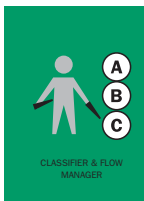




# AppDirector - Application Delivery Controller (ADC)

## Reduce Costs. Eliminate Disruptions. Accelerate Applications

Being able to quickly and effectively roll-out web-based and networked IP applications is key to being competitive in today's fast-paced global market. AppDirector enables enterprises to realize the full potential of delivering applications over IP networks by removing performance bottlenecks, ensuring application availability, reducing infrastructure costs, and simplifying the management of datacenter resources. As part of Radware's APSSolute application delivery product family, AppDirector adds critical application intelligence to networks, making them "application-smart," bridging the gap between applications and the network.



Built around Radware's APSSolute OS, AppDirector uses the industry's most extensive set of granular application intelligence to optimize server resources, improve application performance and provide high-availability for a wide range of applications. Server farms are intelligently load balanced locally within the datacenter, and globally between distributed and back-up sites. It's the only solution that integrates application-smart monitoring and traffic management capabilities with web-level security on a highly reliable, multi-gigabit, purpose-built application switch.

With AppDirector deployed in the datacenter you get a cost-effective, highly scalable solution for deploying networked business applications and web-sites that provides users with responsive and seamless experiences despite point failures, disasters or hackers' attempts to compromise the performance or integrity of your business.

### APSSolute Application Delivery:

Apache  
Avaya (VoIP/SIP)  
Basic  
BEA WebLogic  
Check Point VPN-1/FireWall-1  
Citrix Metaframe Presentation Server  
HP OpenView  
Financial Interchange (FIX)  
Lotus/Domino Notes servers  
IBM WebSphere

Instant Messaging:  
– MSN  
– Yahoo  
– AOL  
– ICQ

Oracle:  
– 9i Application Server  
– 10g Application Server  
– E-Business Suite 11i  
– Collaboration Suite.

Macromedia ColdFusion  
Mercury Business Availability Center  
Microsoft:

– Application Center  
– Commerce Server  
– Communication Server (MMS/VoIP/SIP)  
– Exchange Server  
– Outlook Web Access  
– Windows Terminal Services  
– SharePoint Portal Server  
– Internet Information Services (IIS)  
– Live Communications Server

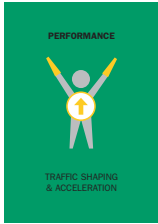
– SQL Server  
– Microsoft Operations Manager  
– Mobile Information Server  
– Internet Security and Acceleration Server  
– Visual Studio .NET

Siebel eBusiness Applications  
Netegrity SiteMinder

Peer-to-Peer:  
– BitTorrent  
– eDonkey/eMule  
– FastTrack  
– Gnutella  
– Kazaa  
– Exeem  
– POCO  
– WinMX  
– WinNY

PeopleSoft Enterprise  
RealNetworks RealSystem Servers  
RSA SecureID  
SAP mySAP Business Suite  
Tivoli Access Manager  
Trend Micro InterScan  
Sun iPlanet Servers  
webMethods Enterprise Services Platform

...and many more



## Optimized Server Utilization and Application Performance

Whether you're trying to do the same with less (consolidation), more with the same (maximizing your investment), or just want to align application behavior with your network architecture – AppDirector fine tunes network traffic to simplify deployment and optimize delivery of a wide range of enterprise applications such as SAP, Oracle, BEA, Citrix, VoIP, streaming media, web-based and even home-grown applications. Its rich set of features and functions optimize the utilization of your server-farms and network and increase the speed of business-critical applications.

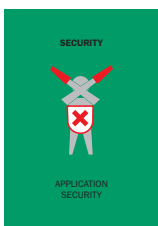
AppDirector feature	IT benefits	The APSolute advantage	Business benefits
Locally manage traffic based on any Layer 4-7(application) content	<ul style="list-style-type: none"> <li>· Create flexible, scalable server farms in your datacenter</li> <li>· Consolidate multiple applications or split applications between servers</li> </ul>	<ul style="list-style-type: none"> <li>· Classification Engine processes all traffic (Packets/ Sessions) using any combination of: Source/Destination IP address or network, Application information matching, Protocols – IP, TCP, UDP etc, Content-based i.e. URL, cookie, client device, language, Regular expressions, Pattern matching</li> </ul>	<ul style="list-style-type: none"> <li>· Increase business agility by reducing time-to-market for new applications.</li> </ul>
Global (distributed) traffic management	<ul style="list-style-type: none"> <li>· Deploy applications over existing distributed architectures</li> </ul>	<ul style="list-style-type: none"> <li>· Integrated into the box</li> <li>· Transparent redirection using any combination of: DNS, Triangulation (patented), HTTP redirection, RTSP redirection, Client NAT</li> </ul>	
Load-balancing: Manage traffic based on any application or server utilization parameter	<ul style="list-style-type: none"> <li>· Optimize server utilization</li> <li>· Minimize application response times</li> <li>· Prevent Server overload</li> <li>· Maximize usage of best performing server</li> </ul>	<ul style="list-style-type: none"> <li>· User-defined priorities for load-balanced servers based on real-time measurements of: <ul style="list-style-type: none"> <li>– Application response time</li> <li>– Inbound/outbound bandwidth</li> <li>– Number of packets/sec</li> <li>– Number of concurrent users</li> <li>– Relative weight</li> <li>– User-defined SNMP (MIB) data</li> </ul> </li> <li>· Cyclic (round-robin) and Hashing traffic dispatch <ul style="list-style-type: none"> <li>– Global site selection according to: <ul style="list-style-type: none"> <li>– Real-time site load</li> <li>– User proximity (Patented)</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Maximize infrastructure investment and operational resources (“more with the same or the same with less”).</li> <li>· Increase work-force productivity.</li> <li>· Guarantee SLAs.</li> </ul>
Stateful persistency	<ul style="list-style-type: none"> <li>· Prevent application session disruptions while enjoying load-balancing benefits</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain persistency based on: <ul style="list-style-type: none"> <li>– Session ID</li> <li>– DNS request</li> <li>– Generic packet-header bit patterns</li> <li>– Generic packet-data pattern</li> <li>– RADIUS ID</li> <li>– SIP tags</li> </ul> </li> </ul>	
Bandwidth management and traffic shaping	<ul style="list-style-type: none"> <li>· Servers and network bandwidth are optimally utilized by applications based on business or technical priorities</li> <li>· Latency-sensitive application receive top-priority</li> <li>· Control QoS levels</li> </ul>	<ul style="list-style-type: none"> <li>· Class based traffic shaping using CB-WFQ</li> <li>· Predefined Classes include over 40 common applications, ToS or Diffserv bits</li> <li>· User-defined classification per any Layer 4-7 parameter or content</li> <li>· Limit/guarantee bandwidth per class, user</li> </ul>	
SSL off-loading	<ul style="list-style-type: none"> <li>· Reduces server load, thereby accelerating performance and reducing the amount of servers needed per user</li> </ul>	<ul style="list-style-type: none"> <li>· Scalable SSL performance with Radware AppXcel</li> <li>· Load-balances back-end encrypted traffic</li> <li>· Maintains persistency for SSL-encrypted traffic</li> </ul>	
Comprehensive device, server, and application-path management	<ul style="list-style-type: none"> <li>· simple device configuration</li> <li>· Application-aware policy set-up</li> <li>· health, performance and utilization monitoring and reporting</li> <li>· network-wide application-level visibility</li> <li>· integration into existing NMS</li> <li>· prevent lengthy and manual maintenance and troubleshooting</li> </ul>	<ul style="list-style-type: none"> <li>· APSolute Insite – network-wide GUI-based configuration, monitoring and management console</li> <li>· SNMP v1, v2, v3</li> <li>· Also supports: <ul style="list-style-type: none"> <li>– In-band Web-based management (HTTP or HTTPS) and Command Line Interface (Telnet or SSH)</li> <li>– Out-of-band RS-232 Command Line Interface</li> </ul> </li> <li>· Supports reporting via SNMP traps, syslog and email messages</li> <li>· HP OpenView plug-in</li> <li>· Multi-device policy propagation</li> <li>· Access Permissions management</li> <li>· Graceful shutdown and recovery control – Resources can be introduced or retired, and server maintenance can be scheduled automatically with minimal operational effort and no user downtime.</li> </ul>	



### High Availability: In the Datacenter and Between Distributed Sites

Your productivity and reputation as a company to deliver results depends upon 24/7 uptime for your business-critical networked applications and website. Your competitiveness depends on guaranteeing round the clock availability with cost-effective building blocks and keeping operational staff to an appropriate level. AppDirector eliminates the risk of downtime and aborted transactions so you don't miss business opportunities by performing health checks at every level – from hardware to application-specific messages – transparently redirecting traffic to available resources within the datacenter or at remote locations.

AppDirector feature	IT benefits	The APSolute advantage	Business benefits
Real-time application smart health monitoring, failure detection and traffic redirection	<ul style="list-style-type: none"> <li>Use cost-effective components without suffering reliability penalty.</li> <li>Quickly Identify failures at any point along the application or transaction path and react proactively.</li> <li>Automatically redirect traffic to available instances, servers and farms in your datacenter or between redundant sites.</li> </ul>	<ul style="list-style-type: none"> <li>Server/application availability based on user-defined full application/transaction path</li> <li>5 Levels of Application Health Monitoring:               <ul style="list-style-type: none"> <li>Physical Port</li> <li>ARP, ICMP, Ping</li> <li>Application Level Monitoring: Citrix App Browsing, Citrix ICA, DNS, FTP, FIX, HTTP, IMAP4, LDAP, LDAPS, NNTP, POP3, RADIUS, RADIUS accounting, RTSP, SIP (TCP &amp; UDP), SNMP, SSL</li> <li>Content Level Monitoring:                   <ul style="list-style-type: none"> <li>Web page check, Username &amp; password, HTTP codes verification, LDAP Search, File verification on FTP servers, Citrix Server check, SSL check and more</li> </ul> </li> <li>User defined specific health checks</li> </ul> </li> <li>Bind multiple checks with and/or conditions for complete flexibility of dependencies checks</li> </ul>	<ul style="list-style-type: none"> <li>Save on infrastructure costs.</li> <li>Never lose business due to IT failures.</li> <li>Prevent high operational costs due to lengthy and manual troubleshooting.</li> <li>Maintain faith and reputation in IT services with employees and customers.</li> </ul>
Global (distributed) redirection	Use geographical redundancy to support disaster-proof high-availability.	<ul style="list-style-type: none"> <li>Integrated into the box</li> <li>Patented Triangulation redirection – significantly improves performance and reduces response times.</li> <li>RTSP redirection – for streaming media applications</li> </ul>	<ul style="list-style-type: none"> <li>Support business continuity and disaster recovery plans.</li> </ul>
Active-active or active-passive device redundancy	Prevent the introduction of a single point of failure in a high-availability architecture.	<ul style="list-style-type: none"> <li>Proprietary ARP</li> <li>VRRP</li> <li>Client Table Mirroring</li> <li>Redundant power supply</li> <li>Active-Active configuration</li> </ul>	<ul style="list-style-type: none"> <li>Protect your investment.</li> <li>Lower TCO.</li> </ul>
Highly reliable platform		<ul style="list-style-type: none"> <li>Purpose built appliance- not PC based</li> <li>High MTBF</li> <li>Redundant power supply</li> </ul>	



### Integrated Application-level Security

The growing number of virus and Denial of Service attacks can impact the availability and performance of your business in the exact same way that a faulty server can, damaging your integrity and your bottom line. AppDirector provides a secure, single point of entry to the datacenter, applying application-level protection at a key point in your network without additional hardware or operational costs.

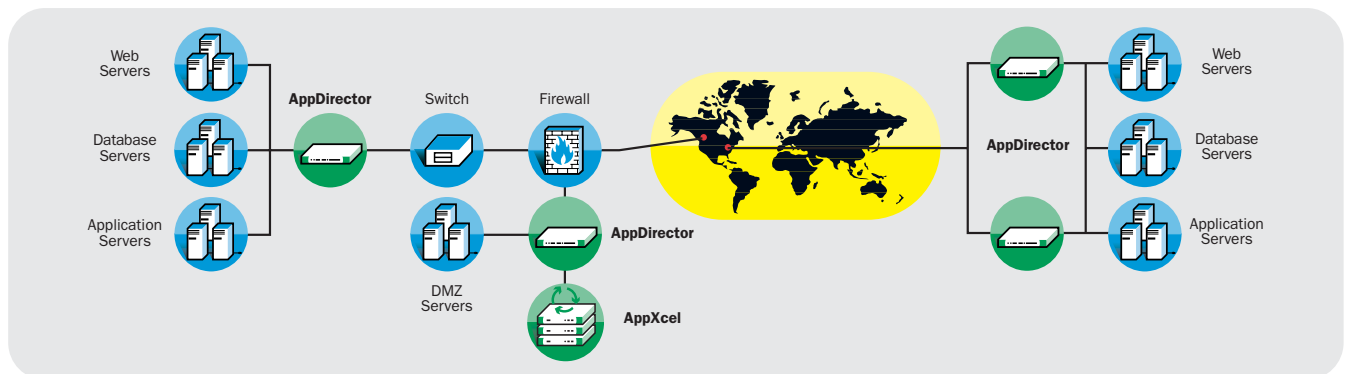
Denial of Service (Dos) attacks, hacking attempts and rampant worms and viruses are automatically detected, reported and mitigated before they can bring down your servers and applications. Advanced intrusion prevention techniques protect against internal and external attacks including Trojans, Spyware, scanning attempts and protocol anomalies.

AppDirector feature	IT benefits	The APSolute advantage	Business benefits
DoS protection	<ul style="list-style-type: none"> <li>Prevent attacks from bringing down firewalls, servers, databases and applications.</li> <li>Isolate attacks and prevent propagation throughout the network.</li> </ul>	<ul style="list-style-type: none"> <li>1000 attack signatures out-of-box</li> <li>Security Update Service</li> <li>Supported by 2 Security Operations Centers (SOCs)</li> <li>Impressive record of First-to-Market signatures</li> <li>Content, anomaly and behavioral based techniques</li> <li>Bandwidth Management clears network of malicious traffic to ensure availability for critical applications</li> </ul>	<ul style="list-style-type: none"> <li>Ensure business up-time even during an attack.</li> <li>Protect reputation with business partners and customers.</li> </ul>
Integrated intrusion prevention			
Advanced security reporting	<ul style="list-style-type: none"> <li>Real-time visibility into network-wide security threats.</li> <li>Logging and reporting of security events for forensics and compliance.</li> </ul>		

## Technical Specifications



Feature	AppDirector 100/200/202	AppDirector 1000	AppDirector 3020	AppDirector 6000
Nominal Throughput	Up to 200Mbps wire-speed	Up to 1Gbps wire-speed	Up to 3Gbps wire-speed	Up to 6Gbps wire-speed
Non-Blocking Switch Fabric	9.6 Gbps	19.2 Gbps	44 Gbps	88 Gbps
Layer 2 Switching	Wire-speed	Wire-speed	Wire-Speed	Wire-Speed
Simultaneous Sessions	Unlimited	Unlimited	Unlimited	Unlimited
Routing Protocols	OSPF, RIP, RIP II	OSPF, RIP, RIP II	OSPF, RIP, RIP II	OSPF, RIP, RIP II
RISC Processor	Motorola PPC 750 266 MHz	Motorola PPC 7410 500 MHz	Motorola PPC 7457 1.3 Ghz	Motorola PPC 7457 1.7Ghz
RAM	up to 256Mb	Up to 512Mb	Up to 2Gb	
Gigabit/GBIC ports	0/0/2	5	20 (12x1G copper + 8 GBICs)	17 (8x1G copper + 9 GBICs)
802.3ae 10G Ports	NA	NA	NA	2
10/100 Ethernet Ports	8	16	12 10/100/1000BaseT	8 10/100/1000BaseT
1000Base-SX/LX/ZX Ports	Full-duplex Gigabit Ethernet fiber	Full-duplex Gigabit Ethernet fiber	Full-duplex Gigabit Ethernet fiber	Full-duplex Gigabit Ethernet fiber
1000Base-SX (850 nm) Operating Distance	<ul style="list-style-type: none"> <li>62.5 micron MM fiber .2 to 275 m.</li> <li>50 micron MM fiber .2 to 550 m.</li> </ul>	<ul style="list-style-type: none"> <li>62.5 micron MM fiber .2 to 275 m.</li> <li>50 micron MM fiber .2 to 550 m.</li> </ul>	<ul style="list-style-type: none"> <li>62.5 micron MM fiber .2 to 275 m.</li> <li>50 micron MM fiber .2 to 550 m.</li> </ul>	<ul style="list-style-type: none"> <li>62.5 micron MM fiber .2 to 275 m.</li> <li>50 micron MM fiber .2 to 550 m.</li> </ul>
1000Base-LX/ZX Operating Distance	<ul style="list-style-type: none"> <li>LX: up to 10Km</li> <li>ZX: up to 80Km</li> </ul>	<ul style="list-style-type: none"> <li>LX: up to 10Km</li> <li>ZX: up to 80Km</li> </ul>	<ul style="list-style-type: none"> <li>LX: up to 10Km</li> <li>ZX: up to 80Km</li> </ul>	<ul style="list-style-type: none"> <li>LX: up to 10Km</li> <li>ZX: up to 80Km</li> </ul>
RS-232C Console	<ul style="list-style-type: none"> <li>DB-9 serial connection</li> <li>female DCE interface for out-of-band management</li> </ul>	<ul style="list-style-type: none"> <li>DB-9 serial connection</li> <li>female DCE interface for out-of-band management</li> </ul>	<ul style="list-style-type: none"> <li>DB-9 serial connection</li> <li>female DCE interface for out-of-band management</li> </ul>	<ul style="list-style-type: none"> <li>DB-9 serial connection</li> <li>female DCE interface for out-of-band management</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>432mm x 475mm (17x18.7")</li> <li>19" EIA rack or standalone</li> <li>Height: 44mm (1U)</li> <li>Weight: 3.85 kg (8.5 lbs)</li> </ul>	<ul style="list-style-type: none"> <li>432mm x 475mm (17x18.7")</li> <li>19" EIA rack or standalone</li> <li>Height: 44mm (1U)</li> <li>Weight: 5.3 kg (11.7 lbs)</li> </ul>	<ul style="list-style-type: none"> <li>432mm x 475mm (17x18.7")</li> <li>19" EIA rack or standalone</li> <li>Height: 88mm (2U)</li> <li>Weight: 7.0 kg (15.4 lbs)</li> </ul>	<ul style="list-style-type: none"> <li>432mm x 475mm (17x18.7")</li> <li>19" EIA rack or standalone</li> <li>Height: 88mm (2U)</li> <li>Weight: 6.6 kg (14.55lbs)</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>Operating Temperature: 0-40° C</li> <li>Humidity (non-condensing): 5-95%</li> </ul>	<ul style="list-style-type: none"> <li>Operating Temperature: 0-40° C</li> <li>Humidity (non-condensing): 5-95%</li> </ul>	<ul style="list-style-type: none"> <li>Operating Temperature: 0-40° C</li> <li>Humidity (non-condensing): 5-95%</li> </ul>	<ul style="list-style-type: none"> <li>Operating Temperature: 0-40° C</li> <li>Humidity (non-condensing): 5-95%</li> </ul>
Power	<ul style="list-style-type: none"> <li>Auto-range supply: 100-250V or 38-72v DC 50-60Hz</li> <li>Power Consumption: 35 Watt</li> <li>Heat Dissipation: 119.5 BTU/h</li> </ul>	<ul style="list-style-type: none"> <li>Auto-range supply: 100-250V or 38-72v DC 50-60Hz</li> <li>Power Consumption: 44 Watt</li> <li>Heat Dissipation: 150.3 BTU/h</li> </ul>	<ul style="list-style-type: none"> <li>Auto-range supply: single or dual 100-250V or 38-72v DC 50-60Hz</li> <li>Power Consumption: 108 Watt</li> <li>Heat Dissipation: 368.7 BTU/h</li> </ul>	<ul style="list-style-type: none"> <li>Auto-range supply: single or dual 100-250V or 38-72v DC 50-60Hz</li> <li>Power Consumption: 110.8 Watt</li> <li>Heat Dissipation: 378.32 BTU/h</li> </ul>
Certifications	<ul style="list-style-type: none"> <li>Safety: EN 60950; UL 1950 ,CSA 22.2 No 950</li> <li>EMI: EN 55022 Class A, EN 50024 FCC, Part 15B Class A</li> <li>CE, UL, VCCI</li> </ul>	<ul style="list-style-type: none"> <li>Safety: EN 60950; UL 1950 ,CSA 22.2 No 950</li> <li>EMI: EN 55022 Class B, EN 50024 FCC, Part 15B Class B</li> <li>CE, UL, VCCI</li> </ul>	<ul style="list-style-type: none"> <li>Safety: EN 60950; UL 1950 ,CSA 22.2 No 950</li> <li>EMI: EN 55022 Class A, EN 50024 FCC, Part 15B Class A</li> <li>CE, UL, VCCI</li> </ul>	<ul style="list-style-type: none"> <li>Safety: EN 60950; UL 1950 ,CSA 22.2 No 950</li> <li>EMI: EN 55022 Class B, EN 50024 FCC, Part 15B Class B</li> <li>CE, UL, VCCI</li> </ul>



### Radware's APSolute Product Family

Over 3,000 enterprises and carriers worldwide use Radware application-smart switches to drive business productivity and improve profitability by adding critical application intelligence to their IP infrastructure, making networks more responsive to specific business processes. Radware's APSolute product family provides the most complete set of application front-end, remote access and security capabilities for application-smart networking to ensure faster, more reliable and secure business transactions.

### Certainty Support

Radware offers technical support for all of its products through the Certainty Support Program. Each level of the Certainty Support Program consists of four elements - phone support, software updates, hardware maintenance, and on-site support.

To learn more about how Radware application delivery solutions can enable you to get the most of your investments in IT infrastructure and people email us at [info@radware.com](mailto:info@radware.com), or go to [www.radware.com](http://www.radware.com)

*Product specifications subject to change without notice.*

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