

## A10 Control

Unified Management, Control and Analytics Platform for Agile Operations and Automation

A centralized management and analytics platform providing full control of your A10 solutions, regardless of whether the solution is deployed on-premises, in the cloud, or in a hybrid environment.

### Agile Management and Intelligent Analytics

The increasing complexity of modern network and security infrastructure, coupled with the rapid adoption of AI and cloud technologies, presents significant challenges for organizations to manage and support their mission-critical services and businesses.

It's a complex and a time-consuming task to understand network infrastructure resources and track service status when its deployment is spread across various geographical locations and multiple clouds. Precise capacity planning and prompt response to scaling demand are critical for AI-powered apps and application services infrastructure as they require higher traffic and transaction volume and are very sensitive to latency. Therefore, administrators should leverage agile management and intelligent analytics to establish efficient operation and management workflow.

A10 Control is the next generation of the management and analytics platform for A10 solutions, consolidating existing A10 Harmony Controller and aGalaxy capabilities. A10 Control provides centralized management for A10 security and infrastructure solutions including application delivery, DNS, CGNAT, SSL Insight, Gi-firewall and DDoS protection deployed in any network or cloud environment. A centralized platform helps collect, analyze and report on application and service traffic flowing through A10 appliances and visualize the service and security posture with intelligent analytics.

#### Platforms



Software/VM

#### Related Products & Services



ADC



A10 Defend  
DDoS Protection



CFW



CGN



SSLi

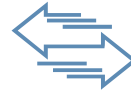
# Benefits



## Gain

Real-time Intelligent Analytics and Observability

Organizations must guarantee their services are up and running constantly. Thus, understanding the services' condition and gaining observability are critical tasks for their operation teams. A10 Control collects metrics data and transaction logs of the service traffic flowing through A10 devices running A10's Advanced Core Operating System (ACOS) and provides deep visibility into what's happening in the service and network infrastructure. Intelligent analytics and customizable alerts help identify potential issues before they impact end-users and enable proactive troubleshooting via access to contextualized traffic data and logs.



## Increase

Operational Efficiency

Organizations can improve their operation team's agility and efficiency by streamlining the workflow and automating processes. Device lifecycle management including backups, health checks, software upgrade, inventory and license management can be troublesome and time-consuming tasks. A10 Control's intelligent automation and tools enable efficient operation for managing a large number of appliances and services deployed over various underlying infrastructures – from data centers to any clouds.

Comprehensive APIs enable easy integration with popular DevOps, infrastructure-as-code and observability tool chains, and major public and private clouds infrastructure.



## Simplify

Management for Services and Security

One management platform for any A10 solutions; One of A10's unique technical advantages is that all A10 solutions are running on a common OS (ACOS) regardless of platform or form factor. Now, A10 Control is the only management platform administrator needs as consolidating capabilities of A10 Harmony Controller and aGalaxy.

With A10 Control, streamline your IT operations and improve uptime of your services using rich intelligent analytics and embedded automation workflow tools.

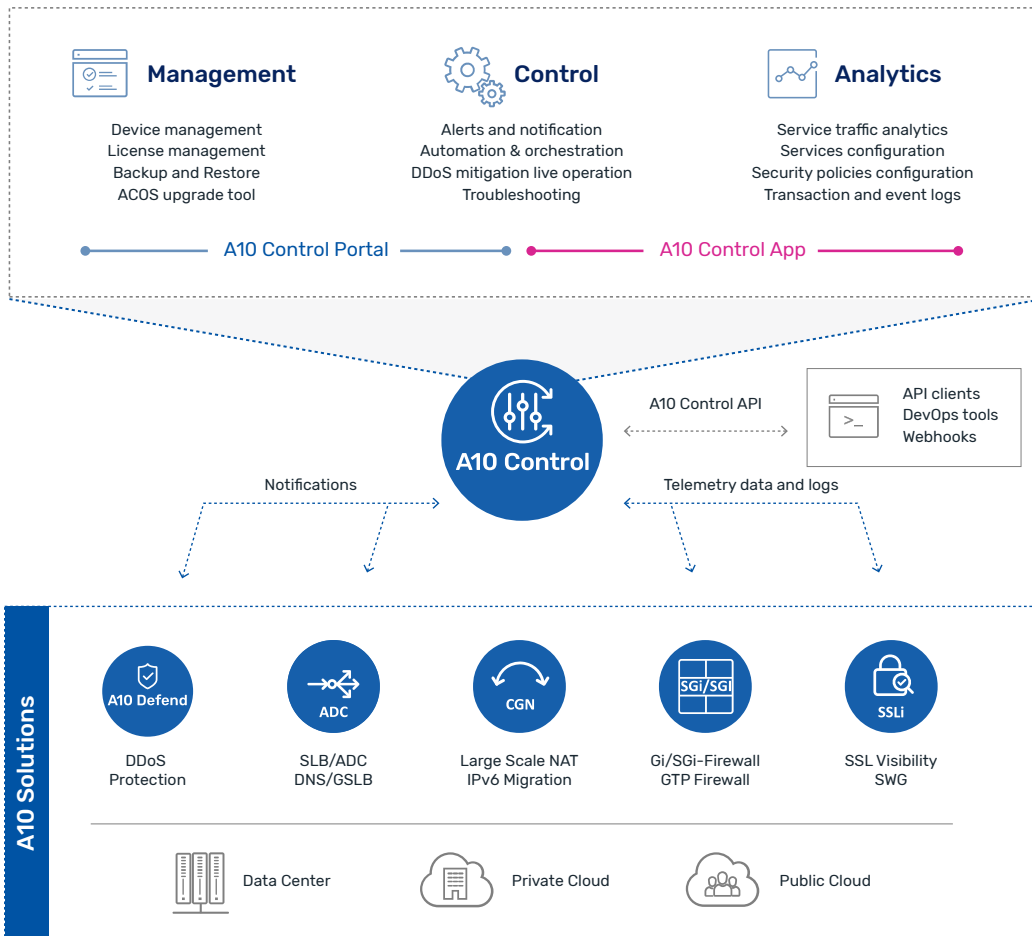


Figure 1. A10 Control is a centralized management and operations platform for A10 infrastructure services and security solutions.

# Features

## Centralized Management



### Device Lifecycle Management

Centralized device lifecycle management for A10 hardware or virtual appliances including public, private cloud, and bare metal. Intuitive inventory and license management for multiple A10 Thunder and A10 Defend DDoS appliances. Automate routine tasks such as backup, inventory reports and schedule automated software upgrades.



### Device Analytics

Detailed device-level analytics are available for A10 devices deployed across various network and cloud environments in different geographic locations. A device health monitor and dashboard provide system resource utilization, device location, traffic and connection metrics, transaction logs and event information.



### Alert and Reporting

Metrics and logs collected from A10 devices are correlated and evaluated against user-defined rules for raising alerts against abnormal events. These alerts are delivered as email notifications and/or via webhook for automated action using collaboration tools such as Slack and Microsoft Teams.

## Service Operations



### Service and Policy Management

Make configuration changes and enforce security policy updates using shared resources such as class-list or IP list for A10 devices deployed across different geographical locations from a central console.



### Multi-tenancy

With a flexible multi-tenancy architecture and role-based access control, each application team and service owner can have their own tenant workspace called organization-unit to manage their services and operations. Tenant allocation is as flexible as having multiple A10 device clusters in a tenant or as granular as assigning a tenant for each L3V/ADP partition of an A10 device.



### API-driven Automation and Integration

Comprehensive A10 Control APIs allow easy integration using DevOps tool chains like Ansible, Chef, Jenkins to automate A10 device configuration management via A10 Control, and to streamline monitoring and operation workflow for the A10 solutions being managed.

## Architecture and System



### Reliable Controller Platform

A10 Control is built upon a solid RHEL foundation with a microservices architecture using Kubernetes, which maximizes the availability of the controller and ensures full regulatory compliance, meeting the latest industry standard. The controller collects and processes various kinds of telemetry data from A10 devices in a secure manner, and never handles service traffic running through data plane of A10 devices. The architecture ensures that service traffic disruption never happens even if the connection between the controller and A10 devices is down.



### Improved Security and Maintainability

A10 has years of expertise in using a microservices architecture in A10 product lines including Harmony Controller. A10 Control has been designed to use with the latest and greatest RHEL software and a next-generation architecture. This has enhanced security and maintainability of the system especially for security and CVE patches.



### Deployment Options

The controller can be installed as a self-managed software solution in single node or multi-node high availability (HA) deployment within a customer's environment. In HA, microservices as well as the data-store of the controller are distributed across nodes.

For details of system requirements and prerequisites for the A10 Control installation, refer to the latest product documentation or contact A10 sales representative.



### Re-architected for Stability and Performance

A10 Control has upgraded versions of all components, frameworks and technologies used in building of the product to boost stability and performance. A10 Control uses a different database system than Harmony Controller for simplified and low-latency data operations and a new and standards-based technology for user authentication management.

## A10 Control Apps

Solution-based comprehensive analytics, configuration and service operation tools are all built into A10 Control as an app.

### Application Deliver Controller (ADC) App

Provides centralized configuration tool and visibility for single or multi-site ADC and DNS deployment. Rich analytics and contextualized logs help gain great insights into app and traffic, and simplify troubleshooting workflow when needed.

### Carrier Grade NAT (CGN) App

Provides CGNAT technologies configuration tool, management and deep insight into subscribers traffic and NAT pool utilization. Rich service analytics including user session logs increase operational efficiency and help future planning.

### Gi/SGi Firewall (Gi-FW) App

Provides detailed insights into user traffic going through the CFW-CGN device, including firewall rule-based analytics, CGNAT analytics and app category based classification.

### A10 Defend Orchestrator (ADO) App

Previously known as aGalaxy is now available as the ADO app. Provides centralized protection configuration and real-time monitor for DDoS Detector and Mitigator. In case of DDoS incidents, orchestrates actions help streamline workflow with a live mitigation console.

### SSL Insight (SSLi) App

Provides wizard-based configuration, guided troubleshooting tool and comprehensive observability into TLS/SSL encrypted traffic for SSL insight or secure web gateway deployment.

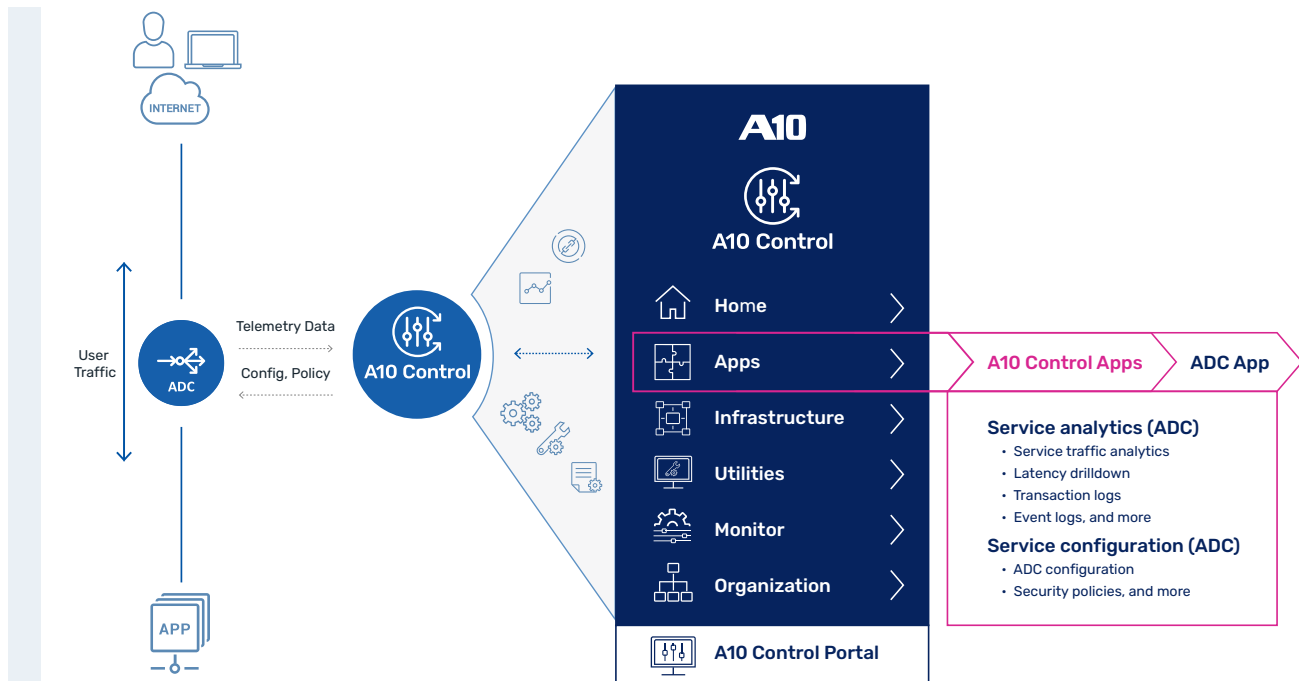


Figure 2. A10 Control collects telemetry from A10 device via control plane and provides analytics and control using a service specific A10 Control App.

# Use Cases

## Supported A10 Solutions

### Application Delivery

High-performance advanced load balancing solution that enables applications to be highly available, accelerated and secure. Deploy with A10 Thunder ADCs or Thunder CFW-ADCs in any form factor including hardware, hypervisor-based software, bare metal, container or in hybrid and multi-cloud environments.

### CGNAT and Gi/SGi-Firewall

Deploy A10 Thunder CGNs for highly scalable and efficient NAT solution that allows service providers and enterprises to extend IPv4 connectivity while enabling smooth transition to IPv6 infrastructure. With A10 Thunder CFW-CGN, it enables consolidation of network function such as CGNAT, Gi/SGi firewall and app visibility, supporting efficient Gi-LAN and mobile core security.

### DNS

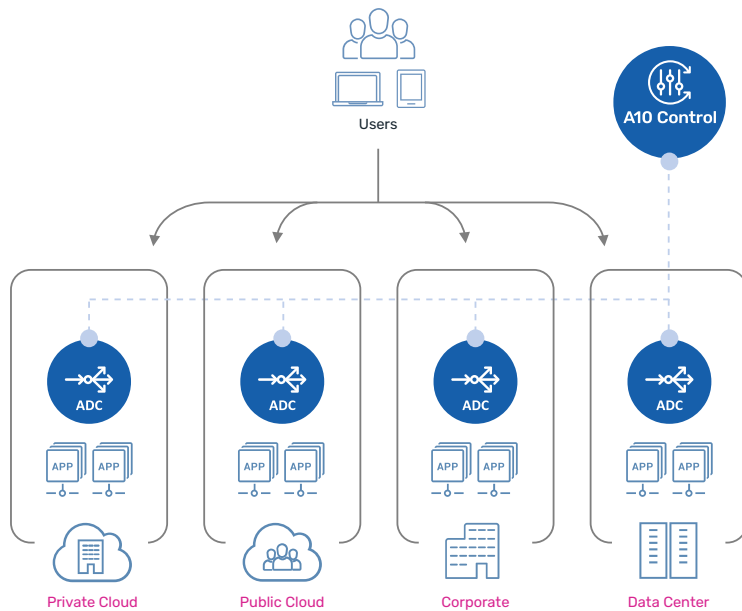
Scalable and secure DNS load balancing and cache solution that makes DNS infrastructure more resilient and efficient. Deploy with A10 Thunder ADCs or Thunder CFW-ADCs in any form factor and environment.

### DDoS Protection

Holistic DDoS defense solution that is scalable, economical, precise, and intelligent to help organizations ensure extended service uptime. Deploy with A10 Defend DDoS Detector and Mitigator.

### SSL Insight

Comprehensive TLS/SSL decryption solution enabling security devices to analyze encrypted enterprise traffic, that can further augment security posture with integrated secure web gateway features. Deploy with A10 Thunder CFW-ADC in any form factor.



### Multi-cloud application delivery deployment

A10 Control can centralize the management and control for application delivery services deployed in hybrid or multi-cloud environment, providing

- ADC analytics
- ADC and security policy enforcement
- ADC device & configuration management, and more.

Figure 3: Multi-cloud ADC use case.

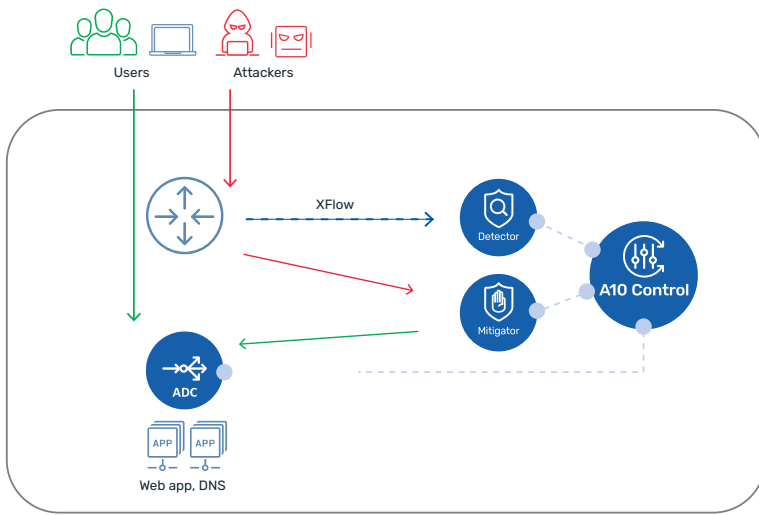


Figure 4: DDoS protection use case.

## DDoS protection for web apps and DNS

A10 Defend DDoS Orchestrator (ADO) running on A10 Control, working together with Mitigator and Detector, enables intelligent automated protection against modern DDoS attack targeting application services and/or network infrastructure.

ADO app provides:

- DDoS defense orchestration and automation
- DDoS mitigation console
- DDoS defense policy configuration
- Incident reports, and more

If A10 ADC is used for application services, it can also be managed and control by the same A10 Control.

# Detailed Features List

## A10 Control Portal

Device Management	
Inventory list	Complete device inventory is available in multiple forms like individual device view and cluster view (single node, VRRP-a pair etc.), providing general system information.
Device management and analytics	Detailed cluster and device-level analytics are available for A10 devices, including system and network information, and analytics for system resource usage and traffic statistics.
Device backup and restore	A10 device's configuration can be backed up periodically and stored in A10 Control. The backup can be used to restore the device as needed.
ACOS image upgrade	Image upgrade utility provides an intuitive and reliable ACOS image upgrade process for registered A10 devices with both manual and scheduled methods. All the upgrade operation logs and records are available in the history view.
Monitoring and Alerts	
Service-level health monitor and alerts	Service traffic and conditions can be monitored with custom trigger rules using a broad range of service-level metrics and thresholds. Alerts can be sent via email and webhook for easier integration with existing monitoring systems.
Device-level health monitor and alerts	Granular device-level trigger rules can be set based on infrastructure/device resource usage, device-level traffic-based thresholds, and system logs. Alerts can be sent via email and webhook for easier integration with existing monitoring systems.
Reporting	Tenant-level inventory report and per-service operation reports are available and can be scheduled for a specific duration. Reports can be downloaded in PDF or sent via email and webhook/ HTTP POST.
Event and audit logs	Event viewer provides consolidated system and service event logs from all registered A10 devices. Audit viewer provides access to audit logs from the A10 Controller, and all registered Thunder and license management activity logs. Granular log filters are available, and logs can be downloaded in CVS format.
Administration and Utilities	
Multi-tenancy management	Multi-tenancy is available with granular role-based access for application teams and service owners. Each tenant (organization-unit) can be mapped with A10 device's partition (ADP/L3V) level.
CLI command utilities	Single or a batch of CLI commands can be remotely executed on multiple device partitions simultaneously.
Shared configuration resource tool	Common configuration resources/templates such as class-list, black/white-list, SLB templates, security templates, TLS/SSL certificates can be created as a shared resource and used across any registered A10 devices regardless of service types.
License management	A10 Control works as an enterprise license manager and can manage and control FlexPool capacity licenses for registered A10 devices.
User management	Flexible user management is available with role-based access control. For example, access areas can be set with organization, tenant, device or specific service/partition, and the permission level can be administrator, operator or custom rule with specific operations.
Authentication management	Besides local authentication, identity provider (IdP) such as Azure or Okta or LDAP can be selected for external authentication and single-sign-on (SSO).

# A10 Control Apps

## Application Delivery

ADC analytics (per virtual service)

- Real-time ADC service-level KPIs including traffic info, error rate and latency
- User traffic-based analytics, including user insights (location, browser), top-k, request insights, time-series latency and more.
- Geolocation-based traffic analysis for latency and volume
- ADC service analytics for common protocols (HTTP/S, SSL and HTTP2)
- ADC cluster analytics for resource usage insight
- Application service analytics for detailed app service conditions and trends
- App server analytics for server health and status
- Latency drilldown and analytics for end-to-end latency and a full request-response cycle

ADC transaction log viewer, providing client, request and response data and latency information

Event and alert log viewer

Centralized ADC configuration tool

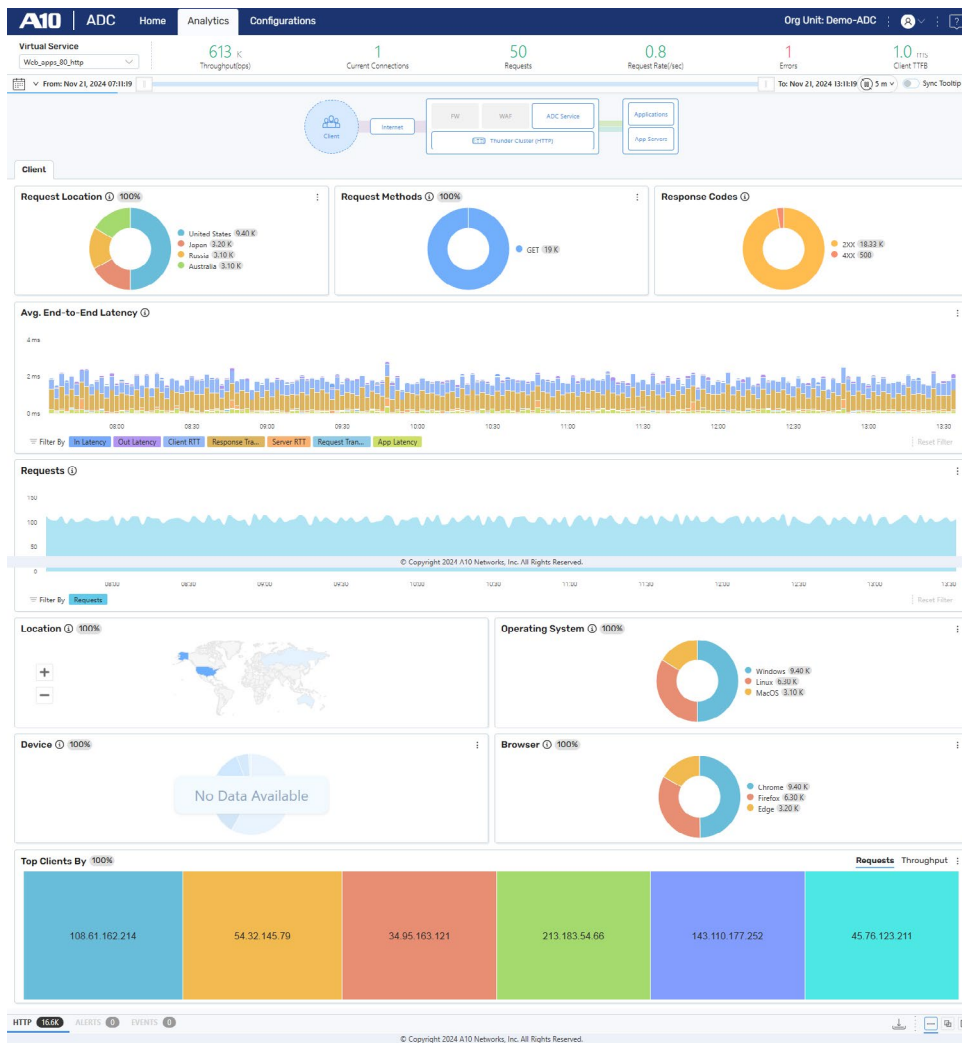


Figure 5. ADC App: ADC analytics for client-based insights.

**Defend Orchestrator**

ADC transaction log viewer, providing client, request and response data and latency information

- DDoS protection workflow orchestration
- Enable seamless communication between Detectors and Mitigators
  - Control and relay DDoS signaling for automated defense operation
  - Send traffic diversion notifications for scrubbing in reactive deployments
  - Manual or automated mitigation actions
  - Automatic DDoS incident reporting after the attack is over

Overview dashboard for DDoS incident and activities

Real-time traffic charts and stats under monitored zone

DDoS mitigation console for live defense operation and monitoring

On-demand and scheduled reports for DDoS incidents, protected zones, device inventory, etc.

On-demand or automated packet capture tool

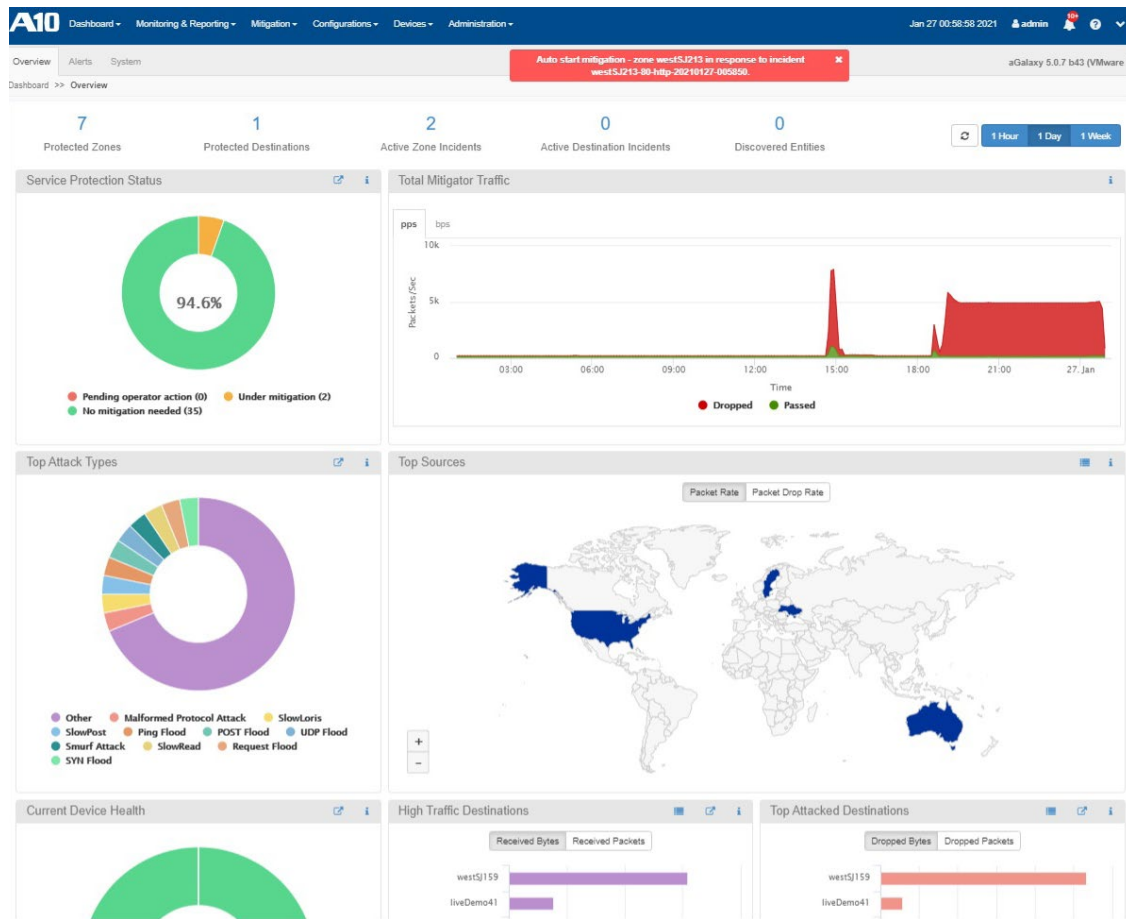


Figure 6. A10 Defend Orchestrator dashboard provides real-time attack statistics and summaries of DDoS incidents.