When organizations are running business-critical applications or storing and accessing sensitive data, they often need rapid access to flexible and low-cost IT resources. Cloud services from IBM provide the agility, elasticity, capacity, and redundancy required to maintain a competitive advantage in the market. On-demand delivery of these IT resources, with pay-as-you-go pricing, has convinced many organizations to create their servers in or move existing servers to the IBM Cloud—with substantial cost and efficiency benefits.

Some applications and data require additional security due to rigorous contractual or regulatory requirements. Until now, companies had to store sensitive data (and/or the encryption keys protecting it) in on-premises data centers. Unfortunately, this either prevented migration of these applications to the cloud or significantly slowed their performance.

The Gemalto and IBM Solution

Today, IBM and Gemalto have teamed up to provide protection for virtual machines, storage volumes, and encryption keys in the IBM Cloud that is as secure as physical servers and storage in the most robust, secure on-premises environment.

SafeNet ProtectV and SafeNet Virtual KeySecure from Gemalto makes sure your sensitive workloads can migrate to the IBM SoftLayer cloud—no matter what level of security is needed.

**Key Benefits**

**Complete virtual machine and storage encryption:**
- Encrypt entire virtual machines and their associated storage volumes
- No data is written to system partition or storage volume disk without first being encrypted
- Even data stored in the OS partition is secured
- Complete encryption and key management solution can run on IBM Cloud bare metal servers configured with VMware ESXi

**The tools customers need to stay compliant in the cloud:**
- Undisputed command and proof of ownership for data and keys
- Only authorized individuals can launch VMs
- Prevents unauthorized data exposure or super-user abuse
- Helps meet a range of regulations, such as PCI and HIPAA

**SafeNet Virtual KeySecure**
SafeNet Virtual KeySecure, also available in the IBM Cloud, centralizes key management for SafeNet ProtectV-secured virtual instances, as well as other applications and devices, in a hardened software appliance that runs in the IBM Cloud. The combination of SafeNet Virtual KeySecure and SafeNet ProtectV enables organizations to prove ownership of their sensitive data in IBM Cloud environments, increasing security and compliance. SafeNet Virtual KeySecure allows organizations to quickly deploy centralized key management in high-availability, clustered configurations.
Additionally, SafeNet Virtual KeySecure ensures that organizations maintain ownership of their encryption keys at all times by hardening the appliance OS and encrypting the entire virtual appliance.

Maintain Full Data Control Throughout Migration to the Cloud
By encrypting the entire virtual machine, SafeNet ProtectV also encrypts all of the data residing in the instance. Once encrypted, all archives, snapshots and backups of these instances remain secure regardless of their location. Additionally, SafeNet ProtectV’s StartGuard makes it impossible to instantiate without authorization. This feature allows customers to track all encrypted instances even when copied or archived, ultimately providing an audit trail of all actions and copies of the customer’s data.

SafeNet Virtual KeySecure’s role in centrally managing and storing encryption keys for SafeNet ProtectV allows administrators to protect the keys securing the customer’s sensitive data. Its position as the central manager allows it to track all actions pertaining to all copies of data for detailed, robust logging. From SafeNet Virtual KeySecure’s single pane of glass management console, administrators can control access to data by controlling access to keys eventually revoking key privileges in the event of a breach.

Separate Duties Among Administrators
SafeNet ProtectV’s encryption obfuscates data rendering it unreadable to the administrators managing the storage environment. SafeNet Virtual KeySecure places control of the keys needed to decipher the encrypted data fully in the customer’s hands. Deployed together, customers have the ability to separate security and storage duties amongst administrators – both internal and external to the customer’s organization. By bringing these operations fully under their control from a single management point, customers can ensure that privileged users in the cloud pose no threat to the sensitive data.

Conclusion
Gemalto and IBM are making migrating to the cloud easier and more secure by addressing enterprises’ data security and compliance concerns. The IBM Cloud’s high-performance, customizable and geographically dispersed cloud infrastructure offerings are especially tailored to the needs of modern enterprises. SafeNet ProtectV and SafeNet Virtual KeySecure makes it easy for enterprises to move their workloads to the IBM Cloud while preserving full control of their data through the effective and secure management of encryption and the encryption keys securing that data.

To learn more, visit safenet.gemalto.com/partners/ibm/