Managing Infrastructure for Rapid Growth with HPE OneView

July 2018
Sponsored by Hewlett Packard Enterprise (HPE)

Introduction

Opus Interactive has provided cloud hosting and colocation services, supplemented by backup and recovery services, for more than 22 years. The Hillsboro, Oregon, company serves a broad range of customers, primarily in the technology, healthcare, finance, and government markets. High demand for Opus' services has resulted in 30% annual growth over the past five years.

The need to provide the underlying infrastructure for cloud hosting in such a high-growth environment places demands not only on the equipment used but also on the people involved in managing and supporting the large number of servers in four datacenters.

The datacenters are high-density facilities with processing power based on blade computers primarily from Hewlett Packard Enterprise (HPE). Managing the processors and associated operating environments is a complex task, especially when Opus needs to maintain its infrastructure in order to adhere to service-level agreements (SLAs) with more than 300 customers. Each chassis has an Onboard Administrator module and a Virtual Connect module for networking, but they are basic management products that do not provide a central view of the entire system.

Opus engineers used these standalone management tools on an ad hoc basis. When the company was smaller, this was not a challenge because engineers could monitor and manually take care of virtually any chassis in a datacenter. "We needed to be able to do more with less," explains Eric Hulbert, president and cofounder of Opus Interactive. "We wanted to get as much infrastructure and as many customers managed by each engineer or administrator as possible so it would be easier." In addition, the dramatic increase in the volume of components took too much time to manage. As Opus looked for a comprehensive management system, the company also saw the advantages of having a single point of contact to manage its entire infrastructure.

To streamline the management tasks and provide a unified view of all equipment, firmware, and networking, Opus selected the OneView infrastructure management solution from HPE.

Solution Snapshot

Organization: Opus Interactive
Operational challenge: Streamline infrastructure management in rapidly growing hosting and colocation service provider
Solution: OneView infrastructure management environment from Hewlett Packard Enterprise (HPE)
Benefit: OneView provides a method for managing Opus' flagship datacenter, and the company plans to expand use of the management system throughout its U.S. operations. OneView helps this small business manage more than 300 clients by providing automated management of servers, firmware, and networks so staff can service more customers per person. In addition, OneView provides a centralized view into the infrastructure and a single point of contact for all management activities, saving time and enabling Opus to better meet its SLAs.
Implementation

As blade servers were continuously added to meet growing demand, configuration and infrastructure management was becoming increasingly difficult. Engineers would have to determine which group the servers were in and provide direct administration for that group, including incorporating hardware and firmware into the network. As a small company, Opus did not have a large team dedicated to infrastructure management; the staff was made up of skilled generalists who became familiar with specific configurations as needed. Providing training and documentation became a difficult task as the datacenters grew.

One challenge was the lack of a centralized console for management, so the staff had to work locally and find ways to link separate chassis and infrastructures together. If there was an issue, administrators first had to determine in which server group the problem resided. Then, knowledge of a particular application or client hosting system could possibly be limited to the last administrator to work on that environment. This added time to solving issues. "We essentially went from having no tools or using HPE's server management tools," says Hulbert. "But they were standalone administration units and only sometimes provided a unified view. When Version 3.0 came out, we decided to put our infrastructure into OneView instead."

Most of Opus' use of HPE OneView centers on configuration and infrastructure management. First and foremost, HPE OneView provides a centralized view of all the Opus servers across all of the chassis, giving staff an easier way to manage and monitor equipment. This automates the expansion process because HPE OneView "sees" new servers and incorporates them into the management infrastructure. The management environment can give authorized administrators access to any server and supporting networks and then enables them to perform multiple tasks right away.

Because the company has grown so rapidly, HPE OneView has been a big help in staff education. According to Hulbert, "Some of our administrators aren't as familiar with all aspects of managing our infrastructure, but OneView provides a single place to go for reference. In addition, because everybody touches the infrastructure every day, time is extremely important, and OneView also enables us to automate several processes."

Currently, Opus is using HPE OneView in its flagship datacenter. The company plans to expand the management environment into another existing datacenter within two months. HPE OneView is now so successful that Opus will include the system with all new infrastructure as it is added. In addition, Opus is looking to incorporate HPE OneView's Global Dashboard to further consolidate management of all datacenters from a single location.

Challenges

Because Opus essentially started from no centralized management system, the biggest challenge when implementing HPE OneView was determining which existing tools and processes should be incorporated into or replaced by the infrastructure management environment. As a hosting and colocation provider with SLAs to maintain, Opus could not shut down processes to install HPE OneView, so these decisions needed to be made up front.

Similarly, training staff was important because administrators and engineers needed to automatically switch to the new environment while still serving customers. In addition to needing to learn how HPE OneView worked, staff had to change how they managed the infrastructure, which sometimes can be difficult — especially when working in a hectic environment. While everyone knew the new system would provide benefits, old habits die hard.
Benefits

Since Opus switched to HPE OneView, the biggest benefit has been the ability to do more in less time. Before the management system was installed, all additions to the network required manual work to install the firmware updates, build the networks, and then create the settings for use. With HPE OneView, the process is automated. "As a small company, the ability to automate caters to the speed and flexibility of our customers," says Hulbert. "We can roll out equipment for our customers quickly. For example, we can develop one template for a group of servers and then roll it out to 10 customer applications identically. A lot of times you hear stories of IT departments taking weeks or months to roll out something new. We use OneView to help us basically launch in days."

Another benefit is that HPE OneView creates an environment that is less dependent on any single person. Previously, the person who built a group or chassis was the "expert." Now, with the information and tools found in HPE OneView, anyone can use the management environment to become the expert, providing better customer service faster. There also is added consistency. HPE OneView enables all engineers and administrators to implement changes and fixes in the same way, eliminating minor infrastructure variations. Simple tasks such as configuring profiles and linking networks to blade servers are made easier, and Opus staff can even move servers to different groups without having the deep level of manual recalibrations typically needed.

Moreover, with a simplified view of multiple groups and, eventually, all datacenters, Opus can ensure seamless connections across multiple networks. One user interface can be used to gain access to all equipment for asset management, inventory, and location tracking. "OneView enables us to do more with less," concludes Hulbert. "In order to maintain our level of service as we continue our rapid growth, we need to get as much infrastructure and as many customers managed per engineer or administrator as possible. Because it is now easier to manage all our devices, OneView makes this happen."

Methodology

The project and company information contained in this document was obtained from multiple sources, including information supplied by HPE, questions posed by IDC directly to Opus employees, and Opus corporate documents.