

FROST & SULLIVAN

SECTION

2022
NEW
PRODUCT
INNOVATION

NORTH AMERICAN
KUBERNETES INDUSTRY

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Section excels in many of the criteria in the Kubernetes space.

AWARD CRITERIA	
<i>New Product Attributes</i>	<i>Customer Impact</i>
Match to Needs	Price/Performance Value
Reliability	Customer Purchase Experience
Quality	Customer Ownership Experience
Positioning	Customer Service Experience
Design	Brand Equity

Match to Needs

Kubernetes is an open-source platform developed by Google in 2014 to better manage the services and

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**- Michael Valenti,
Senior Research Analyst**

workloads that are bundled into containers to improve development speed, operational efficiency, and mobile flexibility. The advantages of Kubernetes include automating rollouts and rollbacks as well as bin packing, load balancing, replacing failed containers, and maintaining configuration management secrecy.

However, as enterprises move their computer processing to the edge of their networks to improve efficiency, performance, resilience, scaling, and usability, the deployment of Kubernetes gets quite complicated. Organizations often need to change tools or workflows, making them hesitate to deploy Kubernetes at the edge.

In response to these challenges, Section.io Inc. (Section) of Boulder, Colorado, has developed the Kubernetes Edge Interface (KEI) as a software-as-a-service (SaaS) which, coupled with their Adaptive Edge Engine (AEE) and Composable Edge Cloud (CEC), enables customers to easily deploy workload to a dynamically optimized Kubernetes platform at the edge. The reduced burden on development teams to manage Kubernetes and trying to choose the optimal deployment footprint frees them up to focus on improving the applications instead.

Positioning

Unlike other competing solutions that deploy to multiple clusters, Section's platform deploys application workloads across a dynamic and distributed edge of hundreds of clusters as if it were a single cluster. This enables development teams to continue using familiar tools and workflows, like kubectl or Helm, to deploy their application to multiple clouds, regions, and provider networks.

IT teams interact with deployed applications as though they were running on a single cluster. Section's patented Adaptive Edge Engine (AEE) will use policy-driven controls in order to automatically adjust, tune, and optimize application workloads in the background across the company's Composable Edge Cloud (CEC).

Companies can achieve best-in-class quality by equipping their product or service with a full complement of features and functionalities. The Section KEI is a stellar case in point. The solution's powerful control enables developers to configure service discovery, so that users will be routed to the optimal container instance — something other competing solutions are simply unable to do. KEI can be used to define such sophisticated applications as the composite applications that comprise multiple containers and define system resource allocations as well. Development teams equipped with the Section KEI are also empowered to specify scaling factors that include the number of containers per location and identify the signals to scale in and out. The consolidated global Kubernetes platform powered by Section's AEE can be used to enforce compliance with geographic boundaries or other network requirements. In addition, Section KEI means the application code and configuration and deployment manifests remain in the users' proprietary code management systems and image registries so there is no need for users to change existing development and operational processes. Not least, the Section platform controls container scheduling, performs health management, and routes global traffic optimally.

Reliability

Section is able to meet and even exceed customer expectations for the reliability of its platform by leveraging its AEE. This solution takes a computational approach to optimizing distributed infrastructure in terms of compliance, cost, performance, and user experience. Frost & Sullivan points out that Section equips its AEE with novel features other competing solutions do not possess, including a location optimizer to select where to run a workload on a minute-by-minute basis, an endpoint controller to run the right workload on the ideal amount of computing in each location as directed, and a traffic director to send app requests to the optimal location. These automated functions would ordinarily be manually accomplished by human operators, and thus Section's approach saves time and labor and removes the possibility of human error.

Price/Performance Value

Frost & Sullivan analysts conclude that the Section platform provides the best value for its price compared to competing market offerings by empowering customers with the freedom of choosing the intent for their application. For example, they can direct an app to run in at least 30 locations, including in specific locations with no traffic, and run to end users continually or only during specified times. Users can set parameters according to cost, such as running apps at the lowest possible cost or, conversely, at whatever cost needed to reach as many locations as possible.

This capability is proven to significantly improve performance. Section performed a load test of its KEI process and found that, compared to predecessor software, an app being run responded seven times faster, or in one-seventh the time, without using any more CPU and RAM.

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Customer Purchase Experience

A number of Section platform customers have reported their positive experiences with using the Kubernetes solution. One such customer is Kentik in San Francisco, California, a global network observability platform that found it crucial to deploy on the cloud and put networking infrastructure deep into the Internet. Section enabled Kentik to quickly and easily deploy to edge locations without investing and managing multiple deployment processes that other competing solutions would have required. QuantCDN is an Australian/New Zealand/UK-based static web solution and global content delivery network provider. The company’s founder and CEO reported that Section took great pains to scale and manage workloads across multiple regions and multiple clouds that competing solutions would not have been unable to manage, providing the right level of core complexity abstraction to build on.

Big Commerce Technologies, based in Monroe, Louisiana, built an application edge product using Section Edge as a service. Big Commerce in Austin, Texas, also built its Big Commerce Optimization product for edge computing using the Section and custom HTML technologies.

Conclusion

Frost & Sullivan has tracked the prevalence of containers, which have become ubiquitous in data networks, and the growth of Kubernetes to better manage those containers. Most customers are wary of running Kubernetes - but still want the benefits that a well-orchestrated management system provides. This is leading enterprises to seek ways to deploy Kubernetes solutions that they can customize, repeatedly if desired, to improve container management.

This is the hallmark of the Section solution, which automates the management of containers using easily adjusted parameters to meet the customer’s specific needs and constraints. This, along with the high level of customization and automation of manual tasks provided by the Section KEI solution, earns Section the 2022 Frost & Sullivan New Product Innovation Award in the North American Kubernetes industry.

What You Need to Know about the New Product Innovation Recognition

Frost & Sullivan's New Product Innovation Award recognizes the company that offers a new product or solution that uniquely addresses key customer challenges.

Best Practices Award Analysis

For the New Product Innovation Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

New Product Attributes

Match to Needs: Customer needs directly influence and inspire product design and positioning

Reliability: Product consistently meets or exceeds customer performance expectations

Quality: Product offers best-in-class quality with a full complement of features and functionality

Positioning: Product serves a unique, unmet need that competitors cannot easily replicate

Design: Product features an innovative design that enhances both visual appeal and ease of use

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

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The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.

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Key Impacts:

- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

