DNS Traffic Control (DTC)

KEY FEATURES

Reliability

- **Integrated DNS/Global Server Load Balancing (GSLB):** Integrates authoritative IP Address Management (IPAM) with DNS and GSLB to deliver five-nines, highly-available Intranet and Internet app uptime and performance without dependence on a separate DNS platform

- **Infoblox Grid™ integration:** Allows all DNS and GSLB server settings to be managed through a simple, consolidated GUI from a single pane of glass with no special programming required

- **Intelligent global traffic management:** Uses DNS-based GSLB to intelligently direct user traffic to the optimal server based on client and server location, server health and server availability

- **Server validation:** Provides a broad range of configurable balancing algorithms, along with flexible, automated, multi-tier health checks to ensure availability and avoid sending traffic to impaired destination servers

- **Scalability:** Enables scalable, multi-level decision making to support increasing data volumes using CNAME records

- **Service Record Support:** Supplies GSLB support for SRV records (e.g., VoIP, video conferencing) to ensure maximum quality, response and availability

- **CSV Import/Export:** Offers bulk import of configuration data and export of DTC data for backup and analytics

Global Network Load Balancing for Digital Transformation

Digital transformation is changing the network landscape. Direct access to cloud applications from everywhere is expanding the network perimeter. SaaS is raising expectations for a fast, efficient, always-available customer experience. SD-WAN is enabling local branch direct Internet access, 5G is emerging and IoT is increasing connectivity demands on network resources.

These challenges magnify as organizations adopt new technologies. Users expect real-time performance, especially from e-Commerce and internal portals. Apps are becoming more complex. Privacy regulations are intensifying with severe penalties for non-compliance. Increasing trends in mobile and remote workers and branches, globalization, datacenter consolidation, ongoing resource limitations and expanding DNS, malware and stealth attacks are placing an even greater strain on teams responsible for managing network traffic, uptime and availability.

Reliable Global Uptime and Availability for the Hybrid Cloud

Infoblox's DNS Traffic Control (DTC) can help solve these challenges. DTC is an integrated DNS Global Server Load Balancing (GSLB) solution that delivers customer satisfaction and business continuity through reliable application uptime, performance and seamless failover. It distributes network traffic loads across geo-diverse, on-premise, public and hybrid cloud environments for e-commerce, customer-facing portals, web and internal business-critical applications for business continuity and disaster recovery (DR) in the event of a catastrophic event.

Visibility

- **DTC Visualizer:** Displays Load Balanced Domain Name (LBDNs), pool and server relationships and attributes through a single GUI visualization

- **Pre-production testing:** Allows testing of new and updated LBDNs, pools and servers quickly and in real-time to ensure pre-production readiness before go-live

- **Compliance:** Allows the use of GeoIP and Extensible Attribute data to restrict traffic to region specific zones for LBDNs and pools to assist with meeting privacy compliance requirements (e.g., GDPR)

- **Integrated Reporting and Analytics:** Supplies Splunk-based pre-built and customizable dashboards, reports, search, alerting and automated distribution for enhanced environmental visibility and control

Automation

- **Topology Management:** Powers discovery, creation and management of topologies automatically using IP subnet, GeoIP and Extensible Attribute data

- **API Automation:** Add new server instances, provision new apps quickly, integrate with other systems and automate routine GSLB management tasks, saving time and money with this easy-to-use, well-documented API that mirrors the functionality of the web GUI

- **Grid Software Updates:** Deploys, configures and updates software for all Grid members, saving time, money and resources

DNS-based GSLB Integrated with the Market-leading Core Network Services and Security Solution

DTC is uniquely able to deliver the reliability, visibility and automation today's organizations require. It's fully integrated with Infoblox's market-leading enterprise-grade DNS, DHCP and IP Address Management (IPAM) (DDI) appliances. It delivers robust, highly intelligent GSLB functionality with core authoritative DNS network and security solutions. DTC enables networking teams to get the best of DNS and GSLB in an integrated, authoritative, easy-to-use and affordable solution.

Integrated DNS-based Traffic Control

At the center of every network connection is DNS. Unlike most other Application Delivery Controllers (ADCs), DTC is not
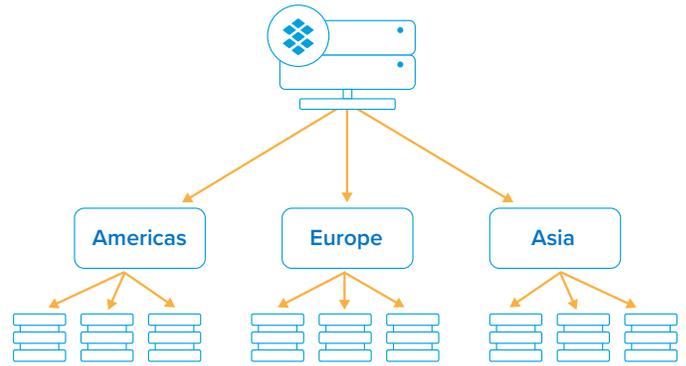
dependent on and administrator having to build a topology map for internal networks. Instead, DTC uses the IPAM data already within the system to manage network traffic via the DNS server. IPAM Extensible Attribute (user-defined tags data provides user location for Intranet applications, while an integrated MaxMind™ GeoIP database supplies user location for Internet clients. This enables DTC to deliver improved availability and performance for internal and external applications.

Single UI for Unified DNS/GSLB Management

DTC operates on the patented Infoblox Grid™ technology, allowing global visibility into, and management of all DDI and GSLB functions from a single pane of glass. The streamlined, efficient GUI visualizes GSLB pool and server relationships, configurations and operational status. This makes DTC to use, without requiring special programming skills, and save management time and effort over more expensive multi-vendor, multi-platform deployments.

Intelligent Load Balancing

Thanks to Infoblox's DNS, DHCP and IPAM (DDI) integration, DTC can intelligently direct user queries and traffic to the optimal server based on configurable algorithms, client location, server location, health and availability. This means that client traffic is routed to the closest, highest-performing server available.

Load Balancing Algorithms

DTC enables network teams to route network traffic to pools or servers using pre-defined customized load-balancing algorithms including Round Robin, Ratio (Weighted Round Robin), Topology (external GeoIP; internal Subnet, Extensible Attribute) or Global Availability (based on a designated resource list). Further, because datacenter and server loads vary throughout the day, DTC features Round Trip Delay (RTD) that detects latency changes and directs traffic to the fastest responding servers. DTC also supplies the ability to use Simple Network Management Protocol (SNMP) health checks which can assess information such as CPU utilization to route users to servers with the most available resources, thereby distributing application load and improving response times.

Flexible, Automated, Multi-tier Health Checks

To ensure traffic is directed only to the best available servers, DTC provides flexible, automated, multi-tier health checks including HTTP/S, SNMP, TCP, SIP, PDP and ICMP. These health monitors detect for impaired upstream servers before routing traffic, thus maintaining performance and continuity by sending traffic only when web, app and database servers are available.

Multi-Tier Scalability

Large, global or multi-tier applications can require successive levels of decision-making to map traffic to servers properly. DTC allows LBDNs to be mapped to CNAMEs of other LBDNs to scale to as many additional tiers as needed to accommodate scalability requirements.

Service Records

With 5G, Voice Over IP (VoIP), video conferencing and other resource-demanding network applications, service records will only intensify the need for GSLB. DTC provides support for the SRV record type to enable these plus other SRV applications to ensure optimal availability, quality and location.

CSV Support

DTC includes CSV tools to enable DNS data import to ease migration from other GSLB solutions. It also offers the ability to export DTC data for backup or external parsing and analysis.

GUI Visualizer

With Infoblox's DDI integration, DTC's easy-to-use GUI visualizer allows you to see detailed real-time status of all LDBNs, pools and servers on-premises and in the hybrid-cloud through a single pane of glass. This makes provisioning, trouble-shooting and planning fast and easy, improving usability and saving time.

LBDN Testing

One of the most helpful DTC features is LBDN testing. On-demand testing saves time, money and resources without having to initiate a project to validate readiness of newly spun-up or reconfigured assets. The GUI visualizer provides real-time visibility into LBDNs, pools and servers with immediate response to confirm configuration, status and availability prior to go-live.

Compliance

DTC's topology rulesets using GeoIP and Extensible Attributes enable network teams to restrict traffic to region-specific zones to help ensure EU GDPR and other privacy compliance requirements.

Integrated Reporting and Analytics

While most ADCs often only provide only third-party bolt-on reporting solutions, DTC offers a fully integrated, engineered and purpose-built Reporting and Analytics tool with over 100 customizable dashboards and reports. Built on the Splunk reporting and visualization engine, integrated pre-built DTC dashboards and reports provide summary and forensic-level historical views for audit and compliance, real-time views for trouble detection, triage and root-cause analysis, and future views for planning and analytics. Monitors, alerts and report distribution can be automated to deliver full visibility into the wealth of data on your network for better management and control.

Topology Management

DTC's deep integration of DDI data from IP subnet, GeoIP and Infoblox's Extensible Attributes automates discovery, creation and management of global network topologies whether on-premises or in the public/hybrid-cloud. This saves time and makes routine load-balancing tasks fast and easy.

API Automation

Thanks to DTC's well-documented, easy-to-use RESTful API, DTC configuration can be automated. Unlike other APIs, DTC's API mirrors the GUI functionality to improve usability and productivity. Configure LBDNs, pools and servers, set topology rules, spin-up new instances, make system-wide changes, integrate with existing tools and technologies, automate ongoing tasks like

Disaster Recovery testing and more, saving time and money, and freeing-up staffing resources for higher-value assignments.

Grid Deployment and Provisioning

Because DTC is a license, it can be deployed on an existing Infoblox Grid appliance in just a few minutes. For already operational environments, updating software on the Grid is fast and easy using a few simple clicks. Unlike some ADC platforms, there are no more manual, error-prone box-by-box updates, saving time, money and resources.

Benefits

Infoblox DTC GSLB delivers the following benefits:

Reliability

- App uptime and performance enabled by intelligent load balancing to the optimal server in the most efficient location

- Seamless management control empowered by a fully-integrated DNS/GSLB architecture

- Server validation enabled by configurable load balancing algorithms and flexible, automated, multi-tier health checks

- Scalability to meet changing global network load balancing needs on-premises or in the public/hybrid cloud
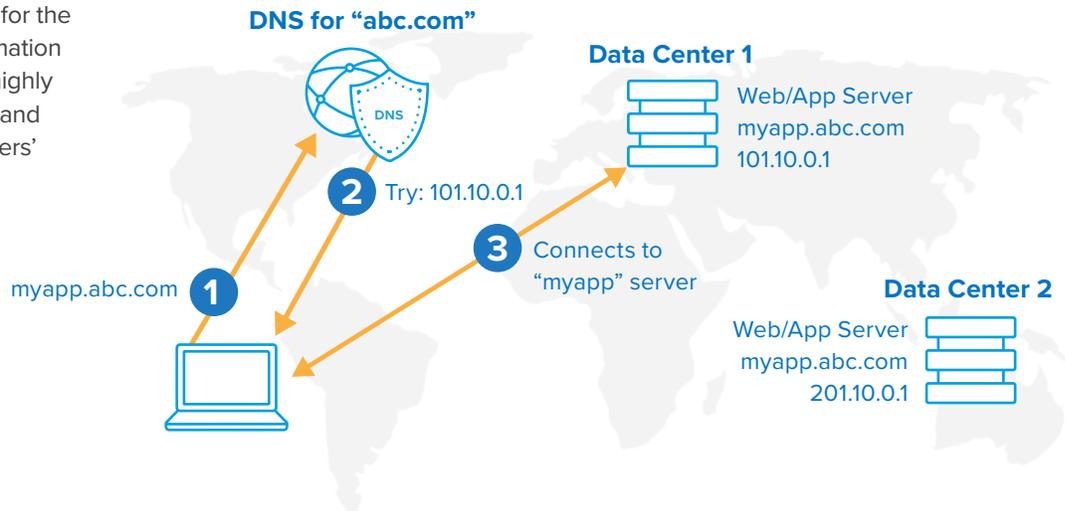
Visibility

- Seamless management visibility and control powered by a fully-integrated DNS/GSLB architecture

- Compliance with privacy regulations like GDPR through Extensible Attributes and GeoIP client zone management

- Summary and forensic-level visibility through integrated real-time Reporting and Analytics

Automation

- Efficient topology management using IP subnet, GeoIP and Extensible Attribute data

- Time and resource savings through API automation

- Simple software updates Fast configuration and updates of software across the Grid

- Automated data sharing with the security ecosystem and community

Summary

As you prepare to transform your environment to SaaS, the public/hybrid cloud, SD-WAN, 5G and IoT technologies, give your network and applications teams Infoblox DNS Traffic Control for the reliability, visibility and automation needed to keep your apps highly available, highly performing and secure to meet your customers' needs and expectations.

DNS for "abc.com"

DNS

Data Center 1
Web/App Server
myapp.abc.com
101.10.0.1

2 Try: 101.10.0.1

3 Connects to "myapp" server

myapp.abc.com **1**

Data Center 2
Web/App Server
myapp.abc.com
201.10.0.1