



Protecting subscribers from viruses, malware, phishing, and botnets

CYBER SECURITY AT SCALE

Thunder Domain Name Security delivers cutting-edge DNS technology for service providers to affordably defend their entire network against cyber security threats.

Decrease Customer Churn

Prevent support calls and customer churn by shielding subscribers from cyber attacks. We leverage world class security filters and specially designed A.I. to offer next level protection.

Secure Network Infrastructure

All devices use DNS to navigate the Internet including your Network Infrastructure. Secure network devices at the same time you protect subscribers.

Optimize Subscriber Experience

Offer parental controls and content filtering to provide a customized Internet experience for each subscriber.

Local Hosting and Compliance

Customize your own locally hosted DNS servers to ensure subscriber latency is minimized and regulatory requirements are enforced.

Intelligent Analytics + DNS Cloud Firewall

Thunder DNS protects subscribers using Intelligent Analytics and our DNS Firewall. Intelligent Analytics use machine learning to identify and contain **unknown threats** and the DNS firewall protects against **known threats** using powerful filters.

INTELLIGENT ANALYTICS

Historic Benchmarking: On-going analysis of every IP address within the network over time. Anomalies are identified and reported for further investigation.

Query Profiling: Identification of unknown threats through DNS query pattern analysis. New threats are quarantined and security definitions are pushed to all network partners.

**300+
Million**

queries processed **daily** from
180 Countries

DNS FIREWALL

Block List



Integrates real time updates from 15+ security feeds.

White List



Leverages database access to the largest certificate authority in the world.

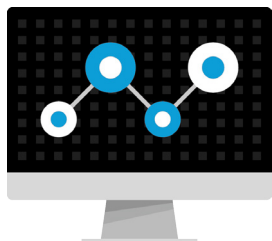
Local Customization



Allows up to 10,000 entries. Local entries override the system DNS Firewall.

Solution Overview

Subscriber



Subscribers are automatically secured by Thunder DNS. Once enabled, all DNS queries are pointed to Thunder DNS instead of legacy DNS servers.

THUNDER DNS



Thunder DNS receives the DNS queries and determines the domain threat level. Risky domain requests are blocked or sent to cloud servers for analysis.

Public Internet



Low risk and non-harmful domain requests are resolved and the subscriber securely navigates the Internet.

Technical Specifications

Features	
Security Domain Updates	Real time (cloud + local architecture)
Smart Caching	Pre-fetch supported
DNS Failover	Up to 3 failover servers
DNS Lookup Latency	< 1 ms for 98.5% of traffic
A.I. Anomaly Detection	Supported
EDNS0	Supported
Supported Image Formats	VMDK, QCOW2
Hosting Options	Cloud or Local Hosting supported

Minimum Server Requirements	
HVA supported	Yes
Processor	Dual Core 1.5+ GHz
Cache	2+ MB
RAM	1+ GB
Network Interface	2 Interfaces (10/100/1000)
IP Allocation	1 public IP per server
Bandwidth	20+ Mbps
Disk Space	5+ GB