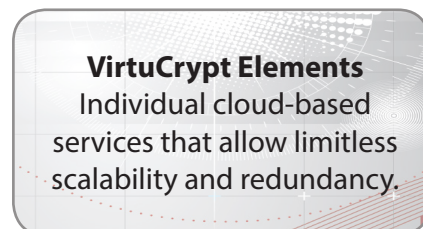


VirtuCrypt Elements - Managed Cloud Services

VirtuCrypt's Hardened Enterprise Security Cloud service offers the robust security of the Futurex Hardened Enterprise Security Platform with the convenience of the cloud. VirtuCrypt differs from traditional cloud services as the only provider of true end-to-end security to protect sensitive information and it allows customers to create fully customized cryptographic cloud environments based on desired functionality. VirtuCrypt service offerings include:



VirtuCrypt services provide organizations with the exact technology they need in the service structure most conducive to their tactical and strategic business objectives. For the VirtuCrypt Elements managed service, it provides an alternative cloud service that allows businesses to add one or more additional cloud-based functionalities such as tokenizing data, verifying transactions, remotely managing cryptographic keys, and other beneficial services.

The VirtuCrypt Elements managed cloud service is a solution designed for businesses seeking to fulfill a specific data processing task and is ideal for organizations who do not have the resources or need for an entire cryptographic platform in the cloud. Integrating VirtuCrypt Elements services into an IT ecosystem is a simple process. Customers can easily set up a connection between their host applications or endpoint devices and the VirtuCrypt Elements services. Through VirtuCrypt's intuitive API, repetitive tasks such as remote key loading, object signing, or PIN validation can be completely automated and would not require any effort on the part of the customer.

Advantages of VirtuCrypt Elements:

Security - Like all other VirtuCrypt services, VirtuCrypt Elements uses Futurex's robust and hardened devices, which are housed in our secure data centers with multi-tiered authentication, dual control-enforced access, and reinforced physical infrastructure.

Compliance - VirtuCrypt's devices meet and exceed all relevant regulatory standards, including FIPS 140-2 Level 3, PCI DSS, and ANSI X9.24 part 1 and part 2. VirtuCrypt takes on the burden of audits and security

measures to help businesses satisfy compliance, which significantly reduces the amount of effort and expense incurred by our customers.

Expedited ROI - VirtuCrypt Elements is highly cost effective to organizations because it removes the financial burden associated with data center maintenance, compliance certification, and man hours for system operation. VirtuCrypt customers simply choose which features to add to their environment and define their required throughput rate, which can be easily modified to accommodate periods of peak usage. This also enables customers to purchase a package of services that fits their exact needs.

Convenience - VirtuCrypt Elements provides organizations with virtually limitless scalability of these services in order to easily fulfill growing business requirements. Customers can also monitor the activity of their VirtuCrypt Elements managed cloud services using the VirtuCrypt Intelligence Portal Dashboard, which provides a single, secure website for reviewing all information related to the selected VirtuCrypt Elements offerings. VirtuCrypt handles the cloud services for you so that you can focus on core business needs.

Individual Elements & Expansion Services

A sampling of the VirtuCrypt Elements managed cloud services are listed below and are offered on a contract length designed to suit customer needs. Expansion services are also offered that allow organizations to integrate more than one VirtuCrypt Elements service into their cryptographic infrastructure.



Remote Key Management

Remote key management securely automates the manual key replacement process by managing and loading cryptographic keys for ATM and point-of-sale terminals from one central location over a secured IP network. This VirtuCrypt Elements turnkey offering decreases downtime and eliminates the costly and burdensome process of manually loading or replacing keys.



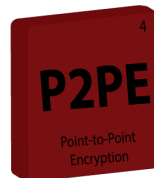
Object Signing

Object signing allows organizations to validate objects such as electronic documents, individual devices, and software/firmware code, which reduces fraud by ensuring authenticity and integrity. This functionality is offered through VirtuCrypt Elements managed cloud services and includes customizable validity periods for signatures as well as online Certificate Revocation List (CRL) and device management.



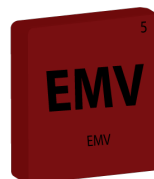
Tokenization

Tokenization is the process of replacing stored sensitive customer data with tokens, which is data that has no intrinsic value. Use this VirtuCrypt Elements service to securely store sensitive data through tokenization, ensuring no data is stored as clear text, reducing your organization's PCI DSS compliance mandates.



Point-to-Point Encryption (P2PE)

P2PE encrypts sensitive data from the Point of Interaction at the merchant until the sensitive data can be decrypted using VirtuCrypt Elements. P2PE functionality enables organizations to significantly reduce their PCI compliance scope and expense and combat attacks that target retailers at the point of sale.



EMV

EMV-enabled payment cards have an embedded cryptographic chip that is used to verify cardholder authenticity and prevent card duplication. The VirtuCrypt Elements EMV service allows organizations to perform card personalization and data preparation as well as transaction validation for card-based and contactless payments using EMV.



Debit Services

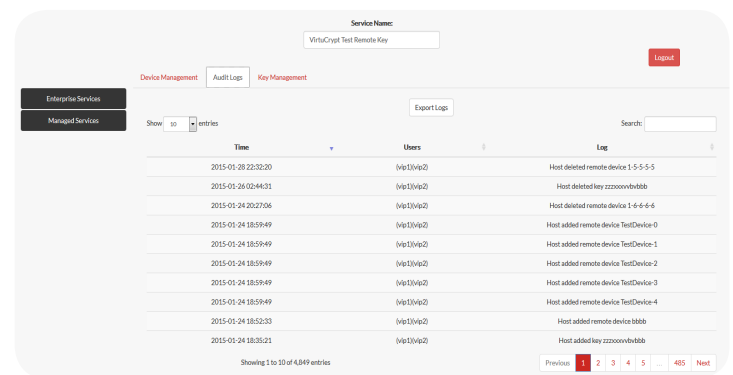
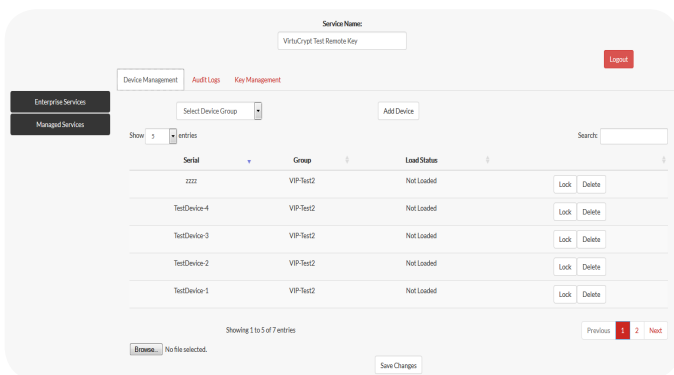
Debit Services translate and validate a customer's PIN information transmitted between the Point of Interaction and the card issuer. The terminal sends the PIN to the card processor in order to translate the PIN, who then sends an authorization request to the issuer to validate the PIN. This VirtuCrypt Elements functionality eliminates requirements for TR-39/PCI PIN audits.

Expansion Services

If more than one VirtuCrypt Elements managed cloud service appeals to your organizational needs, you can acquire expansion services that allow multiple functionalities to be operated and managed from a single VirtuCrypt instance. Each VirtuCrypt Elements service has individual benefits, but combining these offerings can elevate your organization's data security measures and compliance. If you would like to integrate a cloud-based functionality into your cryptographic infrastructure that isn't listed above, please contact one of our knowledgeable Solutions Architect to discuss a customized solution to fit your unique and specific needs.

Managing VirtuCrypt Elements Services Through the VIP Dashboard

Each VirtuCrypt Elements service, along with other offered VirtuCrypt Enterprise and Plus services, can be managed through the VirtuCrypt Intelligence Portal (VIP) Dashboard. The VIP Dashboard allows customers to monitor, configure, operate, and maintain their personalized VirtuCrypt cloud services through a secure, easy-to-use, and intuitive web application.



Upon service activation, customers are given access to the VirtuCrypt Intelligence Portal. This portal provides a way to view all services purchased through VirtuCrypt as well as the ability to manage all selected VirtuCrypt Elements services through a secure, web-based interface called the VIP Dashboard. The VIP Dashboard provides granular control of service components such as device management, key management, and log management and is customizable for organizational needs such as categorizing and naming service groups to simplify managing the VirtuCrypt Elements services.

Other capabilities of the VIP Dashboard include starting new services, stopping services that are no longer required, and scaling current services to meet present, anticipated, and even unexpectedly emergent needs. The VIP Dashboard also allows customers to view account and billing details,

manage monthly quotas, search the VirtuCrypt knowledgebase, submit support requests, manage servers, review audit logs, export reports, receive notifications and set up account alerts, add or delete client devices, monitor service status, and more. New functionalities are being continually added to the VIP Dashboard. Customers gain access to these new features just by logging into the VirtuCrypt Intelligence Portal and accessing their VIP Dashboard.

For organizations that wish to implement VirtuCrypt Elements, the process is simple. Just let us know what functionality you are interested in and our Solutions Architects will develop a plan for seamless integration of VirtuCrypt technology into your core cryptographic infrastructure with a package including access to our web-based resources and scalable service volumes to fit your current and future needs.