



Application Delivery Controller

Array Networks APV Series of Application Delivery Controllers optimizes the availability, user experience, performance, security and scalability of mobile, cloud and enterprise application delivery from anywhere-to-anywhere. With 60 Gbps throughput, the APV9650 is designed for intelligent acceleration and optimization of cloud-scale applications. This feature rich 2U appliance allows for ease of deployment and management, while delivering outstanding business value.

Product Features and Benefits

- 60 Gbps throughput and up to 20 million concurrent application connections for cloud-scale performance
- Intelligent traffic management for optimized application delivery and availability
- Server offloading for improved application acceleration, scale and TCO
- Local/global load balancing and clustering for 99.999% application uptime
- Built-in caching, compression, SSL processing and TCP connection multiplexing for 50% or more improvement in user experience
- Network, server and application firewall, and SSL encryption for securing and protecting applications without impacting performance
- Browser based Web user interface for ease of management
- API's for integration with applications, virtual and datacenter management tools and 3rd party products
- Appliance form factor for simplified deployment



- **Cloud Scalability and Performance**

The APV9650 is powered by Array Networks patented SpeedCore™ software platform with its rich application delivery features and parallelized design which fully leverages multi-core processor technology for linear scalability. This enables the APV9650 to handle heavy Layer 4 through 7 traffic loads while delivering unmatched performance and scalability for private and public clouds.

- **Application Availability**

APV9650 appliance delivers 99.999% uptime for enterprise application services with intelligent local, global and link load balancing. The appliance provide health check mechanisms for automatic failover of application services. This results in 24x7 application availability while reducing business continuity risks.

- **Application Aware Intelligence and Control**

The application aware appliance eliminates application performance bottlenecks, reduces application deployment complexity and provides seamless application integration. The appliance is fully aware of Layers 4 through 7 application traffic, connections, transactions, and content. This enables IT to create event-driven policies for intelligent distribution of application traffic across web and application servers, and eliminates the need to replicate content across multiple servers.

Using SpeedCore APIs IT administrators can integrate APV9650 with virtualized IT infrastructures to dynamically provision IT resources based on real-time application traffic demands.

- **SSL and Server Offloading**

The APV9650 appliance offloads server intensive 1024-bit and 2048-bit SSL processing, TCP connection management, data compression and HTTP request processing from servers. This speeds-up response times and increases server utilization.

- **Unified Voice, Video and Data Delivery**

The APV9650 is optimized for unified delivery of voice, video and data application services with its rich set of load balancing and content switching policies. The appliances can support multiple virtual IPs for enabling individual application services, with a given set of availability, acceleration and security policies that are specific to delivering either voice, video or data.

- **Securing Applications and Data**

The APV9650 appliance supports comprehensive network, server and application firewall capabilities to protect against denial of service and malformed URL attacks. The appliance provides rich set of firewall policies from Layers 2 through 7 that can be layered on top of each other for more comprehensive security.



Features:

Application Availability

Intelligent but simple Layer 2-Layer 7 policy and group management

- Virtual service, multi-level, tree like policy routing
- Static, default and backup policies and groups
- Layer 2-Layer 7 application routing policy
- Layer 2-Layer 7 server persistence
- Application load balancing based on round robin, weighted round robin, least connections, shortest response, SNMP

Layer 2/3 Application Load Balancing

- IP/MAC based load balancing, any IP application protocol
- Round robin, persistent IP (source + destination), return to sender
- Firewall, IPS/IDS/AntiSpam/AntiVirus, and composite applications

Layer 4 Application Load Balancing

- TCP, TCPS, UDP protocols supported
- Round robin, weighted round robin, least connections, shortest response
- Persistent IP, hash IP, consistent hash IP, persistent IP + port, port range
- All single port TCP applications, RADIUS, DNS servers support
- Composite IP applications support

Layer 7 Application Load Balancing

- HTTP/HTTPS/FTP/FTPS/SIP/RTSP/RDP
 - L7 content switching
 - QoS network, client port
 - SSL session ID, SIP session ID
 - HTTP URL, host name, cookie, any header
 - Hash header, cookie, query
- URL redirect, HTTP request/response rewrite
- HTTP request filter

Advanced Content Routing

- Configurable reverse or transparent proxy mode per VIP
- Build nested L7 and L4 policies
- Combine L7 and L4 policies

Global Server Load Balancing (GSLB)

- Applications availability from multiple locations worldwide
- DNS DoS protection
- Global site/service selection
- Proximity and IP persistence for nearest site for improved performance.
- Delivers local and global load balancing between multi-site SSL VPN deployments

Link Load Balancing

Provide WAN link high availability and efficient usage

- Policy based routing based on Src/Dest IP, port, and IP protocols
- Priority and auto-failover
- Static and dynamic routing support
- Return to sender (RTS)/IP flow
- SmartNAT
- Multiport application support
- Multi-homing support, service IP health check
- Link health and performance check
- QoS and bandwidth management

Clustering

- Up to 32 nodes
- Active/active; Active/standby
- Configuration synchronization
- Application-specific health checks
- Fast failover - via USB ports

Application Acceleration

SSL Offloading and Acceleration

- Offloads HTTPS processing up to 90% while securing sensitive data
- Hardware acceleration
- Optimized for 1024-bit and 2048-bit SSL keys
- HTTPS, NNTPS, SMTPS, POPS, IMAPS, LDAPS support
- SSL encryption between APV and servers
- Full certificate management features
- Processes millions of CRL entries
- Shares certificates across virtual services

High-Performance Caching

- Virtualized cache
- Memory-based DRAM cache reduces seek times by 1000x
- Fully-compliant with HTTP 1.1 specs

TCP Acceleration

- 100x acceleration by off-loading TCP processing
- Connection pooling & multiplexing
- TCP buffering
- Client connection persistence

Dynamic Compression

- Virtualized compression
- Inline HTTP processing
- Hardware acceleration
- Compresses HTML, XML, Java scripts and CSS
- Compresses Microsoft file formats (.DOC, .XLS, .PPT) and PDF



Application Security

Server Security

- Full proxy-based firewall safeguards applications from network attacks
- TCP syn-flood protection
- Flash/surge event protection
- Full DoS protection
- URL filtering

Network Security

- Stateful packet inspection firewall
- Supports over 1000 ACL rules without performance degradation

Networking

- Static and port-based NAT translation for maximum flexibility and scalability
- VLAN, trunking support

IPv6 Support

- IPv4 to IPv6 NAT, IPv6 to IPv4 NAT
- IPv6 support

Network Address Translation

- Static and port-based translation for maximum flexibility and scalability

Management

- Centralized management tools that simplify installation without compromising security or flexibility
- Single point of cluster management
- CLI Interface for configuration and monitoring
- Secure SSH remote network management
- Secure Web UI access
- XML-RPC API for integration with 3rd party products
- SNMP V2 / V3 and private MIBs
- Syslog (UDP or TCP)
- Administrator and operator account management
- E-mail/paging notification/alerting capability
- Multiple configuration files
- Multiple unit configuration synchronization
- On-line troubleshooting
- Real-time monitoring graphs



Technical Specifications

Traffic Throughput	60 Gbps
Max Concurrent Connections	20M
Layer 7 Requests Per Sec	6.4M
Memory	32 GB
10 Gigabit Fiber Ports (SFP+):	8 XF SR Included
Clustering	32 nodes
Typical Power Consumption	300 Watts
Input Voltage	100-240VAC; 8.5A; 47-63 Hz, ATX Auto-Switching
Standards	10 GbE, 10 Gig XF SR, IP, SSH, HTTP 1.0/1.1, SSL, SNMP
Management	SSH CLI, Direct Console CLI, SNMP, Single Console per Cluster, XML-RPC, Out of Band Management
Dimensions	Standard 19" 2U Rack Mountable 17"W X 22.5"D X 3.5" H
Weight	28 lbs
Environmental	Operating Temperature: 0° to 45°C, Humidity: 0% to 90%, Non-condensing
Certifications/Susceptibility Standards:	IEC 60950-1, CSA 60950-1, EN 60950-1, ICES-003, EN 55024, CISPR 22, AS/NZS 3548, FCC, 47FR part 15 Class A, VCCI-A
Safety Agency Approval	CSA, C/US, CE, UL

