

z e u s



**ZXTM**

## Zeus Extensible Traffic Manager

Software Features and Technical Specifications



# Managing your Application Traffic

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

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





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

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.

Zeus Technology Limited (UK)  
 The Jeffreys Building  
 Cowley Road  
 Cambridge CB4 0WS  
 United Kingdom

Sales: +44 (0)1223 568555  
 Main: +44 (0)1223 525000  
 Fax: +44 (0)1223 525100  
 Email: [info@zeus.com](mailto:info@zeus.com)  
 Web: <http://www.zeus.com/>

Zeus Technology, Inc. (U.S.)  
 1955 Landings Drive  
 Mountain View  
 CA 94043  
 United States of America

Phone: 1-888-ZEUS-INC  
 Fax: (866) 628-7884  
 Email: [info@zeus.com](mailto:info@zeus.com)  
 Web: [www.zeus.com](http://www.zeus.com)

© Zeus Technology 2007. Zeus Technology, the Zeus logo, Zeus Web Server, Zeus Extensible Traffic Manager, ZXTM, ZXTM Global Load Balancer, ZXTM Virtual Desktop Broker, TrafficScript, TrafficCluster and RuleBuilder are trademarks of Zeus Technology Limited. Other trademarks may be owned by third parties.

**Solution Centre**  
DATA: AVAILABLE - MANAGEABLE - SECURE

Solution Centre Ltd, Vickers House,  
 Priestley Road, Basingstoke, RG24 9NP, UK  
 Tel: 01256 818600  
 Fax: 01256 819600  
 Email: [sales@solutioncentre.co.uk](mailto:sales@solutioncentre.co.uk)  
 Web: [www.solutioncentre.co.uk](http://www.solutioncentre.co.uk)