TAKE CONTROL OF YOUR APPLICATIONS

As application environments become more complex, more distributed, and more virtualized, enterprises need a broader set of tools to solve performance problems for their web-based services.

Brocade Virtual Traffic Manager is a software-based Layer 7 application delivery controller (ADC) designed to deliver faster, high performance user experience, with more reliable access to public websites and enterprise applications, while maximizing the efficiency and capacity of web and application servers.

Accelerate, Optimize, and Secure Your Applications

- Accelerate and enhance applications, leading to improved customer satisfaction and higher productivity.
- Reduce costs with flexible capacity management, and scale applications up or down to meet changing traffic demands.
- Take advantage of cost benefits of using cloud technologies, while retaining the performance and security.
- Protect applications against external threats and network attacks, and resolve application problems and vulnerabilities.
- Roll out new applications and services up to 10x faster than traditional ADC solutions.

Deliver Fast, Secure, and Available Applications

Web traffic is rarely constant: it has peaks and valleys that can make it difficult to plan for future business growth. Brocade Virtual Traffic Manager is a unique, highperformance software solution that's mobile, flexible, and scalable. It reduces the strain placed on application infrastructure with network-level buffering, protocol optimizations, and applicationspecific measures such as dynamic compression and caching.
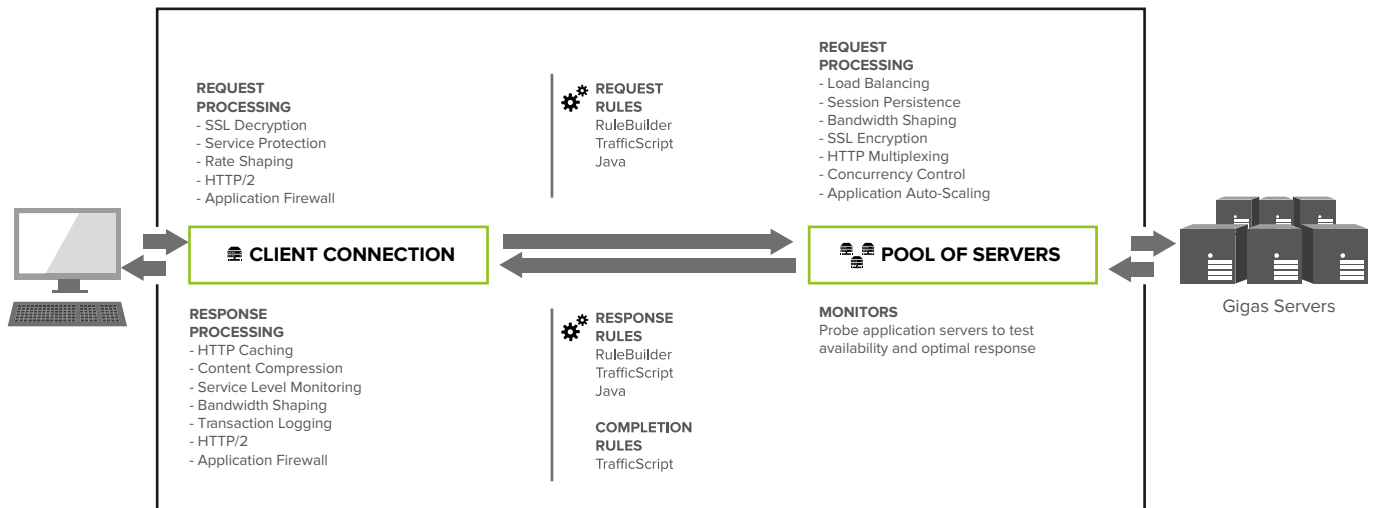
The result is reduced latency, increased capacity, improved availability, and optimized service levels for each end user.

ADVANTAGES

- Provides an Application Delivery and Load Balancing solution purpose-built for high-performance Network Functions Virtualization (NFV)
- Intelligent load-balancing
- Application acceleration
- Dynamic content caching
- SSL and compression offload
- Service-level monitoring
- Global load-balancing
- Bandwidth management
- Service automation using REST API
- NFV Appliance for Application Delivery

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GIGAS LOAD BALANCER

REQUEST PROCESSING
- SSL Decryption
- Service Protection
- Rate Shaping
- HTTP/2
- Application Firewall

REQUEST RULES
RuleBuilder
TrafficScript
Java

REQUEST PROCESSING
- Load Balancing
- Session Persistence
- Bandwidth Shaping
- SSL Encryption
- HTTP Multiplexing
- Concurrency Control
- Application Auto-Scaling

🖥 CLIENT CONNECTION

POOL OF SERVERS

Gigas Servers

RESPONSE PROCESSING
- HTTP Caching
- Content Compression
- Service Level Monitoring
- Bandwidth Shaping
- Transaction Logging
- HTTP/2
- Application Firewall

RESPONSE RULES
RuleBuilder
TrafficScript
Java

COMPLETION RULES
TrafficScript

MONITORS
Probe application servers to test availability and optimal response

How Brocade Virtual Traffic Manager Works

Traffic Manager inspects and processes application traffic with full payload inspection and streaming. As requests are received, a range of optimization techniques ensures that requests are presented in the most appropriate manner to the web and application servers.

Responses from the application can be compressed, cached, and returned to the client at optimum speed, while freeing up resources on the server. Builtin TrafficScript software controls how individual requests are optimized, routed, and transformed. Traffic management rules may also be created using Java extensions.

Traffic Manager includes a web-based administration interface that provides powerful real-time and analysis and history for traffic across Traffic Manager clusters. Alternatively, REST, SoAP and SNMP interfaces can be used to integrate the solution into remote management.

Bring New Services to Market More Quickly

ADCs are an important part of the modern application platform. They provide key functionality such as security, centralized authentication, rate shaping and queuing, and content modification to support applications.

They also support operations such as the gradual introduction of new servers, session upgrades between application generations, and A/B testing. Their monitoring and debugging capabilities also help deliver reliable applications with predictable performance.

Brocade Virtual Traffic Manager includes TrafficScript scripting software which provides fine-grained control over how traffic is managed. TrafficScript is designed with application developers in mind, making it far more efficient and easy to use than traditional network or event-based solutions. Traffic Manager also provides graphical analysis and management tools to give control over the complete ADC infrastructure.

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Feature Summary

Autoscaling
Brocade Virtual Traffic Manager—Enterprise Edition features an auto-scaling capability to ensure reliable application service delivery by automatically managing traffic changes in real time, distributing traffic among a pool of virtual servers. It can orchestrate the provisioning and rightsizing of applications, helping to migrate traffic across multiple virtual and cloud platforms.

Advanced Event Handling
Configure appropriate responses for key infrastructure events, including email and SNMP alerts, syslog logging and custom user-supplied scripts.

Bandwidth Management
You can limit the total bandwidth (kbits/sec) which can be used to stop a popular site or application taking up so much bandwidth. This can enable service providers to enforce access limits based on criteria such as account type or location.

Clustering
Traffic Manager has unmatched scale and performance, and is able to scale-up with the latest generation of multi-core CPUs.

Content Catching
Traffic Manager can stores copies of requested data on the Traffic Manager rather than the back end servers, freeing them up to deliver newly requested content. This can reduce the need for additional servers as traffic grows and speed up the response to end user requests.

Content Compression
Traffic Manager can compress content returned to the client rather than have that workload undertaken by the back-end servers. Compression of content can result in bandwidth being used more efficiently offloading this workload from the back-end servers can enable it to serve requests faster.

Content Inspection
Use Traffic Manager to apply business policies to each request: geotargeting, edge authentication, session failover, all with a global view of the application cluster. Content inspection allows rapid web changes such as the insertion of marketing tags, branding changes, and dynamic watermarking, procedures that may be difficult to achieve by modifying the application itself.

RESTful Control API
Allows Traffic Manager to be configured and controlled by a third-party application and simplifies administration of large/ complex configurations. The Control API enables configuration changes to be automated (e.g. In response to an event).

Global Load Balancing
Improve service availability by automatically failing over to an alternative datacenter or cloud deployment in the event of a catastrophic failure. Improve service performance by performance-sensitive load balancing and location-based traffic routing.

Health Monitoring
Monitor the health and correct operation of servers with built-In and custom checks. Detect failures of servers and errors in applications, and route traffic away from these servers so that the performance of the application is not compromised and the user experience is maintained.

HTTP/2 Support
Faster web pages with support for HTTP/2 connections. HTTP/2 is a significant enhancement to the HTTP/1.1 standard: Traffic Manager can automatically negotiate an HTTP/2 connection with the client web browser, which may improve web page load time with techniques such as connection sharing, page request multiplexing and header compression. For even more advanced HTML and web content optimization, the optional Brocade Web Accelerator add-on module is available to create custom optimization profiles for individual applications.

Load Balancing
Traffic Manager can use a wide variety of algorithms and techniques and balance load based on different criteria (e.g. can send more requests to higher spec machines). Servers can be drained for easy maintenance/uninterrupted service. The client never has to see a server fail.

Multi-Site Capable
Deploy services across multiple sites with location-specific configuration and simplify and the management of services from multiple datacenter locations.

Performance Monitoring
Measures performance and load and gives a graphical representation of the results which can identify bottlenecks and identify where and when high loading occurs which can be useful for identifying future upgrade needs.

Request Rate Shaping
Traffic Manager can restrict the number of requests (per min or sec) to a service, from either all or a set of clients. This can stop a small group of intensive users (including spiders) hogging a service, leading to a poor user experience for all users.

Scalability
Traffic Manager can scale very easily and in real time. Just upgrade your license in one click.

Service Level Monitoring
Monitors the performance of a service or application and can issue an alert if it falls below a pre-determined level such as going out of scope of an SLA.

Service Protection Classes
Traffic Manager can enforce an IP black/white list and limit the number of connections to a service. It can also enforce rules on HTTP content (e.g. enforce RFC compliance) and help protect against malicious attacks such as Denial of Service.

Session Persistence
Ensures all requests from a client go to the same server, enabling application data to persist throughout a session without using cookies (e.g. an e-commerce shopping basket).

Software or Virtual Appliance
The Traffic Manager is software and is available in a range of form factors and configurations, making it ideal for (private, public or hybrid) cloud and virtualized data center deployment.

SSL Performance
Off-loading SSL/TLS key exchanges and decryption to the Traffic Manager frees up the back-end servers use their full resources for generating content and responding to user requests. Decryption on the Traffic Manager allows for deep packet inspection. Content can be re-encrypted for secure forwarding of requests to the back-end infrastructure.

TrafficScript
TrafficScript™ is a sophisticated programming language integrated within the core of Traffic Manager that enables high performance, highly-configurable control of traffic management policies.

TrafficScript rules can control all aspects of how traffic is managed and can choose when and where to apply request rate shaping, bandwidth shaping, routing, compression, and caching to prioritize the most valuable users and deliver the best possible levels of service. It can also help parse complex XML data using XPath in order to make informed routing decisions based on embedded content. TrafficScript also supports the offload and acceleration of the translation between XML variants via XSL Transformations (XSLT).

TrafficScript software is even powerful enough to create rules that transform requests and responses, correct invalid requests, apply security filtering and optimization, and allow complex response rewriting.

Brocade Virtual Traffic Manager Specifications

Modelo	VTM CSP 500		Standard edition		Enterprise edition
Numeric Model	500 series		1000 series		2000 series
Configuration	L2	M	M	H	L
Profile	Virtual Appliance	Virtual Appliance	Virtual Appliance	Virtual Appliance	Virtual Appliance
Throughput	1 00 Mbps	200 Mbps	200 Mbps	1 gbps	1 gbps
SSL transactions per second	Uncapped				
Functionality	Basic		Core		Advanced

Virtual Traffic Manager Brocade Functionallity Matrix

Model Series	500	1000	2000
Maximum Bandwidth	100 MB, 200 MB	200 MB, 1 GB	1 GB
Feature			
Rule Builder Rules for Content Routing	Yes	Yes	Yes
Rule Builder Full Rules	Yes	Yes	Yes
Traffic Script Editor	No	Yes	Yes
Health Monitoring	Yes	Yes	Yes
SSL / TLS Offload	Yes	Yes	Yes
Analytics	Yes	Yes	Yes
Simple Session Persistence (IP,SSL)	Yes	Yes	Yes
Standard Session Persistence (ip, ssl, monitorcookies, transparent, j2ee, asp, x-zeus)	Yes	Yes	Yes
Full Session Persistence (includes all Standard and TS based persistance mechanisms: Universal and Named Node)	Yes	Yes	Yes
Event and Action System	No	Yes	Yes
Load Balancing	Roundrobin, Least Connections	All*	All*
HTTP Compression	No	Yes	Yes
Service Protection	No	Yes	Yes
Java Extensions	No	Yes	Yes
Multi Site Manager	No	Yes	Yes
HTTP Caching	No	Yes	Yes
XML Parsing	No	Yes	Yes
Rate Shaping	No	Yes	Yes
Bandwidth Management	No	Yes	Yes
Service Level Monitoring	No	Yes	Yes
Web Accelerator Express	No	No	Yes
Keberos Constrained Delegation	No	No	Yes
Route Helath Injection	No	No	Yes
Maximum Cluster Nodes	2	2	2
Add-ons de Funcionalidades			
Web Application Firewall		Optional	Optional
Web Accelerator		Optional	Optional
FIPS		Optional	Optional

* All = Round Robin, Weighted Round Robin, Perceptive, Least Connections, Weighted Least Connections, Fastest Response Time, Random Node.