

Comparison Sheet: section.io and Fastly

section.io and Fastly are modern Content Delivery solutions that offer enhancements in performance, security and scalability of websites. While both solutions are appealing to developers when compared to legacy CDNs, Fastly’s proprietary reverse proxies can limit developers’ ability to configure tools and their price model makes necessary features cost prohibitive. section.io embraces open-source proxies and supports agile and DevOps workflows by providing software-defined configuration options, a local testing environment to ensure changes work in production, and metrics and monitoring at no additional cost.

Feature	section.io	Fastly
Platform		
Global Delivery Network	29 Super PoPs backed by AWS and Azure. Option to deploy PoPs on demand, private PoPs, and Developer PoPs.	35 Super PoPs. Option to deploy PoPs on demand.
Load Balancer	Yes.	Yes.
Origin Shield	Yes.	Yes.
DNS Hosting	Yes, global Anycast network included.	Not offered.
Performance and Scale		
Caching reverse proxies	Varnish Cache versions 5.1.2, 5.0, 4.1.5, 4.0.3, 4.0.1, 3.0.5 Varnish Cache + Magento 2.x extension Varnish Cache + Magento 1.x integration	Modified Varnish Cache version 2.1 .Varnish Cache + Magento 2.x extension Varnish Cache + Magento 1.x extension
Cache clear time	Instant.	Instant.
Caching types	Static + dynamic content.	Static + dynamic content.
Front End Optimizations	Google’s PageSpeed module for image optimization, CSS minification, caching optimization, Inline CSS and JavaScript, lazy loading, minifying JavaScript and more FEO features.	Basic image optimization through undisclosed tool.
Video streaming	Not currently.	Yes, on demand and streaming capabilities.
HTTP/2	Yes, no extra cost for HTTPS and HTTP/2.	Yes, minimum of \$100/month for HTTPS.
Security		
Security reverse proxies	Intelligent WAF Threat X Rules-based WAF ModSecurity Signal Sciences WAF Perimeter X Bot Blocking Future security proxy releases	Undisclosed rules-based WAF Partnership with Perimeter X Bot Blocking

COMPARISON: SECTION.IO VS FASTLY

DDoS protection	Yes, 24/7 support included in Max plan.	Yes, extra cost for DDoS support \$2,500/month.
SSL/TLS certificates	section.io provides and manages domain validation certificates at no cost, or provide your own at no cost.	Shared certificate for \$100/month, wildcard certificate for \$275/month, or provide your own for \$500 plus \$600/month management fee.
Overload prevention	Yes, ability to set limit on number of concurrent visitors.	Not offered.
Developer and Operations Tools		
Configuration options	Full software-level control over configuration with git backed workflow. Unmodified VCL for advanced tuning.	Limited control over configuration with git backed workflow. Modified VCL for tuning.
Metrics and diagnostics	Unlimited timespan metric access in portal or open end point querying. Graphite metrics visualized in Grafana with ability to create custom queries.	Unlimited timespan metrics access in portal.
Logs	Real-time enriched logs available in Kibana interface with open endpoints for external system querying.	Real-time streaming logs that can go to most logging endpoints.
Alerting	Alerting system included in platform.	Use logs to set external alerts.
Real user monitoring	Ongoing RUM data at no extra cost.	Not offered.
Synthetic monitoring	Ongoing synthetic data at no extra cost.	Not offered.
Development environment	A Developer PoP means developers can pull reverse proxy and CDN configuration into their local machine and test before going to staging or production.	Not offered.
Pricing		
	Pricing based on proxy selection + page view volume. No extra costs for SSL certs, DNS hosting, HTTP/2, metrics and monitoring.	Region specific pricing based on bandwidth plus requests served and chosen features. Additional monthly costs for SSL, HTTP/2, dedicated support.

In Depth Information

Choosing a Content Delivery solution is an important decision for global businesses who rely on their website for revenue and can't afford downtime or slow page speeds. When choosing between Content Delivery solutions businesses need to consider many factors including what your website is looking to improve, how much your developers can achieve with each CDN, and the cost structure of different CDNs.

section.io and Fastly both offer website performance and security benefits built on the backbone of global server networks, however the reverse proxy choice, configuration options and included features vary. In the next pages we go through the core differentials between section.io, a flexible Content Delivery Grid with a range of flexible performance and security tools, and Fastly, a CDN with rules-based security offerings.

Network Architecture and PoPs

All Content Delivery solutions consist of two main layers: A DNS layer which finds the server closest to the end-user from a global server network, and a reverse proxy layer which acts on behalf of your website server and injects additional security and performance functions, such as caching content. The DNS layer directs traffic to a network of servers or Points of Presence: section.io and Fastly both have networks of modern “Super PoPs” around the globe. Fastly currently has 35 PoPs, and section.io has 29 PoPs.

Both Fastly and section.io support modern protocols including HTTP/2, although Fastly charges additional for the SSL certificates which are required to utilize HTTP/2. Fastly has built their own network of PoPs comprised of servers located at strategic points around the globe. section.io leverages the power of industry heavyweights including AWS and Azure to build a global PoP network that is flexible and scalable.

Website Performance Features

The reverse proxy layer caches content, blocks malicious traffic, and provides other speed and security benefits. Caching is the main way Content Delivery solutions are able to speed up page load time. By caching content on global servers, Content Delivery solutions can serve end-users from the cache without going back to the website server, saving time and reducing stress on the origin server.

Caching Reverse Proxy

section.io and Fastly both run versions of the Varnish Cache reverse proxy. Varnish Cache excels when caching dynamic content including stylesheets, JavaScript, and even full HTML documents. This is important as more websites have a large amount of dynamic content which websites should aim to cache.

section.io offers a choice of unmodified Varnish Cache versions, from version 3.0.5 to the latest version, 5.1.2. Fastly uses a modified version of Varnish Cache 2.1, which is no longer supported by Varnish Cache. Because section.io provides users unmodified Varnish Cache versions, developers can use the open-source docs and community to troubleshoot issues. In addition, by offering a choice of versions section.io lets its users pick the version that works best for them and upgrade whenever they want.

Caching Configuration

section.io and Fastly both offer more control over caching configuration than legacy CDNs, which typically require the use of professional services to fully configure caching. Fastly provides a user interface that can turn basic caching controls on and off using Fastly’s own VCL, and the ability to upload a custom VCL file on request. While Fastly does allow users to upload custom VCL, note that this can conflict with Fastly’s modified version of Varnish.

section.io also provides a dashboard for turning on basic caching, plus the ability to directly edit VCL via a file in the repository of every account. section.io provides unmodified VCL files which are highly flexible to fit the needs of different websites. section.io also provides example VCL for caching of static and dynamic content and instructions for VCL with various platforms including Wordpress and Magento.

SEO

section.io provides additional performance benefits by serving all HTTPS traffic over HTTP/2, the updated and faster version of the HTTP communications protocol. Having HTTPS and HTTP/2 is also beneficial for SEO. Fastly also offers HTTPS and HTTP/2 at an additional monthly cost.

section.io gives websites the ability to re-write URLs for further SEO benefits, so blog.shop.com could be re-written to shop.com/blog, which is preferable for SEO.

Website Security

Core Security Features

All Content Delivery solutions include some protection from attacks: By serving content from distributed caching servers, you are already more capable of withstanding an attack than you would be if all traffic was going directly to your origin server. Therefore, the amount of content you can cache should be considered when thinking about the security of your Content Delivery solution.

Another important element of website security is serving traffic over the HTTPS encryption protocol, which protects data sent between your website server and a visitor’s browser.

Core Security Features Continued

HTTPS is becoming more and more necessary for all pages on a website, with some browsers such as Google Chrome marking pages without HTTPS as insecure.

To get HTTPS on all of your pages you will need an SSL certificate. Both Fastly and section.io provide SSL certificates, however Fastly's shared certificate costs start at \$100/month, whereas section.io provides all users with a dedicated SSL certificate or the option to upload their own certificate at no extra cost. section.io also supports multiple SSL certificates for multiple domains running on the same section.io application.

You should also consider the network protection offered: section.io is built on top tier cloud hosting, so you'll get all the DDoS network layer protection and capacity provided by industry leaders like Microsoft and Amazon. Fastly also provides protection against network-layer DDoS attacks.

Advanced Security Features

Both section.io and Fastly offer additional protection with features that detect and block malicious traffic. Fastly offers a proprietary rules-based Web Application Firewall, while section.io offers a choice of Web Application Firewalls.

Fastly also has a partnership with bot blocking platform Perimeter X, which section.io will be releasing as a proxy option on their content delivery grid shortly.

Web Application Firewalls detect and block traffic from bad bots and hackers who may be trying to attack your website. They are able to patch known vulnerabilities and advanced WAFs can also find and patch unknown vulnerabilities. However, not all WAFs are created equal: some are tricky to set up and may result in a high number of false positives, turning away legitimate traffic from your site and impacting potential revenue.

Fastly uses a proprietary rules-based WAF which pulls in rulesets from around the internet. section.io offers both an unmodified version of ModSecurity that includes rules for protection against top attack types, and Threat X, a next-generation intelligent WAF.



Rules-based WAFs and intelligent WAFs both aim to protect your website from hackers and malicious bots, however they go about this in different ways.

Rules-based WAFs use rules that you set yourself to block traffic based on known actions of hackers or previously malicious activity seen on your site. Rules need to be turned on and off to block traffic without impacting legitimate traffic, and requires a significant amount of time from development teams to monitor and manage.

Intelligent WAFs such as Threat X detect and block threats with no configuration needed from you. Threat X first runs in detect mode to learn your site's legitimate traffic profile and threat profile, and then is switched to blocking mode where it automatically blocks threats without false positives that harm legitimate traffic. Threat X is different from other WAFs in that it identifies not only the entity performing the attack but also the level of progress made by the attacker by tracking threats across seven stages of attack and providing you with multiple response options.

Threat X is backed by a team of security experts who monitor the latest hacker trends and how your website is being targeted, meaning users don't need an advanced in-house security team to set up and manage their intelligent Web Application Firewall.

Developer Tools

section.io and Fastly both include features which are positioned towards developers who have struggled to gain control over their CDN configuration and integrate caching and security with agile and DevOps workflows. However in recent years section.io has surpassed Fastly in terms of developer tools by adding a local testing environment (Developer PoP), real user and synthetic monitoring and highly customizable metrics.

Developer PoP

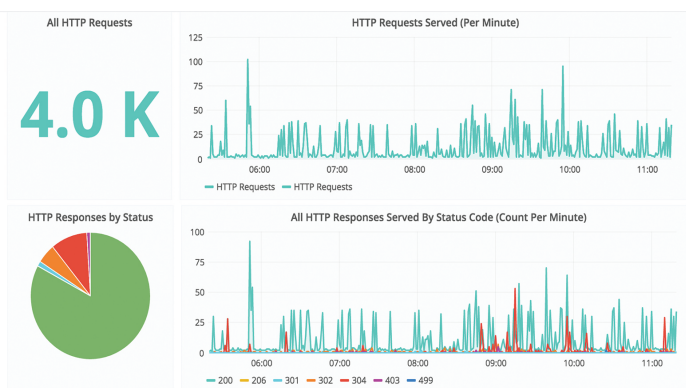
section.io is the only content delivery solution that allows developers to pull their full CDN and reverse proxy configuration into their local machine. This allows websites to cache more content by seeing how VCL and other configurations will impact the production site, and reduces the risk associated with caching dynamic content. Fastly allows developers to test their configuration using a staging environment but does not offer a local development environment.

Metrics

Both Fastly and section.io offer some level of metrics to integrate with DevOps workflows and encourage fast resolving of issues. Fastly offers real-time and historical metrics for Varnish Cache in their dashboard interface. section.io also offers real-time metrics for Varnish Cache and PageSpeed with unlimited historical metrics. section.io's metrics are backed by Graphite and visualized by Grafana so users can create custom queries.

Logs

section.io includes a full set of ELK stack logs within the section.io portal with open endpoints for external system querying. Fastly also offers logs which can be integrated into most external logging systems.



Monitoring

section.io offers both Real User Monitoring (RUM) and synthetic monitoring data included for all accounts. RUM data is valuable because it gives a clear picture of how visitors experience website speed under real-world conditions. Data is broken down by browser type and device so configurations can be tailored to that website's specific audience.

Synthetic monitoring simulates user behavior and is valuable because it can regularly collect data and help establish a performance baseline even when visitors are not present. Both of these methods enable section.io users to quickly view how changes impact their performance and security. Fastly does not currently offer monitoring data.

Pricing

section.io offers pricing based on page views that includes SSL certificates, DNS hosting, real-time metrics and logs, monitoring data, and other core features. The Plus plan includes fully configurable Varnish Cache and core security features for \$149.95/month for 1,000,000 page views, plus unlimited additional page views at \$0.25/1,000 pages.

The Max plan includes multiple proxies (for example Varnish + PageSpeed + ModSecurity) for \$499.95/month for 1,500,000 pageviews plus unlimited additional page views at \$0.45/1,000 pages.

section.io's pricing is monthly and does not require any commitment. In addition, section.io allows websites to change or remove the reverse proxies they use at any time. section.io regularly adds both open-source and proprietary reverse proxies, so users are always able to take advantage of the most advanced, modern technologies.

Fastly pricing is based on bandwidth served plus requests made and varies by region. For US businesses, the cost is \$0.12/GigaByte for the first 10 TeraBytes served and \$0.08/GB beyond 10 TB, plus \$0.0075 per 10,000 requests. Features including SSL certificates add extra monthly costs of up to several hundred dollars per month.

Fastly does not publicly disclose costs for its WAF, bot blocking, and load balancing tools. DDoS protection services also come at an extra cost which is not shared.

Support

section.io includes support through a live chat system available for all customers during business hours, best-effort support tickets for the Plus plan (average response time under 30 minutes), and 24/7 support for the Max plan.

If a website is experiencing a business critical issue, section.io will always aim to respond as quickly as possible, no matter the level of plan they are on. In addition, section.io offers a one-time enablement training for teams which educates teams on the section.io platform, how to cache correctly, and how to use logs and metrics to troubleshoot issues.

Fastly includes a standard support plan with all accounts which gives users access to web and email support tickets during business hours and incident availability on weekends and holidays. Initial response time is next business day for the standard support plan.

Fastly offers Gold and Platinum support levels which include chat support, 24/7 availability and faster response times for additional undisclosed costs.

Conclusion

At first glance, section.io and Fastly may seem to have similar offerings. However, the level of developer control provided and the choice over what reverse proxies are deployed within each solution differ significantly.

Fastly provides logs and metrics and some developer control over Varnish Cache and their WAF. However, because their WAF is proprietary and their Varnish Cache is a modified version of Varnish Cache 2.1, developers are limited in how far they can configure these systems.

In addition, the Fastly rules-based WAF may require significant developer resource to manage and update rulesets. Fastly offers only one caching reverse proxy, one WAF, and one bot blocking reverse proxy.

By contrast, section.io includes a library of reverse proxies that websites can choose from, including more recent Varnish Cache versions, a choice of WAFs, Front End Optimizations, bot blocking and future proxies to come.

By keeping open-source tools such as Varnish Cache unmodified, section.io ensures developers know exactly what their code is doing and can rely on the open-source community to troubleshoot issues.

section.io also offers developers more control over their configurations by providing a Developer PoP for local testing, real-time metrics, and real user and synthetic monitoring to immediately view the impact of changes. section.io was built to alleviate the issues developers have with traditional CDNs, and the platform gives developers the ability to cache more content and block more malicious traffic without the risks usually associated with CDN deployment.

Although Fastly gives developers slightly more control over configuration than legacy CDNs, for developers to get all the advantages offered through reverse proxies and to remove the risks associated with reverse proxy deployment they need the additional functionality offered by section.io. section.io's combination of agile and DevOps-friendly tools is the only content delivery solution available that enables developers to achieve the highest performance, security, and scalability outcomes possible.

GET IN TOUCH

section.io gives developers complete control over configuration, testing, and global deployment of website security and performance tools.

Leading brands build better websites with section.io because they can cache more content, integrate changes with modern agile and devops workflows, and prevent more attacks before they occur.

To speak with a section.io representative or see a demo of the section.io platform please contact sales@section.io or visit section.io/contact-us.

If you'd like to get started yourself, visit section.io/sign-up.