that can protect organizations from today's most sophisticated DDoS attacks.

Radware Cloud Security services are officially certified and fully compliant with all the requirements of the following security-related standards:

- PCI-DSS v3.1 (Payment Card Industry Data Security Standard)
- ISO/IEC 27001:2013 (Information Security Management Systems)
- ISO/IEC 27032:2012 (Security Techniques -- Guidelines for Cybersecurity)
- ISO 28000:2007 (Specification for Security Management Systems for the Supply Chain)

In addition, Radware Cloud Security services and its data centers worldwide are certified with all the requirements of the following quality-related standards:

- US SSAE16 SOC-1 Type II, SOC-2 Type II
- ISO 9001:2008 (Quality Management System)
- ISO 14001:2004 (Environment Management System)
- ISO 22301:2012 (Business Continuity Management Systems)
- ISO 50001:2011 (Energy Management Systems)
- OHSAS 18001:2007 (Occupational Health & Safety)

About Radware

Radware® (NASDAQ: RDWR), is a global leader of **application delivery** and **cyber security** solutions for virtual, cloud and software defined data centers. Its award-winning solutions portfolio delivers service level assurance for business-critical applications, while maximizing IT efficiency. Radware's solutions empower more than 10,000 enterprise and carrier customers worldwide to adapt to market challenges quickly, maintain business continuity and achieve maximum productivity while keeping costs down. For more information, please visit www.radware.com.

Radware encourages you to join our community and follow us on: [Facebook](#), [Google+](#), [LinkedIn](#), [Radware Blog](#), [SlideShare](#), [Twitter](#), [YouTube](#), [Radware Connect](#) app for iPhone® and our security center [DDoSWarriors.com](#) that provides a comprehensive analysis on DDoS attack tools, trends and threats.

Certainty Support

Radware offers technical support for all of its products through the Certainty Support Program. Each level of the Certainty Support Program consists of four elements: phone support, software updates, hardware maintenance, and on-site support. Radware also has dedicated engineering staff that can assist customers on a professional services basis for advanced project deployments.

Learn More

To learn more about how Radware's integrated application delivery & security solutions can enable you to get the most of your business and IT investments, email us at info@radware.com or go to www.radware.com.

This document is provided for information purposes only. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law. Radware specifically disclaims any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. The technologies, functionalities, services, or processes described herein are subject to change without notice.

©2016 Radware Ltd. All rights reserved. Radware and all other Radware product and service names are registered trademarks or trademarks of Radware in the U.S. and other countries. All other trademarks and names are property of their respective owners. The Radware products and solutions mentioned in this document are protected by trademarks, patents and pending patent applications. For more details please see: <https://www.radware.com/LegalNotice/>