



Case Study:

Genesis Hosting

Background

Genesis Hosting Solutions is a leading provider of hosting solutions for businesses of all sizes since 1997.

Genesis specializes in delivering solutions that have been tuned for CIOs, IT managers and system administrators. Genesis takes pride in delivering best-in-class availability and performance, with above-industry standards for reliability and customer-centric support.

While already providing VMware-based solutions, Genesis was looking to add open cloud services to their customer base for some time, but the existing open cloud solutions did not meet Genesis' expectations for stability, performance and reliability needed for their public cloud service.

Due to the complexity of managing the lifecycle of all OpenStack components, including installation, maintenance, upgrades, patches, deprecation and finally, removal of each component, Platform9 was the answer. With their fully SaaS-managed OpenStack product, Genesis was able to significantly reduce their administrative overhead, allowing them to focus on infrastructure management, network architecture and storage optimizations.



Platform9 has helped us achieve our goal, allowing us to concentrate on automation of the installation and management of the physical hardware, network architecture and storage components while dealing with the heavy lifting of the OpenStack component lifecycle.

Open source solutions help Genesis differentiate their offerings from public cloud providers. Genesis examined several deployment approaches, including rolling out their own OpenStack deployment, but wanted to offer a complete managed solution in a relatively short amount of time. Fast, automated deployment of OpenStack, support for a wide variety of OpenStack features, open APIs to work with 3rd party integrations, being software and infrastructure-agnostic, were all important considerations.

After evaluating several OpenStack vendors, Genesis Hosting selected Platform9 for SaaS-managed OpenStack, Midokura for software-defined networking and Blockbridge for software-defined storage.

They were also looking for a more resilient and scalable platform that supported on-premise, hybrid clouds. Through the SaaS-managed OpenStack solution, Platform9 provides a seamless, single-pane of glass management for hypervisors and containerized microservices. Another advantage that Platform9 provides is their growing partner ecosystem. Platform9 has been proven in production and has previously deployed networking and storage integrations from Midokura and Blockbridge, respectively.

Highlight on Blockbridge

In moving from managed services to cloud, Genesis had to re-think storage. Blockbridge was the only solution that allowed Genesis to deliver high-reliability, high-performance, low-latency, high-throughput, multi-tenant



service controls and encryption at-rest. Blockbridge brought new life to the existing SAN footprint while providing a migration path to commodity-only. Using Blockbridge software, Genesis now provides uniform support for Docker, OpenStack and VMware in an infrastructure comprised of heterogeneous resources.

Blockbridge is a scalable elastic block storage solution that provides AWS-like storage service controls, mobility and economics. It uses a “federated” storage architecture that addresses the performance and efficiency challenges presented by “distributed-only” storage solutions such as Ceph. Blockbridge delivers high efficiency and performance by controlling data locality. This is different from a Ceph cluster, which distributes data across all Ceph nodes according to policy.

“Distributed storage solutions, including Ceph, were incredibly slow in terms of latency, required large amounts of network traffic to continuously move data around as the topology changed and were derived from a large number of software layers that contributed to unnecessary complexity. For SSD based infrastructure, solutions like Ceph were simply not economical. This is where Blockbridge shines, utilizing all of the benefits of high-performance SSDs while providing low-latency access times”, said Eric Miller of Genesis.

Highlight on MidoNet

MidoNet is open source network virtualization overlay software. With its distributed architecture, MidoNet allows enterprises and services providers to build, operate and manage virtual networks at scale. IDC has reported that organizations that have undertaken network virtualization initiatives needed **67%** less time to deploy business applications and **65%** less time to deploy new networking equipment. MidoNet enables server and network engineers to create network services and automates network provisioning for new applications, allowing them to run all types of containerized and hypervisor-based workloads on a single network.



The combination of Platform9, MidoNet, and Blockbridge has given us a powerful combination of tools that has helped Genesis get to market quickly and reliably, all with a support ecosystem that we can count on. This has led Genesis to offer a packaged,

complete solution based on these three components, hosted at Genesis’ data center in Chicago, or on-premise using the knowledge gained and automation Genesis built to deploy the entire solution in days instead of months, resulting in a quickly deployable, multi-tenant private cloud solution that is scalable beyond any existing private cloud architecture available on the market today.

Solutions Benefit to Genesis

More Operational Efficiency: Simultaneous deployment of infrastructure components related to Compute (Platform9), Network (Midokura) and Storage (Blockbridge) saved significant time.

Faster Issue Resolution through cross-functional collaboration and knowledge-sharing among infrastructure teams. It used to be difficult and time consuming to resolve service outages. With an integrated software defined infrastructure solution, what used to take hours of troubleshooting can now be resolved faster with the combined solution and better teaming.

Faster Time to Value with the Flexibility of the SaaS Model: Unlike DIY or legacy distribution with complicated setups, SaaS solutions from Platform9 can deliver value quickly without the administrative overhead.

Technical Superiority of Open Source: In terms of feature enhancements and receiving full commercial support from leaders in the software defined networking, OpenStack and MidoNet have been tested and proven in tens of thousands of deployments worldwide.

Increased Return on Investment: By investing in Platform9's OpenStack SaaS offerings, Genesis Hosting is able to save on costs for training and hiring OpenStack specialists, while meeting SLAs set by its clients.

Open APIs: Open APIs that provide flexibility to deploy various types of infrastructures, avoid vendor lock-in and last, but not least, enable automation. The open source nature of the project also means that a community of software engineers are optimizing and debugging the codebase more efficiently than would be possible in a traditional software development and support model.

Reasons for choosing the category leaders

- Feature-rich, highly scalable solution with pre-tested 3rd party integrations
- Faster implementation than assembling standalone, open source components
- Vendor-enhanced functionality, like monitoring, logging, beyond open source
- Support for low latency environment, especially important for high-speed networking (56 Gbps) and high speed SSD storage
- Data security features enabling encrypted at rest and encrypted-in-transit storage
- Fine-grain security policy enabling micro-segmentation and network isolation

