

# NETSCOUT Arbor Cloud DDoS Protection for Enterprises

# Global, Intelligently Automated Protection from DDoS Attacks

The trend for DDoS attacks is not favorable for Enterprises. Volumetric attacks are growing. The increasing popularity of reflection/amplification attacks is adding a new layer of complexity. Modern-day DDoS attacks now employ a combination of volumetric, TCP-state exhaustion and application-layer attack vectors. Arbor Cloud provides global, cloud-based traffic scrubbing services tightly integrated with NETSCOUT Omnis™ AED for on-premise DDoS mitigation. This multi-layered approach to DDoS protection is an Enterprise best practice for mitigating today's dynamic multi-vector DDoS attacks.

#### Layered Protection Against Modern-Day DDoS Attacks

As part of a layered approach to DDoS protection, Arbor Cloud provides in-cloud protection from advanced and high-volume DDoS attacks without interrupting access to your applications and services. Arbor Cloud's automated or on-demand traffic scrubbing service, staffed by Arbor's DDoS security experts, defends against volumetric DDoS attacks that are too large to be mitigated on-premise.

NETSCOUT's on-premise component NETSCOUT Omnis AED, provides always-on, in-line, stateless, packet-based DDoS attack detection and mitigation. Omnis AED can detect and stop all types of DDoS attacks. However, in the event of a large volumetric DDoS attack that will overwhelm internet-facing circuits and local protection, Omnis AED using a powerful feature called Cloud Signaling™ can automatically notify and reroute attack traffic to Arbor Cloud scrubbing locations worldwide where the attack is mitigated. The combination of Omnis AED on-premise, Cloud Signaling and Arbor Cloud offers the most comprehensive protection from the modern-day DDoS attack.

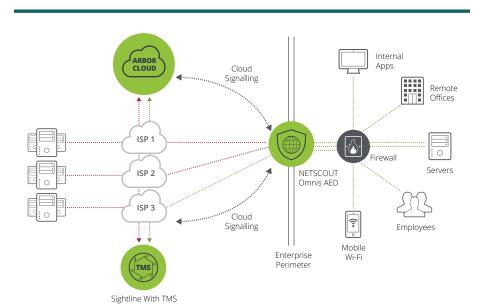


Figure 1: The fully integrated combination of 1) Omnis AED on-premise to stop application layer attacks; 2) Cloud Signaling to intelligently reroute large attack to Arbor Cloud; 3) Cloud-based Flow collection, attack detection and reroute to Arbor Cloud; 4) Multi-Tbps of Arbor Cloud global scrubbing; 5) All continuously armed with the global threat intelligence of ATLAS/ ASERT – offers the most comprehensive DDoS protection solution in the industry.

#### **KEY FEATURES & BENEFITS**

#### **Global DDoS Protection**

A single solution offering carrier-agnostic, global DDoS protection, backed by world-class security intelligence and industry-leading DDoS protection products.

#### Multi-Tbps of In-Cloud Protection

Worldwide scrubbing centers with over 15Tbps of network mitigation capacity offers comprehensive protection from the largest DDoS attacks.

#### Cloud Only and/or Hybrid Protection

The Arbor Cloud® solution can be deployed as a cloud-only and/or an intelligent combination of in-cloud and on-premise DDoS protection- providing you the flexibility to design comprehensive DDoS protection that fits your environment.

## Powered by Global Threat Intelligence

Arbor Cloud DDoS protection solutions are continuously armed with the latest global threat intelligence from NETSCOUT® Arbor's ATLAS® and ATLAS Security Engineering & Response Team (ASERT).

### Automated DDoS Attack Detection and Mitigation

Using stateless packet-processing technology and/or cloud-based IP flow analysis, DDoS attacks can be automatically detected and routed to Arbor Cloud global scrubbing centers for mitigation.

#### **Managed Services**

Rely upon the industry-leading expertise of Arbor Networks to manage and optimize your on-premise DDoS protection.

Cloud Signaling also works with Arbor Sightline and Threat Mitigation System (TMS) deployments; typically deployed in service provider or larger enterprise network environments. A deployment could have the combination of both Omnis AED and Arbor Sightline/ TMS on-premise automated DDoS attack protection.

On-premise, packet-based protection can be augmented with Arbor Cloud's Flow Monitoring and Detection Service which will collect and analyze IP Flow from local routers. Using unique algorithms during a base line period of approximately 10 days, volumetric DDoS attacks (i.e. reflection / amplification) can be detected in as little as one second and automatically be routed to one of the Arbor Cloud global scrubbing centers.

#### **Arbor Cloud Specifications**

#### **Arbor Cloud Security Operations and Scrubbing Centers**

- · Security Operations Center: North America (Sterling, VA).
- Scrubbing Centers: 15 located in US (New York, Ashburn, San Jose, Los Angeles, Dallas), Europe (Amsterdam, Frankfurt, Marseille, London, Stockholm) Asia (Sydney, Tokyo & Singapore), Latin America (Sao Paulo) and Middle East (Dubai).
- · Network/Mitigation Capacity: 15 Tbps.

#### **Service Packages & Options**

- All services based upon IPv4/IPv6 clean traffic throughput license options include 100Mbps, 500Mbps, 1Gbps, 2Gbps, 3Gbps, 4Gbps, 5Gbps, 6Gbps, 8Gbps and 10Gbps; (10Gbps+ entitlements available up on request) unless noted, no setup fee for standard provisioning; includes access to customer portal, ASERT intelligence, attack analysis and warnings; 24x7 Level 1, 2 and 3 support services.
- Arbor Cloud Connect: On-demand/automated in-cloud DDoS attack protection with optional integration with on-premise Arbor AED or Sightline/TMS products. Includes one, 72-hour mitigation per year, unlimited netblocks, 5 DNS hostnames, 1 GRE tunnel. Additional mitigations, GRE tunnels, DNS hostnames, SSL certs and Flow Monitoring and Detection service sold separately.
- Arbor Cloud Essentials+: On-demand/automated in-cloud DDoS attack protection with optional integration with on-premise Arbor AED or Sightline/ TMS products. Includes unlimited mitigations per year, unlimited netblocks, 5 DNS hostnames, 1 GRE tunnel. Additional GRE tunnels, DNS hostnames and SSL certs and Flow Monitoring and Detection service sold separately.
- Arbor Cloud Always-On: Always-On, in-cloud DDoS attack detection and protection. Includes unlimited netblocks, 5 DNS hostnames, 1 GRE tunnel. Additional GRE tunnels, DNS hostnames and SSL certs sold separately.
- Flow Monitoring and Detection: Automated in-cloud attack detection using encrypted IP flow data sent from customer router(s) into Arbor Cloud. Available in addition to Arbor Cloud Connect and Essentials+ packages. Annual licensing options from 1 to 30 routers.
- Equinix Cloud Exchange (ECX) Integration: Layer-2 connections available for clean traffic return from Arbor Cloud. Customer must also or already be part of the ECX fabric and is responsible for providing connectivity into and over ECX.
- Arbor Cloud Direct Connect: Direct or Cross Connect from Arbor Cloud scrubbing center to customer router. One-time set up fee per 100Gbps router port required. Subsequent monthly recurring fee per 10Gbps, 40Gbps, or 100Gbps, of bandwidth.
- Arbor Sightline to Arbor Cloud Signaling: Automated signaling from on-premise Arbor Sightline/TMS deployment to Arbor Cloud for cloud-based mitigation. One-time setup fee required.

#### **On Premise Options**

#### **NETSCOUT Omnis AED**

- · Always on, In-line, packet-based detection and mitigation.
- 2U appliance (mitigation up to 40 Gbps); Virtual appliance (mitigation up to 1 Gbps).
- · Cloud Signaling to automatically redirect large DDoS attack traffic to Arbor Cloud.
- 3M+ IoCs to detect and block outbound communication.
- · Supported Hypervisors: VMware, KVM; Supported VNF.
- · Orchestration: Cloud-Init, Openstack.

#### Arbor Sightline and Threat Mitigation System (TMS)

- · Sightline: Network visibility and DDoS attack detection via IP Flow collection and analysis.
- TMS: Surgical mitigation via appliances (500 Mbps-400 Gbps), 6U chassis (10–100 Gbps); virtualized in Cisco ASR 9000 Router (10–60 Gbps) and KVM & VMware hypervisor (1-40 Gbps).
- Cloud Signaling to automatically redirect large DDoS attack traffic to Arbor Cloud.
- Orchestration: Openstack (Heat, Tracker), Ansible, Cisco NSO/ESC, Nokia CloudBand, AWS CloudFormation.



#### Corporate Headquarters NETSCOLIT Systems Inc

NETSCOUT Systems, Inc. Westford, MA 01886-4105 Phone: +1 978-614-4000 www.netscout.com

#### Sales Information

Toll Free US: 800-309-4804 (International numbers below)

#### Product Support

Toll Free US: 888-357-7667 (International numbers below)



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netscout@bakotech.com

+380 44 273 3333

www.netscout.bakotech.com