AppBeat DC

Next Generation Web Application Delivery

Application performance is one of most critical challenges facing organizations today. As businesses increase their dependence on web-based applications to conduct business and drive revenue, the need for superior application performance and availability grows. IT organizations struggle to meet escalating performance demands without increasing operating costs or infrastructure footprint.

Crescendo Networks' AppBeat™ DC gives IT organizations a simple and powerful way to improve application performance and availability. It accelerates and optimizes essential web applications by offloading and consolidating common tasks, so that server resources can be dedicated to the application itself. AppBeat DC has been independently validated in third-party tests as the clear performance leader in the Application Delivery Control (ADC) market, with performance far exceeding the competition.

Testimonials

CARFAX

"To maximize the performance and availability of our Web applications, we chose AppBeat DC. Not only was the product superior in terms of performance and ease of use, but the Crescendo team offered unmatched support from day one. When it came down to the final choice, Crescendo had the most complete package."

Gary Lee, VP-Data Center

Key Benefits

Application Acceleration

AppBeat DC delivers industry-leading application acceleration at multi-gigabit rates. With powerful, purpose-built hardware and innovative technologies, AppBeat DC performs multiple application acceleration functions concurrently, enabling unparalleled performance even under heavy load.

Improved End User Experience

Fast, consistent and reliable peformance creates a better application experience and shortened response time for the user. Patent-pending Short-Lived Transaction (SLT) technology, zero-latency compression and server normalization techniques improve the performance delivered to end users by 30-70%.

Increased Security and Application Assurance

AppBeat DC shields servers from malicious attacks and mediates flash crowd events. Removing the impact of peak- load periods on application response times ensures consistent application availability for customers.

Reduced Data Center Expenditures

By consolidating and offloading critical functions, AppBeat DC increases available server capacity by 300-500%. In addition, efficient hardware-based compression reduces bandwidth requirements by up to 75%. Using AppBeat DC, IT organizations can reduce existing and planned expenditures for a clear and immediate ROI.

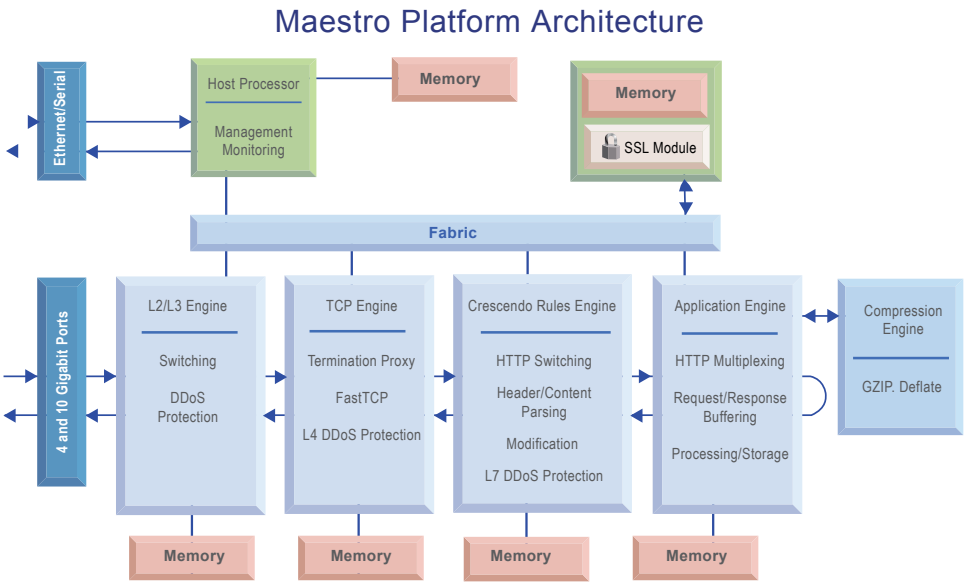
Core Technologies

AppBeat DC achieves its industry-leading performance using innovative hardware and software technologies: the Maestro™ platform and Crescendo Networks' Short Lived Transaction™ (SLT) technology.

Maestro Platform

The underlying hardware for AppBeat DC, the Maestro platform, is the only industry solution to implement Layer 2-7 functionality in dedicated hardware with TCP termination/optimization, load balancing, compression, and SSL acceleration. Each function runs on a separate, purpose-built engine with dedicated CPU and memory resources. As a result, AppBeat DC can enable all of the functions at the same time without any performance slow-down. This feature concurrency distinguishes AppBeat DC from other application acceleration solutions that slow down as more features are enabled.

The Maestro platform uses dedicated, purpose-built processors for different functions, enabling feature concurrency and scalability.



Short-Lived Transaction (SLT)

Crescendo's patent-pending SLT technology leverages the Maestro platform to provide unparallel performance for TCP termination and optimization, including:

- **Advanced connection management** for offloading TCP overhead from servers by consolidating many connections into a few
- **Unique request processing technology** that enables request and response buffering during the transaction flow, for optimal content delivery
- **Response optimization technology** that completely shields servers from WAN-based TCP overhead (dropped packets, congestion, etc), enabling content delivery at maximum throughput

Features

AppBeat DC supports multiple functions, from compression to load balancing, on a single device. And unlike other application acceleration solutions, it can deploy all of these functions at once without any performance penalty.

TCP Offload, Multiplexing and Acceleration

AppBeat DC significantly reduces the processing load on servers by handling TCP termination for clients. AppBeat DC receives all incoming requests and multiplexes and redirects them to servers over a controlled number of persistent server-side connections. This approach relieves the servers of the connection setup, teardown and management processes that normally consume valuable server resources. The result is a dramatic increase in application performance.

Content Compression

By compressing content, AppBeat DC improves client response times and significantly reduces bandwidth requirements. With its dedicated, solid-state compression processor, AppBeat DC can compress content by up to 85%, operating at speeds of up to 1 Gbps, with zero latency. The compression engine also offloads this processor intensive task from servers that would have otherwise had to compress the data themselves. HTTP compression schemes provide an asymmetric approach to application acceleration, as data is automatically decompressed by common Web browsers.

SSL Offload and Acceleration

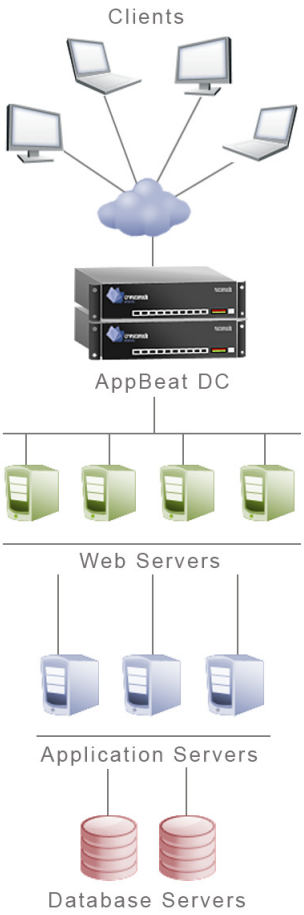
With more applications requiring security, many servers now handle SSL processing in addition to their core applications. AppBeat DC offloads this CPU-intensive task, freeing server resources and making the site faster and more secure. AppBeat DC handles both SSL session setup and bulk data encryption tasks, employing dedicated hardware designed to accelerate these resource-intensive processes.

Server Load Balancing

Server load balancing shields users from server failures or overloaded, slow servers, while enabling the even distribution of resources across the data center. With full visibility into the application layer, AppBeat DC manages traffic based on outstanding transactions, server load and health, ensuring that data is always sent to the least loaded server.

Application Assurance and Availability

Severe changes in user patterns, traffic spikes and other traffic anomalies can seriously affect server performance. AppBeat DC maintains a normalized operating environment, shielding servers from erratic client behavior as well as malicious attacks (DDoS) and flash crowd events.



AppBeat DC integrates seamlessly into existing data centers, providing multi-gigabit application acceleration and optimization.

crescendo networks

AppBeat DC

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AppBeat DC Summary

Feature Summary

Application Acceleration

True TCP termination/offload/acceleration

- Server side: Eliminates the overhead of connection setup and tear down, handles a large number of client connections, and multiplexes requests to a controlled number of persistent server connections

Compression

- Real time compression
- Supports Gzip, Deflate (decompressed by Web browser)
- Hardware-based, zero latency

SSL

- Hardware based SSL offload for session setup and bulk data transmission
- Client side and server-side SSL functionality

Load Balancing (Layer 4 and 7)

- All decisions made at the request level
- Flexible layer 7 rules: URL, file-type, headers, etc.
- Best server selection based on actual server load
- Application-level client persistence
- L4 load balancing with TCP acceleration

Application Protection

Protection from DDoS attacks

- SYN Flood, Land, Teardrop, Smurf, Ping Of Death, Open/Close, ICMP Unreachable, ICMP Redirect, Looping UDP Ports, Fraggle, UDP Flood, TCP Flood

Application Assurance

- Guarantees application operation under any load

Redundancy/High Availability

- Active/Passive for hot standby
- Active/Active for load sharing

Management

AppBeat DC can be managed through a comprehensive, easy-to-use interface. Highlights include:

- Remote configuration and management
- Web GUI
- Command Line Interface (CLI)
- Telnet/SSH
- RS232 serial console
- SNMP compliant
- Event reporting through, event logs or syslog
- Dual images, multiple configurations

Performance

- 1 Million Total Connections
- 2.4 Million Syns/Second *
- 500K Connections/Second *
- 120K Transactions per Second
- 10K SSL Handshakes per Second *
- 1 Gbps Bulk Encryption Throughput *
- 1.5 Gbps Compression Throughput *
- 6 Gbps Optimized Throughput *

* Model Dependent

System Specifications

System Interfaces

- CN-5020: 2 x SFP GbE ports (optical or copper)
- CN-5080: 8 x SFP GbE ports (optical or copper)
- Management interfaces: RJ-45 serial port, RJ-45 10/100 Ethernet
- Support for link aggregation of multiple physical interfaces for higher bandwidth and fault tolerance

Power

- AC Input
- Voltage:
  - 90-250 VAC @ +6%, -10%
  - Frequency: 50-60 Hz
- Maximum current: 3.0 A
- Heat dissipation:
- Maximum AC: 200W, 682Btu/hr

Certifications

EMC:

- EN 55022
- EN 55024
- CES-003A
- VCCI 2002
- FCC part 15, Sub-part B

Safety

- EN 60950
- IEC 60950
- UL 60950
- CSA CS22.2 No. 950

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