DDoS Scrubbing Centers – High Availability and Resilience

Radware's scrubbing centers provide cloud-based security solutions for DDoS mitigation on enterprise networks. They deliver best-in-class infrastructure security and integrity, strict standards, true multitenant service, and high resiliency and scalability. An overview of Radware's scrubbing centers' high availability and resilient architecture follows.

High Availability

Systems

All scrubbing centers are designed in full resilience mesh topology and are based on N+1 redundancy on all of their networking (routers, switches and load balancers) and mitigation elements. They are equipped with dual redundant power supplies on all applicable equipment to assist with maximum uptime. This topology allows for steady and uninterrupted operation of the scrubbing centers during maintenance and/or element failures.

Connectivity

Radware's scrubbing centers are connected to the internet through multiple Tier 1 (upstream) providers and links.

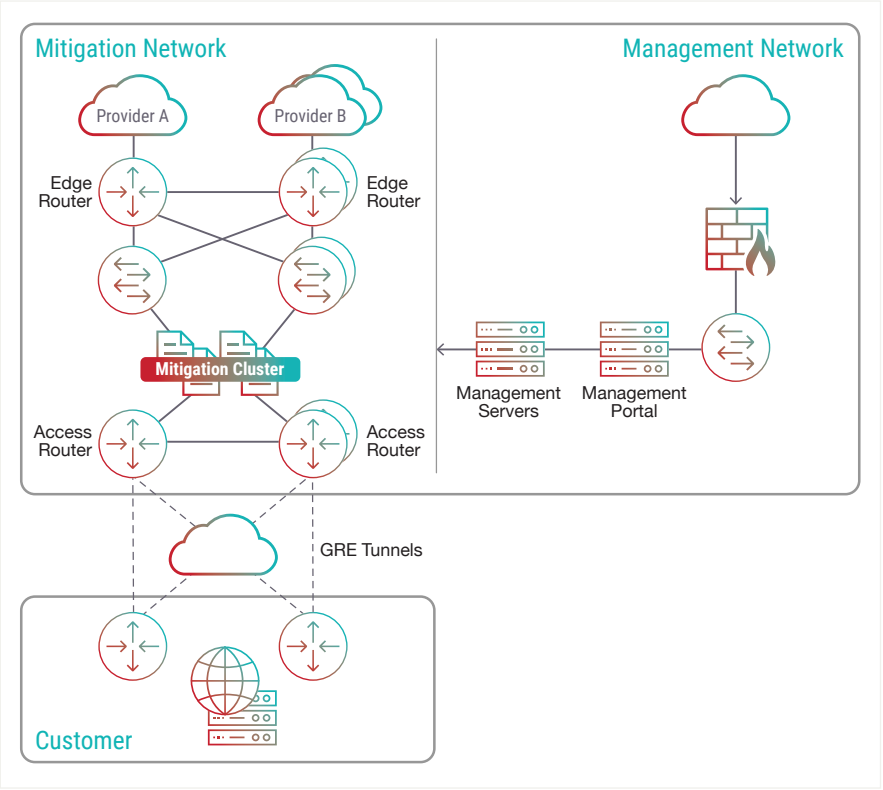
This configuration enables high capacity, flexibility in customer diversion methods and high availability at all times.

Management and Security

Everyday operation of the scrubbing centers is controlled by management and monitoring systems, allowing continuous monitoring of all components, subcomponents, and internal/external and front-end/back-end applications to assist the infrastructure and service integrity.

The management network is dedicated and separated from the mitigation network. All management servers are installed on dedicated physical or virtual servers, protected by leading firewall and network security systems.

Figure 1:
Radware's
Scrubbing
Centers



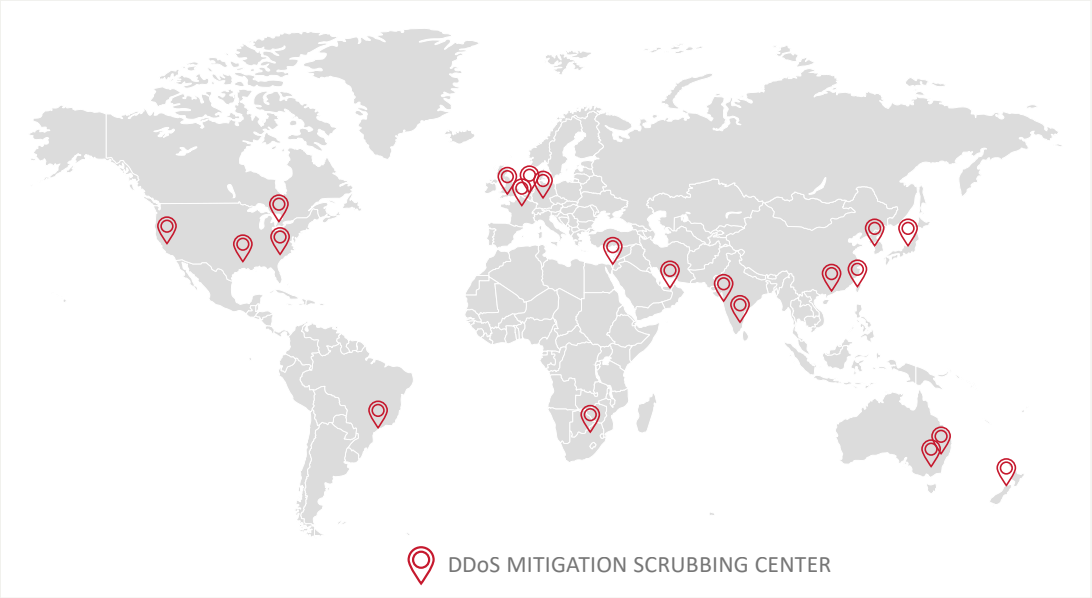
Scaling and Disaster Recovery

Radware's DDoS scrubbing center network is designed and built from multiple scrubbing centers located in data centers around the world.

Scrubbing centers are backed up automatically via proper procedures and policies, and individual centers can be replaced by one of the other centers for scaling up or disaster relief. All scrubbing centers are interconnected with a VPN, and control can be transferred from one scrubbing center to another using the control center software.

Scrubbing Center Locations

DDoS Mitigation Scrubbing Center



Geo Location	City	Hosting DC
USA	Ashburn, VA	Equinix
USA	Dallas, TX	Equinix
USA	San Jose, CA	Equinix
Latin America	Sao Paulo, Brazil	Equinix
EMEA	Frankfurt, Germany	Interxion
EMEA	London, UK	Equinix
EMEA	Amsterdam, NL	Equinix
EMEA	Tel Aviv, Israel	Internet Binat
EMEA	Johannesburg, ZA	Teraco
EMEA	Paris, France	Interxion
Asia	Hong Kong	iAdvantage
Asia	Seoul, South Korea	Hostway
Asia	Tokyo, Japan	Equinix
Asia	Chennai, India	Airtel
Asia	Mumbai, India	Yotta
Asia	Taiwan	Chief
Australia	Sydney, Australia	Equinix
Australia	Melbourne	Equinix
New Zealand	New Zealand	Spark
Canada	Toronto	Digital Realty
UAE	Dubai	Equinix

Radware's Cloud Security Services is fully compliant with all the requirements of the following security-related standards:

- PCI DSS v3.2 (Payment Card Industry Data Security Standard)
- HIPAA (Health Insurance Portability and Accountability Act of 1996)
- ISO 27001:2013 (Information Security Management Systems)
- ISO 27017:2015 (Information Security for Cloud Services)
- ISO 27018:2014 (Information Security Protection of Personally Identifiable Information [PII] in Public Clouds)
- ISO 27032:2012 (Security Techniques — Guidelines for Cybersecurity)
- ISO 28000:2007 (Specification for Security Management Systems for the Supply Chain)

In addition, Radware's data centers worldwide are certified with all the requirements of the following quality-related standards:

- US SSAE16 SOC-1 Type II
- US SSAE16 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)

All of Radware's scrubbing centers are hosted on industry-leading data centers with high standards and procedures.

Radware's data centers have at least 99.999% availability SLAs on power. Every mission-critical device has at least one backup power feed fed by UPS along with a generator backup.

Physical access to the data center buildings, data floors and individual areas is monitored 24x7. Standardized procedures also ensure that only selected staff members have access to equipment whenever required.

RW 1038 | 04.01.2024