K3 MSP Cloud Services Achieves Secure Segmentation Across Network Environments with Hillstone CloudHive

The Customer

K3 Cloud Services is a UK-based managed service provider (MSP) that delivers first-class business technology solutions for domestic and international customers. K3 Cloud Services is part of K3 Business Technology Group (K3 BTG), the UK's leading solution provider for integrated business technology systems with more than thirty years. The K3 cloud offers both hosted and managed virtual private cloud solutions including Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS).

The K3 cloud serves clients' line-of-business applications and data needs via multiple ISO-certified data centers and specializes in making customers' applications run faster and with less downtime. In addition, the K3 cloud provides enterprise-class infrastructure security to meet stringent risk and regulatory requirements, easy accessibility via hosted desktop, the ability to scale up/down as needed, and attractive flat-rate pricing with no micro-transactions.

The Challenge

K3 Cloud Services customers span a variety of industries, including retail, manufacturing, non-profits and other organizations. In addition, the K3 cloud hosts business applications and data for its parent company, K3 BTG. From the beginning, the K3 Cloud Services team has had a strong focus on network and data security to protect the vital business assets of their customers and to help meet risk and regulatory requirements.

The shared nature of virtual private clouds presents challenges, however. Each customer environment hosts its own sensitive data and applications, and the K3 cloud also hosts horizontal applications that are shared across multiple customers. In order to assure the highest levels of security, customer environments and shared applications must therefore be segregated. A variety of perimeter and internal security technologies and strategies were already in place, but hackers are increasingly using lateral attacks (between VMs) to carry out data exfiltration and other exploits. The K3 cloud team determined that a micro-segmentation solution was needed to further protect customer applications and data. The primary goals of micro-segmentation included:

- To meet compliance requirements, traffic within subnets must be controlled based on granular policies with adequate controls to segregate the environments and protect against cross-environment traffic
- To securely segment internal group applications and multi-tenant customer environments
- To insert a robust security framework at the infrastructure level that is transparent to the virtual servers that are being protected

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The Solution

After extensive research, the K3 Cloud Services team ultimately chose Hillstone Networks' CloudHive, which secures and protects each virtual machine (VM) in a cloud environment. Like almost all MSPs, the K3 cloud includes a test and development environment as well as the production environment. CloudHive was initially deployed in the development environment, where its capabilities and performance were tested and met all requirements, and it was then deployed in the K3 cloud production environment.

CloudHive provides granular visibility into east-west traffic to defend against lateral attacks, is easily scalable, and is transparent to users and network devices. CloudHive enforces Zero Trust across environments, allowing the K3 cloud team to safely segment vulnerable applications from other systems, and gain visibility and control in their cloud.

Hillstone CloudHive is an advanced security solution designed from the ground up for the demands of virtualized data centers. Using advanced micro-segmentation and a standard cloud orchestration API, CloudHive inserts its monitoring and security capabilities deeply and seamlessly into the virtual environment. It monitors all east-west traffic to detect, isolate and eliminate malware, potential data breaches and other security issues before they can spread across VMs, tenants and virtual networks.

Perhaps most importantly for K3 Cloud Services, Hillstone's CloudHive provides deep visibility into VMs, traffic and applications, right down to traffic types, paths and trends, as well as potential threats both within and outside VMs and virtual networks. This critical data is provided in an at-a-glance dashboard with drill-down capability that allows K3 cloud admins to quickly detect and address anomalies and potential attacks. Performance issues are also identified and displayed, allowing the admins to locate root causes and determine remediation steps.

CloudHive provides security at Layers 2 through 7, with robust firewall capabilities, policy control, session limits, IPS, Attack Defense, Anti-Virus and fine-grained application control. These security features combine to detect potential lateral (inter-VM) movements or attacks. CloudHive includes first-line mitigation to block, mitigate and quarantine potential attacks. Further, CloudHive helps the K3 cloud admins investigate and quickly respond to incidents where, for example, one customer's VM has abnormal traffic to another user's VM.

The CloudHive micro-segmentation solution is scalable, mobile and highly elastic. Policies are bound to every VM and will remain in place even if the VM is moved – without impacting security or application performance. This capability is of high importance in data centers like the K3 cloud's where customers might place multiple orders in a short timeframe. The CloudHive solution can also be easily scaled up or down as needed to address the dynamic data center environment.

Deployment was easy for the K3 cloud team, since the Hillstone solution installs at Layer 2 and does not require any changes to the network topology or existing configurations. It's also important to note that for MSPs like K3 Cloud Services, the total cost of ownership (TCO) and return on investment (ROI) are critical from a business perspective. Flexible, CPU-based licensing models (perpetual or subscription based) helped K3 achieve the lowest TCO in the market and also the quickest returns with CloudHive.

The Conclusion

"We had a tremendous challenge ahead of us that impacted us from multiple angles: compliance, security, customer service levels as well as our overall business. With CloudHive, we have adopted a modern, sophisticated approach to data center security and successfully segmented network traffic and protected customer data," said Craig Bright, IT Infrastructure Manager for K3 Cloud Services. "With Hillstone CloudHive, we have achieved our goals."

MSPs face a highly competitive market in which responsiveness to customer needs and requirements is a key to success. By providing an enhanced security through micro-segmentation technology, as well as the centralized and streamlined management that CloudHive delivers, K3 Cloud Services is well-positioned to meet the security needs of its growing customer base today, and well into the future.

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