Case Study

Genesis Hosting Solutions

Networks have traditionally been designed for resiliency, not for flexibility, and often performance suffers as the network grows and becomes increasingly complex and fragile. Service providers targeting enterprises operate “networks within networks” and are particularly challenged with the costs and issues of maintaining and scaling these complicated infrastructures.

Genesis Hosting Solutions, a virtual infrastructure hosting company headquartered in Chicago, IL, is focused on enterprise customers who require high availability for their applications. Genesis is tuned to the individual needs of these enterprises, offering personalized infrastructures, including a new, unique service leveraging VMWare to deliver instant cloud environments. To facilitate their growth and implement a manageable, flattened network structure with secure multi-tenant virtual networks, Genesis chose NEC ProgrammableFlow, now working in production at Genesis.

Challenges

Genesis is proud of their ability to offer high quality services for prices that are competitive and easy to understand. Their focus on high availability and quality service has laid the groundwork for continued expansion and growth. Yet their network infrastructure was expensive to maintain and a bottleneck to supporting next generation IT and business expansion.

“The ability to manage a large number of customer virtual environments, providing 5 nines of availability without complexity, was the goal.

“Trying to manage a large service provider network is difficult with the tools available today. The complexity is beyond reasonable. Others are managing this by creating segments. We sought a single pane view of our network with centralized management,” stated Eric Miller, CEO of Genesis Hosting.
Solution

Genesis looked at other, competitive network offerings, seeking a solution to their challenges. “We wanted the same level of reliability at the edge as at the core,” says Miller, “We saw OpenFlow, and preferred the open architecture, and with NEC offering ProgrammableFlow, it was a no-brainer. “

The ProgrammableFlow controller and ProgrammableFlow 5240 switches are installed today in production at Genesis. All customer traffic, virtual routers and virtual machines are now being run through ProgrammableFlow.

Focused on application availability, ProgrammableFlow was also a natural choice, with the ability to conduct automated application control and performance. Once business policy is defined within the controller, network hardware becomes self-repairing, supporting Genesis’ high availability objectives. ProgrammableFlow is a great match for a company self-described as “devoted to providing highly available services.”

Results

Genesis Hosting Solutions has noted multiple significant benefits from ProgrammableFlow:

- Integrating into Genesis’ existing infrastructure, ProgrammableFlow is seamlessly interoperable with the legacy environment, establishing a foundation for reduced network complexity at Genesis.
- ProgrammableFlow multi-tenant virtual networking provides the company with new avenues of growth and revenues.
- Software development resources have been reallocated to other corporate needs, since ProgrammableFlow requires 50% less administration than the legacy network with even less administration as the network grows.
- Self-repair capabilities of ProgrammableFlow supports 99.999% availability.
- Increased IP efficiency, up to 60%, will allow Genesis to potentially double the number of small business customers they can serve with their existing public IP addresses.
- “Genesis is enjoying a new ease of configuration and expansion. We can grow our business because the network automatically configures itself as we add new switches,” concludes Miller. “We look forward to expanding our use of ProgrammableFlow, and fully experiencing the benefits this family of products can bring.”