

XCrypt Container Encryption for Docker Enterprise from Mirantis

High performance encryption for containers

Zettaset XCrypt Container Encryption provides a first-of-its-kind, software-only encryption solution that protects containers from data theft in any physical or virtual environment. It's transparent, easy-to-deploy, and has a negligible effect on performance as it's software-defined.

The challenges of container security

Containers have gained a lot of momentum in the market because of their many use cases and benefits. But despite their impact, containers also created new security challenges:

- Containers have short lifespans and move fast, so gaining full visibility into what's happening in the environment has proven to be difficult.
- Unlike virtual machines, containers aren't always isolated from each other, so one compromised container can quickly lead to another.
- When it comes to containers, the leading security concern continues to be the security of data that's stored in them.

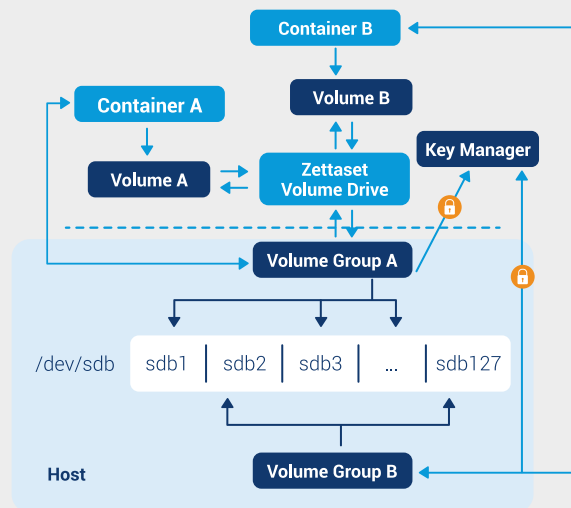
Many organizations rely on access control, monitoring/logging, and existing workload security solutions to protect their container environments, but very few organizations have incorporated encryption because of the performance effect and complexity it often adds. It's for this reason that encryption is consistently the last security solution to make its way into newer technologies like containers.

The importance of encryption for containers

The reality is that critical data resides in containers and it needs to be encrypted to ensure both security and compliance. In a recent study conducted by IBM, the extensive use of encryption, threat intelligence sharing, and integrating security into the DevOps process were all associated with lower than average data breach costs – and among those, encryption had the greatest impact.

A software-only solution for container encryption

XCrypt Container Encryption works seamlessly with major container and orchestration software and scales across on-prem, cloud, or edge deployments.



- 1 Upon creation, containers request a particular-sized encrypted storage volume.
- 2 Zettaset's volume driver requests a volume from the host.
- 3 Zettaset's volume manager constructs a volume from various partitions on the device and creates a volume group.
- 4 The volume manager communicates with the key manager to create a key and encrypt the volume.
- 5 On container destruction, the encryption key is destroyed and volumes are made available again.

Use cases include:

- Ensuring data protection in containers without performance impact
- Securing DevOps procedures across an organization
- Achieving compliance in highly-regulated industries like healthcare and finance
- Achieving internal or corporate security mandates

Container encryption so simple, it's hard not to do it

XCrypt Container is a first-of-its-kind encryption solution built specifically for containers. Because it's software-only, it overcomes the typical adoption barriers for encryption – offering a negligible effect on performance and adding no additional complexity to your container environments.

Zettaset's software-defined solution provides high performance encryption that protects containers from data theft in any physical or virtual environment without performance impact. Its ease of use and intelligence enables pervasive and on-demand encryption that's scalable across any deployment:

- Transparent integration into container software via Zettaset's volume driver
- All required services run in containers – key manager, certificate authority, and license server
- Management of host storage is completely automated
- A dedicated volume group is allocated for each container volume
- Container volumes are cryptographically tied to containers

About Zettaset

Zettaset is a software-defined encryption solution that protects against data theft and can be transparently deployed across all physical and virtual environments. Its products are designed for medium to large enterprises that deal with sensitive information that would expose them, financially and reputationally, in the event of a breach. Unlike traditional solutions that are appliance-based, Zettaset is a cost-effective, software-only solution that is easy to deploy, does not impact performance, and scales with your business from on premise to the cloud.

