

## Load Balancing & Acceleration

AppVelocity provides a strategic point of control for optimizing the availability, security and performance of enterprise applications, IP data services and data center equipment.

Powered by Array SpeedCore™, AppVelocity leverages parallel multi-core processing to cost-effectively drive industry-leading performance across a rich load balancing and application acceleration feature set for unmatched total value of ownership. Available for Array's APV Series Application Delivery Controllers and engineered for modern cloud and virtual environments, AppVelocity boosts application performance and speeds return-on-investment from the small enterprise to the large service providers.

### Highlights & Benefits

- Local and global server load balancing with multi-unit clustering for 99.999% application uptime and data center scalability
- Advanced, application-fluent traffic management for optimized delivery of business critical applications and IP services
- Offloading of Web and application servers for increased efficiency, capacity and return on investment
- Integrated TCP connection multiplexing, high-speed HTTP processing, compression and caching for a 5X improvement in application performance
- SSL acceleration for securing data in transit, offloading compute-intensive processes from servers and improving application performance
- Reverse-proxy architecture with a stateful packet-inspection firewall for guarding applications without impacting performance
- Application-specific certifications and guides for rapid deployment of optimized configurations
- IPv6/IPv4 dual stack support for addressing IPv4 depletion
- High-performance 2048-bit SSL encryption for alignment with NIST and certificate authority security requirements
- VMware vCenter integration for intelligent command and control of virtualized application infrastructure including dynamic resource allocation and deallocation
- Extensible XML-RPC for integration with proprietary and 3rd party data center management and monitoring products
- Familiar CLI and intuitive WebUI for ease of configuration and management
- Available on all Array APV 600 Series Application Delivery Controller appliances

## Load Balancing & Availability

AppVelocity local and global server load balancing deliver 99.999% uptime for enterprise applications and IP data services. Leveraging robust and powerful distribution algorithms, health check mechanisms and failover capabilities, AppVelocity maintains connections, ensures persistence, directs traffic away from failed data centers and intelligently distributes application services between multiple nodes and locations for optimized performance and availability.

## Advanced Traffic Management

Application-fluent AppVelocity advanced traffic management eliminates performance bottlenecks and reduces deployment complexity for enterprise applications and IP data services. Fully aware of Layer 2 through Layer 7 traffic patterns, connections, transactions and content, AppVelocity enables event-driven policies for intelligent distribution of traffic that improves data center efficiency and reduces the need to replicate data across multiple Web and application servers.

## Unified Voice, Video and Data

AppVelocity supports multiple virtual IPs for partitioning traffic and tailoring availability, acceleration and security policies specific to voice, video and data.

## Application Acceleration

AppVelocity leverages multiple acceleration technologies and advanced TCP optimization to deliver a premium end-user experience for a wide range of applications and IP data services. In-memory caching increases server efficiency and improves seek and response times by over 500%, hardware and software compression can reduce bandwidth utilization and end-user response times by more than half and TCP connection multiplexing and high-speed HTTP processing aggregate millions of short-lived client connections into persistent fast lanes that increase server efficiency by up to 70% while improving application performance.

## SSL Acceleration

SSL acceleration reduces the number of servers required for secure

applications, improves server efficiency and dramatically improves application performance. Offloading compute-intensive 1024 and 2048-bit encryption and delivering industry-leading client-certificate performance, AppVelocity SSL acceleration is ideal for e-commerce environments and business critical applications requiring high-volume secure connectivity.

## Application and Data Security

Integrating WebWall™, Array's stateful packet-inspection firewall, AppVelocity protects against denial of service (DoS) and malformed URL attacks and allows a wide range of Layer 2 through Layer 7 protective policies to be stacked atop of one another for increasing levels of security.

## Data Center Modernization

AppVelocity supports a full set of features aligned with data center modernization including virtual client connections for dynamic server-side resource changes, IPv6 for addressing IPv4 depletion, 2048-bit SSL encryption for aligning with NIST and certificate authority security requirements and VMware vCenter integration for intelligent command and control of virtualized application infrastructure.

## Management Integration

AppVelocity is simple to install and offers intuitive configuration and management via a WebUI and a familiar command line interface. Using the administration tool kit, network managers can view the status for a wide range of system parameters, enable services on the fly and automate configuration using XML-RPC. Leveraging extensible APIs, application and network intelligence can be integrated with third-party monitoring and management or exported for optimizing complementary data center systems.

## Appliance Options

AppVelocity is available for Array's full line of APV Series Application Delivery Controller appliances, including the APV1600 and APV1600T for the mid-market and small enterprises, the APV2600, APV4600 and APV5600 for small to medium enterprises and service providers and the APV6600, APV8600, APV9600 and APV9650 for large enterprises and cloud service providers.



## Availability

Layer 2-7 Policy & Group Management	Multi-level virtual service policy routing -- Static, default and backup policies and groups -- Layer 2-7 application routing policies -- Layer 2-7 server persistence -- Application load balancing based on round robin, weighted round robin, least connections, shortest response and SNMP
Layer 2-3 Application Load Balancing	IP/MAC based load balancing for any IP protocol -- Round robin, persistent IP and return to sender -- Firewall, IPS/IDS, anti-spam, anti-virus and composite applications
Layer 4 Application Load Balancing	TCP, TCPS and UDP protocols -- Round robin, weighted round robin, least connections and shortest response -- Persistent IP, hash IP, consistent hash IP, persistent IP+port and port range -- All single port TCP applications, RADIUS and DNS server support -- Composite IP application support
Layer 7 Application Load Balancing	HTTP/HTTPS, FTP/FTPS, SIP, RTSP and RDP -- L7 content switching (QoS network and client port - SSL and SIP session ID - HTTP URL, host name, cookie and any header - hash header, cookie and query) -- URL redirect and HTTP request/response rewrite -- HTTP request filter
Content Routing & Switching	One arm, configurable reverse or transparent proxy mode per VIP -- Configurable reverse or transparent proxy mode, triangle mode -- Nested L7 and L4 policies -- Combine L7 and L4 policies
Server Persistence	Source+Destination IP, Client IP, SSLID, HTTP header, URL, Cookie, Application
Application & Server Health Checks	ARP, ICMP, TCP, HTTP/HTTPS, DNS, Radius, RTSP, SIP single port/protocol health checks -- Multi-port health checks -- Scriptable customer-defined composite health checks -- Health checks by protocol and content verification
Networking	VLAN/MNET, NTP, Static and port-based NAT -- IPv4/ IPv6 NAT and IPv6 support (optional)
Clustering	Up to 32 nodes -- Active/active, active/standby -- Configuration synchronization -- Application-specific health checks -- Fast failover via USB ports

## Acceleration

TCP Acceleration & Offload	Connection pooling and multiplexing -- TCP buffering -- Client connection persistence
Compression	Hardware-accelerated -- Virtualized compression -- Inline HTTP processing -- Compresses HTML, XML, Java scripts and CSS -- Compresses Microsoft file formats (DOC, XLS, PPT) and PDF
Caching	Virtualized, memory-based cache -- HTTP 1.1 compliant, policy-based cache

## Security

WebWall stateful packet-inspection firewall -- Over 1000 ACL rules without performance degradation -- Proxy-based firewall -- TCP syn-flood protection -- Flash and surge event protection -- DoS protection -- HTTP access method control -- URL filtering

## Management

Centralized cluster management -- Secure CLI, WebUI and SSH remote management -- XML-RPC for integration with 3rd party management and monitoring -- SNMP V2/V3 and private MIBs -- Syslog (UDP or TCP) -- Administrator and operator account management -- E-mail, paging and alerting capability -- Multiple configuration files and unit configuration synchronization -- Online troubleshooting -- Real-time monitoring

## Optional

Global Server Load Balancing (GSLB)	Application availability from multiple locations worldwide -- DNS DoS protection -- Global site/service selection -- Proximity and IP persistence -- Load balancing between multi-site SSL VPN deployments
AppVelocity	Hardware accelerated 1024-bit and 2048-bit SSL encryption for improving server efficiency and accelerating secure applications
NetVelocity	Link Load Balancing for optimizing WAN performance and availability

