



# Layer 7 SecureSpan & Cisco ANS Solution

## Enhance Network Performance, Security and Reliability

Layer 7, deployed together with Cisco ANS products, can deliver improved security and enhanced class of service across layers 3 through 7 of the network stack

The solution offers:

### Enhanced Performance

Deploying Cisco ANS (for best-in-class network performance at layers 3-6 of the network stack) with Layer 7 Gateways (for best-in-class performance at the application layer) delivers an optimal solution for traffic shaping across the entire network stack that can be managed from a single, central location.

### Improved Security

Standards-based, end-to-end packet-level and message-level inspection provides improved network and application security.

To learn more about Layer 7 and how it can address your organization's needs, call 1-800-681-9377 (toll free within North America) or +1.604.681.9377. You can also email us at [info@layer7.com](mailto:info@layer7.com); friend us on [facebook.com/layer7](https://facebook.com/layer7); visit us at [layer7.com](http://layer7.com), or follow-us on twitter [@layer7](https://twitter.com/layer7).

Today's organizations feature a mix of transaction and service oriented architectures; leverage on-premise, mobile and remote clients; and connect to traditional applications, web applications, web services and even SaaS/cloud applications. Securing and optimizing the underlying network is a complex undertaking. For this reason, Layer 7 has optimized its SecureSpan XML Gateway technology for Cisco ANS products, giving Cisco customers the ability to enhance their Web service security, reliability and performance for SOA, Web 2.0 and cloud applications.

By deploying SecureSpan XML Gateway in conjunction with Cisco ANS products (such as the Cisco ACE and WAAS families of products), Cisco customers can implement a network-based solution that globally load balances SOA deployments based on redundant, globally-distributed, session-aware SecureSpan XML Gateway clusters.

### Challenges

Deploying production-ready Web services across geographically distributed sites that span multiple physical datacenters, as well as virtualized private/public cloud infrastructure remains a daunting IT task. Typical challenges include:

- Precise rate limiting – how can you selectively limit the traffic being sent to each SecureSpan XML Gateway in a cluster for each service?
- Session affinity – how can you maintain session persistence across clusters of SecureSpan XML Gateways?
- Global load balancing – how can you automate load balancing as new Web services are deployed globally?

Layer 7, in conjunction with Cisco, can help you implement a solution to these tasks, enabling organizations to move towards creating more dynamic infrastructures. Uniquely, Layer 7 SecureSpan XML Gateways can be deployed in multiple form factors (including hardware, software, VMware and Amazon Machine Image) facilitating global load balancing across physical, virtual and cloud-based deployments, in any combination.

### Solution Highlights

**Integrated Rate Limiting:** SecureSpan XML Gateways can instruct Cisco ANS Products to rate limit traffic directed to a specific Gateway node, thereby ensuring SLAs can be enforced across the network stack.

**Integrated Health Management:** enable Cisco ACE to monitor the health of a SecureSpan Gateway to better optimize how load is apportioned across a set of Gateway clusters.

**Session Persistence:** using Cisco ANS products, organizations can implement a solution to persist sessions across a cluster of SecureSpan Gateways based on cookies or SSO tokens.

**SSL Offload:** terminate SSL in Cisco ANS fabric in order to create a single point of SSL management for both Web and Web services traffic, as well as enhancing security (single point of management for SSL keys)

**Global Load Balancing:** create load balancing for globally distributed production deployments.

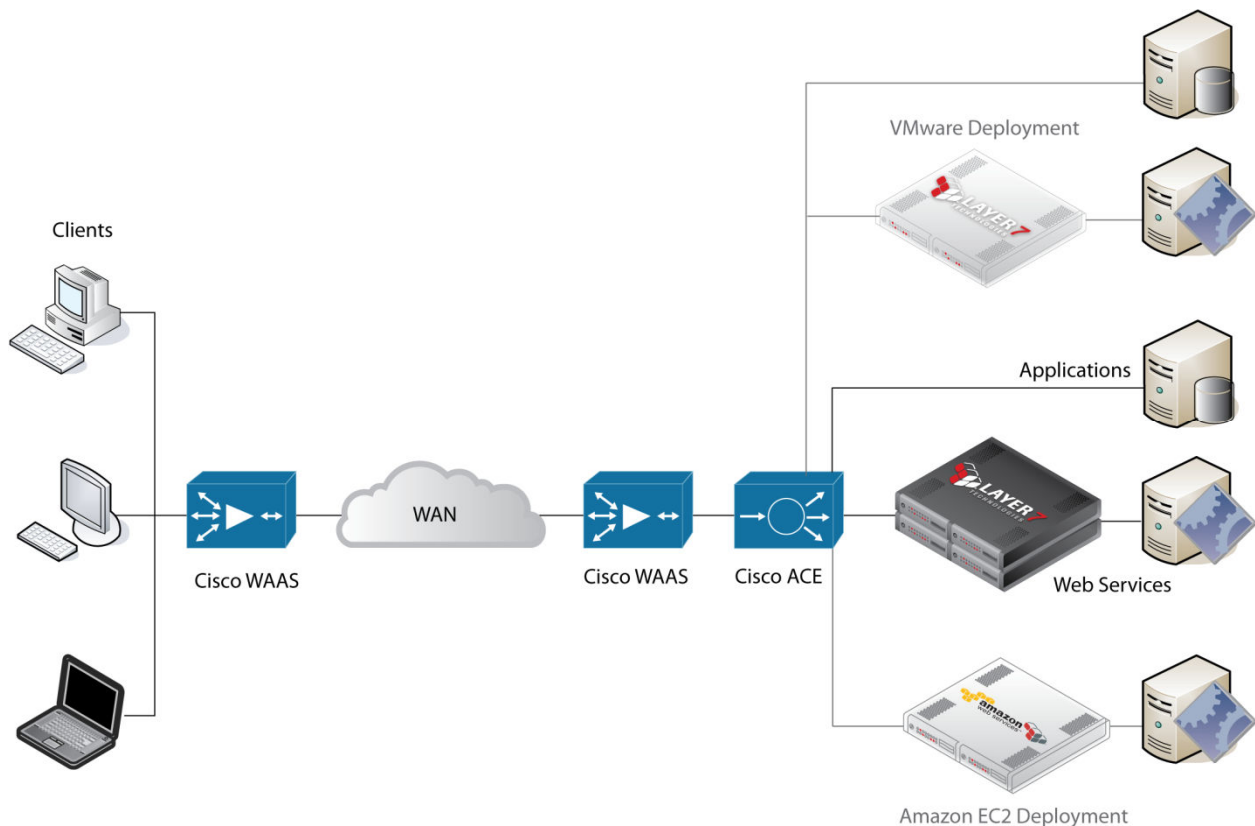
| <b>Key Features</b>                   |  |
|---------------------------------------|--|
| <b>Performance</b>                    |  |
| Authentication Offload                | Support for all leading external identity/access management, SSO and federation systems, as well as all major authentication and authorization standards (including SAML, Kerberos, digital signatures, X.509 certificates, LDAP and XACML) allows centralized offloading of authentication to Layer 7, thereby improving appserver performance and reducing administrative burden   |
| Protocol Bridging                     | Transform from/to JMS, MQ series, FTP, TIBCO EMS, SMTP, raw TCP, UDP, HTTP/HTTPS, etc, simplifying the bridging of transactional and Service Oriented architectures  |
| Acceleration                          | Offloading XML acceleration to Layer 7 (i.e., XPath, XSLT, Regex, XML Encryption, XML Signatures, etc) improves application performance and reduces the need for Web server scaling  |
| Caching                               | Cisco ANS' network caching coupled with Layer 7's message caching decreases back-end server loads, thereby improving application and Web service response times  |
| End-to-end Affinity                   | Layer 7 leverages HTTP session cookies provided by Cisco ANS to deliver session persistence to the backend, thereby reducing end-to-end network latency  |
| Class of Service/ Quality of Service  | Where Cisco ANS provides traffic shaping at layers 3-6 of the network stack, Layer 7 provides traffic shaping at layer 7 through rate limiting based on any number of factors, including type of consumer, user name, IP address, time of day, metered limits, service/ API endpoint, etc  |
| <b>Security</b>                       |  |
| Threat Protection                     | Protection against XML-based threats, including: <ul style="list-style-type: none"> <li>• Document structure, DOS, XDOS, SQL/XPath injection and shell attacks</li> <li>• Detects unauthorized content in inbound and outbound replies</li> <li>• Protection against viruses in attachments</li> <li>• XML parsing attacks</li> <li>• Replay attacks</li> <li>• IP throttling/blocking</li> <li>• Schema poisoning, etc</li> </ul> |
| Packet/Message-level Validation       | Where Cisco ANS provides packet-level processing and inspection, Layer 7 provides contextual processing and inspection of messages (including schema validation for XML and JSON), improving both network and application security   |
| Security Standards and Certifications | Gain the highest levels of security while ensuring current investments can be preserved with support for all major XML security standards (including WS* and WS-I security protocols; Common Criteria EAL4+ and FIPS 140-2)  |
| <b>Network Management</b>             |  |
| Context-aware Traffic Management      | Layer 7 Gateways can poll Cisco ANS devices and populate/process policies based on current status, dynamically reacting to changing network conditions   |
| Metrics                               | Publish Layer 7 Gateway and service metrics to Cisco ANM (including throughput, routing failures, utilization and availability rates, disk usage, clock drift, audit and log file size, etc) in order to simplify troubleshooting and improve capacity planning  |

## Benefits

**Enhanced Security:** guard against both Web and Web services threats; ensure session persistence across backend Web services applications; inspect SSL context in SecureSpan in order to make per service trust decisions.

**Enhanced Reliability:** distribute load intelligently across both locally and globally disparate locations; ensure bullet-proof availability across SecureSpan Gateway clusters; and enforce rate limiting policies at layers 3, 4 and 7 of the network stack.

**Enhanced Performance:** accelerate SSL performance for Web services; optimize compression and TCP; and ensure every SecureSpan Gateway is fully saturated and operating at peak load.



The solution supports the latest versions of the Layer 7 SecureSpan and CloudSpan Gateways, as well as Cisco ACE and WAAS devices.

To learn more about Layer 7 call us today at +1 800.681.9377 (toll free within North America) or +1.604.681.9377. You can also email us at [info@layer7.com](mailto:info@layer7.com); friend us on [facebook.com/layer7](https://www.facebook.com/layer7); visit us at [layer7.com](http://layer7.com), or follow-us on twitter [@layer7](https://twitter.com/layer7).