



2013 North American Software Defined Data Center
Management Platforms New Product Innovation Award



F R O S T & S U L L I V A N



50 Years of Growth, Innovation & Leadership

New Product Innovation Award Software Defined Data Center Management Platforms North America, 2013

Frost & Sullivan's Global Research Platform

Frost & Sullivan is in its 50th year in business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The company's research philosophy originates with the CEO's 360-Degree Perspective™, which serves as the foundation of its TEAM Research™ methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2013 North American New Product Innovation Award in Software Defined Data Center (SDDC) Management Platforms to HP.

Key Industry Challenges Addressed by SDDC Management Platforms

The evolution of IT has created a cyclical, self-imposed challenge. IT-enabled capabilities from simple email and improved connectivity to instant messaging and telepresence have allowed enterprises to become global and do business around-the-clock, enhancing every department from logistics to the c-suite. These improvements, along with increasingly interdependent economic systems, have helped create global competition for finite customers and resources. With this pressure to compete, businesses turn back to IT for help in driving top-line business results.

IT must continually respond to this pressure by driving new innovation and efficiency through the services it provides, despite stagnant budgets, staff working in outdated comfort zones, and little time or resources to educate them about something new. Old modes of configuring and working in technology are not sustainable in light of current, and future, demands. Technology must be in a constant state of improvement to meet business needs.

There is a new technology model that is enabling business results. The software-defined data center, or SDDC, follows virtualization and cloud computing in IT's current technology evolution. By enabling all data center components to be defined in software, delivered as a service, and managed by a robust orchestration platform, IT is able to maximize its infrastructure and scale services as needed, while making them as effective and efficient as possible. Frost & Sullivan notes that its value lies in the ability to deliver applications and data to users more quickly, efficiently, and effectively than ever before, while reducing the overall data center footprint. Application and service optimization and delivery is at the heart of the SDDC's value proposition.

What makes an SDDC successful is the infrastructure management and orchestration capabilities that it offers. Frost & Sullivan firmly believes that a successful provider will transcend virtualization and offer a robust, open management platform: a platform that allows IT to manage multiple clouds—either private or hybrid, regardless of provider—and optimize application delivery in order to provide the best possible experience, all through a single user interface.

Key Benchmarking Criteria for New Product Innovation Award

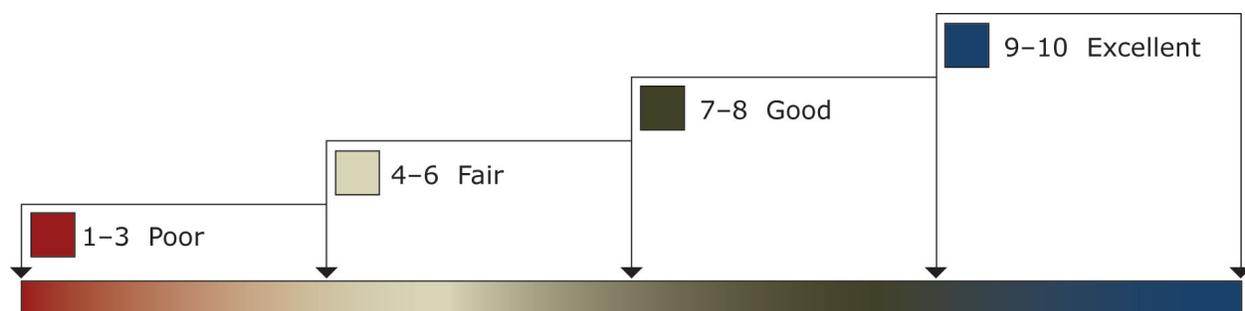
For the New Product Innovation Award, the following criteria were used to benchmark HP's performance against key competitors:

- Innovative Element of the Product
- Leverage of Leading-Edge Technologies in Product
- Value Added Features/Benefits
- Increased Customer ROI
- Customer Acquisition/Penetration Potential

Decision Support Matrix and Measurement Criteria

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Matrix (DSM). The DSM is an analytical tool that compares companies' performance relative to each other with an integration of quantitative and qualitative metrics. The DSM features criteria unique to each Award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. Fundamentally, each DSM is distinct for each market and Award category. The DSM allows our research and consulting teams to objectively analyze each company's performance on each criterion relative to its top competitors and assign performance ratings on that basis. The DSM follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are shown in Chart 1.

Chart 1: Performance-Based Ratings for Decision Support Matrix



This exercise encompasses all criteria, leading to a weighted average ranking of each company. Researchers can then easily identify the company with the highest ranking. As a final step, the research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

Chart 2: Frost & Sullivan’s 10-Step Process for Identifying Award Recipients



Best Practice Award Analysis for HP

The Decision Support Matrix, shown in Chart 3, illustrates the relative importance of each criterion for the New Product Innovation Award and the ratings for each company under evaluation. To remain unbiased while also protecting the interests of the other organizations reviewed, we have chosen to refer to the other key players as Competitor 1 and Competitor 2.

Chart 3: Decision Support Matrix for New Product Innovation Award

<i>Measurement of 1-10 (1 = lowest; 10 = highest)</i>	Award Criteria					
	Innovative Element of the Product	Leverage of Leading-Edge Technologies in Product	Value Added Features/Benefits	Increased Customer ROI (small change)	Customer Acquisition/Penetration Potential	Weighted Rating
Relative Weight (%)	25%	25%	20%	15%	15%	100%
HP	10	10	9	10	9	9.65
Competitor 1	8	9	7	7	6	7.60
Competitor 2	4	3	3	3	4	3.40

Criterion 1: Innovative Element of the Product

HP has a new infrastructure orchestration platform that was launched in late September 2013. Branded as [HP OneView](#), the platform is an integrated management offering designed to manage HP infrastructure across compute, storage and networking today, but is swiftly moving toward multi-cloud management for both physical and virtual environments from multiple vendors through a single user interface. Developed using open standards and modern APIs, it allows IT organizations to efficiently provision and manage an entire environment through a single management platform. It can also automate security and compliance resulting in considerable time savings and risk reduction from human induced errors. HP OneView relies on representation state transfer, or RESTful, API, enabling easier management of environments including mobile or social components that also rely on the REST protocol. HP OneView is part of HP's overall software offering and moves the company closer to an application-centric mode of data center operation and management.

Frost & Sullivan recognizes that HP does have competitors in market. The first has similar capabilities as HP, but it is not based on open standards. In a recent Frost & Sullivan survey of business cloud users, 39 percent stated that they expect a cloud to integrate with their current data center environment, validating that many users implement cloud and SDDC environments alongside their existing environments. As such, Frost & Sullivan believes that providers which offer interoperability only rather than completely open standards will not be as successful.

The second competitor offers management based on open standards, but overall management capabilities are not as robust and do not provide as broad a set of capabilities with regard to IT lifecycle management as HP's offering. It only manages network performance, rather than the entire IT environment.

Criterion 2: Leverage of Leading-Edge Technologies in Product

HP OneView management platform is designed not only on industry standards, such as the Advanced Message Queuing Protocol also used by OpenStack, but also on RESTful protocol API. RESTful APIs rely on resources that use universal, HTTP-based identifiers. The resources are all able to communicate with each other using these global identifiers. As such, an application can interact with a resource by knowing two things: the identifier of the resource and the action required—it does not need to know whether there are caches, proxies, gateways, firewalls, tunnels, or anything else between it and the server actually holding the information. RESTful APIs allow for far easier interoperability between data center components.

The first competitor uses RESTful API however, its lack of open standards makes it less effective at managing the hybrid IT environments that many migrating to SDDC have in their data center.

The second competitor does not use RESTful API, relying instead on different interfaces for its management system. This makes it more difficult for this competing management platform to effectively manage multiple SDDC components.

Criterion 3: Value Added Features/Benefits

Frost & Sullivan finds that HP's infrastructure management platform offers an excellent graphical user interface (GUI) to help users navigate the platform, with easy-to-use features such as: unified dashboard that shows the current, complete data center environment in simple, intuitive layout a search function inspired from industry leading internet search providers that allows administrators to predictively find and access key events or device information in a matter of milliseconds; an innovative map view that visually shows the relationships and dependencies between every endpoint in the data center; activity feed that allow for quick, easy, and real-time IT team collaboration; and finally, SW defined infrastructure templates that capture and catalog best-practice deployment scenarios and enables them to be executed as repeatable processes.

HP's first competitor has automation features, but does not include in-platform collaboration, a key feature to help reduce provisioning time when several teams must work on a component concurrently before provisioning can be completed.

The second competitor offers fewer features, and its GUI is less intuitive and more difficult to understand. It does not include extra tools to enable IT collaboration, quick information gathering or sharing, or templates that enable best-practice deployment.

Criterion 4: Increased Customer ROI

Clearly, with the global competition and decreased resources that businesses face, providing strong ROI and low TCO are important factors to consider when considering any technology investment, and infrastructure management platforms are no exception.

The HP OneView platform speeds provisioning and delivery of infrastructure components, reducing the man hours to manage such processes manually while also reducing costly mistakes. It also allows for greater visibility into the entire data center—whether virtual or physical—and enables users to maximize their resources and reduce over-buying on unnecessary components. HP reports that it collaborated with approximately 150 customers in the development of the HP OneView platform. During that development, those customers reported migration as being five times faster than with manual operations, server configuration as being nine times faster as compared to manual configuration, and network configuration as being 24 times faster than manual configuration. According to HP, these users also reported a 42 percent lower TCO and a 220 percent ROI when utilized with HP's BladeSystem offering.

Frost & Sullivan research reveals that neither competitor whose infrastructure management platforms were held up against HP OneView report improved customer ROI. Because HP OneView has the benefit for being developed within a customer-tested framework, HP has ensured that the TCO and ROI are compelling to potential customers.

Criterion 5: Customer Acquisition/Penetration Potential

Technology that enables business to do more with less, makes processes more efficient and helps optimize IT resources will clearly have potential for customer adoption. In cloud computing, interoperability and the open standards are often hallmarks of successful technology: because business rarely engages in a traditional “forklift upgrade” when it comes to virtualization, cloud, and newer data center technologies like the SDDC, management platforms that can successfully manage a myriad of cloud components from a variety of providers are likely to be the most successful and penetrate the market better than competitors.

HP has gone to great lengths to ensure the interoperability of its HP OneView management platform. It is designed on industry standards and makes use of RESTful APIs, ensuring that it can work with any other service that adopts these open industry standards. Looking to the future, HP has successfully engineered an SDDC management platform that both meets today’s needs and has the needed extensibility to meet the needs of future in a platform that is capable of effectively managing a hybrid environment.

While the first competitor has designed its platform to be interoperable with other major cloud providers, it is not designed on open, industry standards and therefore it is not guaranteed to work with providers and platforms that work under industry standards, including OpenStack, either today or in the future.

The second competitor’s management platform is based on open standards, its limited capability to manage only virtualized networking and computers make it a less likely choice for businesses that want to manage an entire environment through a single pane of glass.

Conclusion

Automation and management are the glue that holds an SDDC. Without strong management and orchestration capabilities, businesses that employ virtualization are simply extending the value of that technology without realizing the full value that the SDDC provides. HP offers robust, open management platforms that allow IT to manage converged environments and accelerate application delivery in order to provide the best possible experience and will enjoy the greatest success of their SDDC management service.

HP has gone to great lengths to develop an SDDC management platform that is based on open standards and RESTful API to ensure interoperability in most hybrid SDDC environments. Frost & Sullivan's independent analysis of the Software Defined Data Center

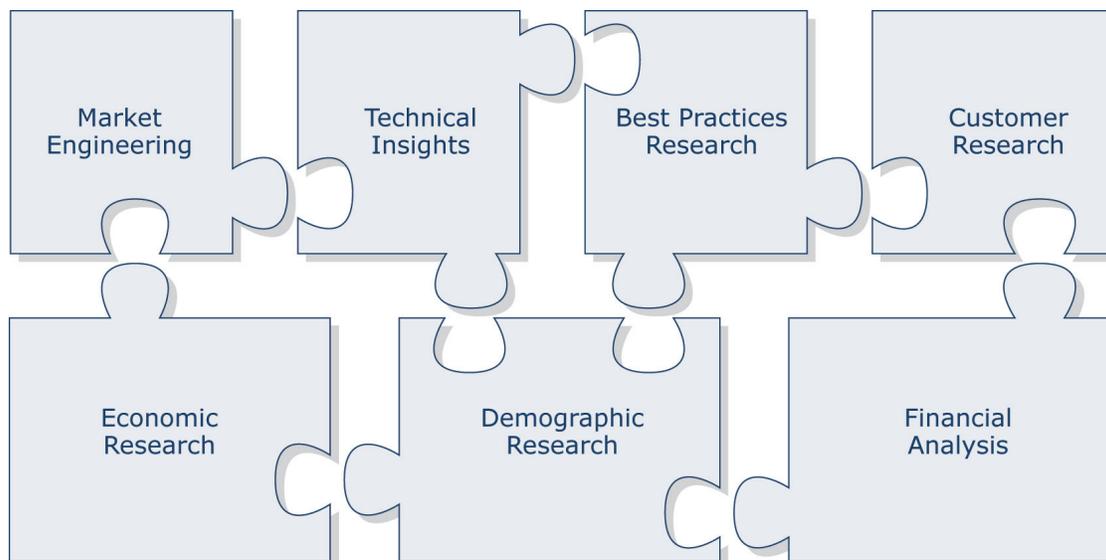
Management Platforms Market clearly shows that HP offers the most comprehensive and open SDDC management platform available in the market today and will capture a strong market share with the HP OneView service.

Based on the aforementioned criteria, Frost & Sullivan is proud to present the 2013 North American New Product Innovation Award in Software Defined Data Center (SDDC) Management Platforms to HP. If you would like to experience HP OneView, [take a tour](#) today!

Critical Importance of TEAM Research

Frost & Sullivan's TEAM Research methodology represents the analytical rigor of our research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all seven of Frost & Sullivan's research methodologies. Our experience has shown over the years that companies too often make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Frost & Sullivan contends that successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. In that vein, the letters T, E, A and M reflect our core technical, economic, applied (financial and best practices) and market analyses. The integration of these research disciplines into the TEAM Research methodology provides an evaluation platform for benchmarking industry players and for creating high-potential growth strategies for our clients.

Chart 4: Benchmarking Performance with TEAM Research



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.