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ZX TM

Zeus Extensible Traffic Manager

Software Features and Technical Specifications



Managing your Application Traffic

Ease of Use	<ul style="list-style-type: none"> • Secure, resilient, web-based GUI, including wizards to simplify common tasks • Simple, fast deployment with automatic ZXTM TrafficCluster™ detection • Secure configuration replication within a ZXTM TrafficCluster™ • Fully-customisable active application monitoring • SNMP support for easy integration into existing monitoring systems • Comprehensive, configurable activity logging • Automatic, event-triggered alerting
Flexible Configurations	<ul style="list-style-type: none"> • Grouping of related back-end servers into named pools • Traffic management parameters and actions defined on a per-pool basis • Wide choice of back-end fail-over configurations and actions • Straightforward back-end application partitioning for performance improvement of large-scale application server deployments • SOAP-based Control API allows ZXTM to drive and be driven by other applications and devices
TrafficScript™	<ul style="list-style-type: none"> • Intuitive traffic inspection, manipulation and routing language • Unlimited content inspection depth for all TCP/UDP protocols, including native support for XML / XPath • Analyse and rewrite entire client requests and server responses • Enables business policies to be translated into traffic management actions • Base traffic management decisions on origin, destination, content type or any part of the request content • Provides protocol-specific functions • Automatically decompresses and reassembles chunked HTTP content • Rich logical expressions allow modelling of complex routing decisions • Forward proxy mode allows inspection, manipulation and routing of outbound traffic to arbitrary destinations • Provides data, string, mathematical and system manipulation functions • Visual TrafficScript™ UI (RuleBuilder™) provides wizards for simple rule creation and configuration • Preview and convert RuleBuilder™ rules into TrafficScript™ rules with a single click • Rules are stored in the Catalog for reuse and easy deployment to multiple virtual servers
Server Load Balancing	<ul style="list-style-type: none"> • Layer 7 load balancing • Choice of load-balancing algorithms and parameters on a per-pool basis including: round-robin, weighted round-robin, least connections, fastest response time, random, perceptive • Cache affinity load-balancing algorithms • Slow start for node introduction / reintroduction • Connection draining for removing nodes from server pools non-disruptively • IP transparency preserves original source address of client
Applications Supported	<ul style="list-style-type: none"> • All web-based applications, email, FTP (active and passive), SQL databases, directory servers, RADIUS, BEA WebLogic, IBM WebSphere, JBoss, JRun, .NET, RealServer, Windows Media Streaming Server, many others
Protocols Supported	<ul style="list-style-type: none"> • All TCP and UDP protocols including any SSL-wrapped protocol
Front-end Fail-over and Scalability	<ul style="list-style-type: none"> • TrafficCluster™ (unlimited active and unlimited standby ZXTM units in a resilient cluster) • Any combination of active and / or standby ZXTM units • Performance scales linearly with number of ZXTM units and number of cores / processors • Protection from multiple compound failures • Resilient session management across a TrafficCluster™
Back-end Fail-over	<ul style="list-style-type: none"> • Reroutes requests away from overloaded or unavailable servers to healthy servers with available capacity, ensuring network problems are invisible to end-users • Predefined and customisable per-service, per-pool and per-machine fail-over actions • Configurable failure pools allow traffic to be directed to alternative back-end machines when those in the current pool have all failed • Pool prioritisation ensures there is always enough capacity to service demand
Control API	<ul style="list-style-type: none"> • Open standards SOAP API allowing ZXTM to drive and be driven by other applications and network devices • Automate regular tasks in ZXTM • Ensures tight integration into existing NOC, hosting, provisioning, network and application systems • Provision and add extra server capacity on-demand when ZXTM detect service level non-conformance

Session Persistence	<ul style="list-style-type: none"> • Wide choice of predefined and customisable stateful session persistence methods • Full support for HTTP- and SSL-specific session persistence methods • Full support for protocol-independent session persistence methods • TrafficScript™ rules allow persistence based on any parameter or value in the request • Automatic detection determined when session persistence is needed and dynamically sets up cluster-aware persistence • Supports clustering of applications such as BEA WebLogic, IBM WebSphere, Oracle 9i and many others • Ensures that legacy applications can be deployed safely in a fault-tolerant cluster
Service Level Monitoring	<ul style="list-style-type: none"> • Active, real-time monitoring of transactions • Set service level performance thresholds on a per-service basis • Provides support for differentiated services offerings • Service level classes stored in the Catalog for easy deployment to multiple virtual servers • Apply service level classes dynamically to traffic using TrafficScript™ • Alerting / logging / custom remedial actions if performance falls outside of service level limits
Bandwidth Control	<ul style="list-style-type: none"> • Active, real-time bandwidth management • Enforce per-virtual server bandwidth limits • Bandwidth classes stored in the Catalog for easy deployment to multiple virtual servers • Apply bandwidth classes dynamically to traffic using TrafficScript™ • Bandwidth usage information is shared around a ZXTM TrafficCluster™
Request Rate Shaping	<ul style="list-style-type: none"> • Define maximum limits on request rates, globally or per user • Apply rate limits dynamically, using TrafficScript™ • Protect application infrastructure from being overwhelmed with requests • Enforce differentiated levels of service per user or by class of users
Content Caching	<ul style="list-style-type: none"> • Store local copies of frequently-accessed web content to reduce transit times and bandwidth usage • Fine-grained control over which pages are cached from a web server • Automatic caching of page variants for compressed/uncompressed content, language-negotiated pages, etc. • Differentiated caching of pages to ensure separation of public/private content, user access rights, etc.
Application Acceleration	<ul style="list-style-type: none"> • Unique connection handling takes load away from back-end servers and applications, removing the overhead of handling sessions with slow clients • WAN offload and connection aggregation accelerate most networked applications • HTTP Optimizations select the best possible HTTP support for clients and servers independently • HTTP Multiplexing ensures rapid responses while minimising connection load on servers • TrafficScript request and response inspection features fully compatible with all HTTP variants and optimisations, such as chunked transfer encoding and compressed responses. • Accelerates Apache, BEA WebLogic and other applications and servers • On-the-fly content compression applied to any compressible content type
SSL Termination	<ul style="list-style-type: none"> • Up to 9,300 native SSL transactions per second on dual AMD Opteron server • SSL decryption takes load away from back-end servers • SSL re-encryption (back-end encryption) for end-to-end security • Integrated 64-bit high performance SSL removes necessity for additional hardware cryptographic accelerators • Allows traffic management intelligence and load balancing to be applied to encrypted traffic • Filters encrypted traffic for malicious content, web viruses and application security attacks • Centralised client certificate authentication, management and revocation • Support for nCipher NetHSM for FIPS 140-2 level 3 compliant tamper-proof key management
Performance Monitoring	<ul style="list-style-type: none"> • Customisable, real-time performance monitoring of both ZXTM and back-end infrastructure • ZXTM takes account of server and application performance in routing decisions • Fully integrated with SLA and Bandwidth management • Real-time traffic visualisation and trending via GUI and SNMP • Performance data available through SNMP





Health Monitoring	<ul style="list-style-type: none"> • Predefined and customisable active application health monitors • Continually monitors the health and status of ZXTMs and back-ends, including applications and services behind the servers which communicate with ZXTM directly • Traffic manager takes account of server and application health in routing decisions • Requests automatically diverted away from unhealthy servers • Recovered servers automatically and gradually reintroduced • Flexible configuration of health monitoring frequency • Monitors can trigger alerts and pre-defined actions when server is classed as unhealthy
Content and Application Verification	<ul style="list-style-type: none"> • Server response verification to detect error codes or other specified data in responses • Traffic manager takes account of response validity in routing decisions
Service Protection	<ul style="list-style-type: none"> • Protection against Denial of Service and Distributed Denial of Service attacks • Protection against Web worms and viruses • Protection against malformed URL attacks • Protection against XML-based application attacks • Access restrictions for specific IP addresses or ranges of IP addresses • Real-time monitoring, threat analysis reporting, and alerting • Configuration allows fine-tuning of service protection, including test and debug modes • TrafficScript service protection rule enables custom actions to be taken • Connection limiting • Extensive, configurable, attack logging
Web Services / XML	<ul style="list-style-type: none"> • Supports .NET, SOAP, XML-RPC, J2EE • TrafficScript provides native support for analysis and transformation of both XML client requests and server responses • Embedded XPath query engine allows interpretation of XML content and makes traffic routing decisions based on the business logic of XML data • Supports offload of XSLT processing for translation between XML dialects

Zeus develops application traffic management software and appliance solutions.
 We dramatically improve network and web-enabled applications,
 making them fast, reliable, secure and easy to manage.

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