# Lumen<sup>®</sup> Application Delivery Solutions

A customizable and secure solution to deliver your web applications at the edge

For companies that demand high-performance, scalability and best-of-breed security for their web applications, Lumen<sup>®</sup> Application Delivery Solutions gives you full command at the edge. Engineers gain complete, code-level control over edge workload configuration, testing, and global deployment. With DevOps-friendly metrics, logs and alerting for ongoing troubleshooting and tuning of edge modules, Lumen Application Delivery Solutions enables developers to run workloads where they define the edge.

### Secure workloads

Delivering holistic enterprise-class security features such as Web Application Firewall and Bot Risk Management modules via a modern application ecosystem.

#### **Application performance**

Enterprise engineering teams can build and deliver applications through a rich ecosystem of performance solutions that run seamlessly on the underlying Lumen infrastructure.

#### **DevOps integration**

Move more logic to the edge and test configurations in your development, testing and staging environments. Speed up deployment cycles and automate workflows with extensible APIs. <sup>66</sup> Amazing CDN to boost website speed. It is a scalable and cost-effective solution with a broad range of services. It ensures quick downloads and faster services. The website performance improves resulting in better user experience."

--IT profession + Service industry customer on Gartner Peer Insights<sup>{1}</sup>



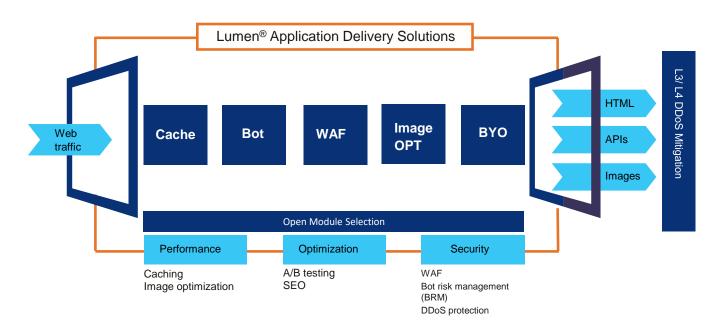
#### **Common Use Cases**

- <u>Travel and hospitality</u>: Provide amazing customer experiences that engender brand loyalty
- · Financial service providers: Enhance the consumer digital banking experience
- Retail: Enrich the customer shopping experience and operational efficiency



## Application delivery workflow

With holistic security, web page optimization, and application performance modules, you can easily manage and control all aspects of your web traffic to provide an excellent customer experience.



## Flexible and scalable application delivery at the edge



Because all businesses are unique, Lumen has partnered with a variety of best-of-breed application security and performance leaders to provide our customers with multiple options to best fit their business needs and budget.



Seamlessly integrate award-winning intelligent security solutions. These easy to manage security modules help ensure your applications are fully protected from all types of attacks while actively adapting to and eliminating security threats.



By adding modules which enhance your application performance (i.e. Image Optimization, Caching, etc.), expect your applications to deliver exceptional customer experiences.



Take your applications to the next level with A/B testing, SEO solutions, real-time performance reporting, and more!



### Features and specs

Holistic application security	<ul> <li>Defense in depth through multi-layer protection combining layer 3 and 4 DDoS with layer 7 application security</li> <li>Next-generation WAF, API protection and bot risk management (BRM) strategically deployed and orchestrated across the Lumen edge network, close to where attacks originate</li> <li>Machine learning techniques to identify malicious behavior patterns and protect a broad range of applications at a low operational cost</li> <li>Powerful automated threat intelligence combined with the expertise of dedicated SOCs for better use of customer resources</li> <li>Ecosystem approach leverages best-of-breed partners – ThreatX, PerimeterX, Wallarm, etc. – allowing businesses to choose the solution that corresponds to their unique security challenges and to change as their threat profile evolves</li> </ul>
Programmable edge, infrastructure as a service	<ul> <li>Containerized workloads built on Docker and Kubernetes clusters</li> <li>Patent-pending adaptive edge engine routes workloads across the edge to meet real-time traffic demand without customers having to manage orchestration or autoscaling</li> <li>Best-of-breed partner ecosystem with pre-integrated cloud-native modules</li> <li>Serverless and BYO code</li> </ul>
Extensive application performance solutions	<ul> <li>Advanced caching and optimization to control how content is delivered: Node.js hosting, Varnish Cache static &amp; dynamic content caching, API caching, HTML streaming</li> <li>Mobile, front-end (JS/CSS), image optimization</li> <li>JavaScript &amp; HTTP/2 protocol optimization</li> <li>Anycast DNS hosting</li> <li>Virtual waiting room</li> <li>OpenResty request routing &amp; domain rewrite</li> <li>Sitespect server-side A/B and multivariate testing</li> <li>SSL/TLS certificate management</li> <li>HarperDB persistent data at the edge</li> </ul>
DevOps tools & monitoring	<ul> <li>Full DevOps suite to plug seamlessly into customer toolsets for rapid deployment and streamlined operations</li> <li>GitOps for application development lifecycle</li> <li>Full DevOps-centric API for automated edge</li> <li>Developer POP</li> <li>CI/CD pipeline integration</li> <li>SaaS console and control plane</li> <li>Real-time log management with Graphite data visualizations, Grafana graphs and ELK stack</li> </ul>

#### 877-453-8353 <u>lumen.com</u> application.delivery@lumen.com

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\*Reviews have been edited to account for errors and readability.

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