

Get more zest out of every byte!



Pay exactly for the storage you need - When you need it

Zesty Disk improves cost efficiency, ensures availability, and reduces the hassle of provisioning and managing EBS infrastructure. Powered by AI, it automatically optimizes storage size to accommodate constantly changing performance requirements, supporting cloud engineers to get the best efficiency out of their infrastructure. As a cloud-native solution with zero footprint, it works within all native policies and SLAs to optimize storage in run time without adding any complexity to your traditional or Kubernetes environment.

The problem

In the risk to application stability - cost always loses

Effectively managing block storage involves a balance between ensuring application stability and controlling costs. Whether your goal is to mitigate the repercussions of fluctuating traffic peaks, ensure always available capacity for data surges, or relieve the burden of on-call alerts, the perennial challenge lies in finding this equilibrium.

The demand for storage performance causes organizations to pay two to three times extra in overprovisioned disk capacity, which most of the time remains idle and wasted, but paid for.

Zesty's solution

Storage autoscaling that improves resilience & cuts costs

With Zesty Disk's unique auto-scaling technology, you'll never need to choose between resilience and cost again. Its powerful AI algorithm responds to changing application demand by automatically adding or removing EBS volumes to the filesystem depending on the amount of ingested data.

Taking the headache out of managing and provisioning storage infrastructure, Zesty Disk ensures optimal management throughout peaks and ebbs in data flows.



"Since we implemented Zesty Disk, we've been able to maintain more than 75% Amazon EBS storage utilization to significantly reduce storage costs."

Derrick Harcey

Chief Architect at

securonix



So why use Zesty's storage auto-scaler?



Reduce Storage Costs: Save on block storage costs by only provisioning the amount of storage that you need.



Ensure Availability and Resilience: Eliminate the risk of “out of disk” failure when the available volume capacity is exceeded or for jobs that create sporadic loads of data. Zesty Disk issues an alert when the disk size has dramatically increased.



Eliminate Manual Effort: Take out the headache of managing and provisioning storage infrastructure by relieving engineers from approximating how much data will be needed to run applications. As Zesty Disk scales synchronously with your application, the necessity to guess capacity needs becomes obsolete.



Manage Volatile Data Ingestion: Steep peaks and troughs of data ingestion can be difficult to manage. Auto-scaling the filesystem so it can shrink and expand makes it possible to seamlessly accommodate changes in data flows, especially when working with thousands of single servers.



Ease Resource Provisioning: Provisioning storage is guesswork. Mitigate the risk of getting it wrong by scaling storage size according to real-time data demand. So there is always just enough capacity, whenever it's needed.



Real-Time Monitoring and Visibility: Get actionable visibility into storage waste in your cloud infrastructure, remove idle or rarely used EBS and monitor block storage for volume fluctuations.

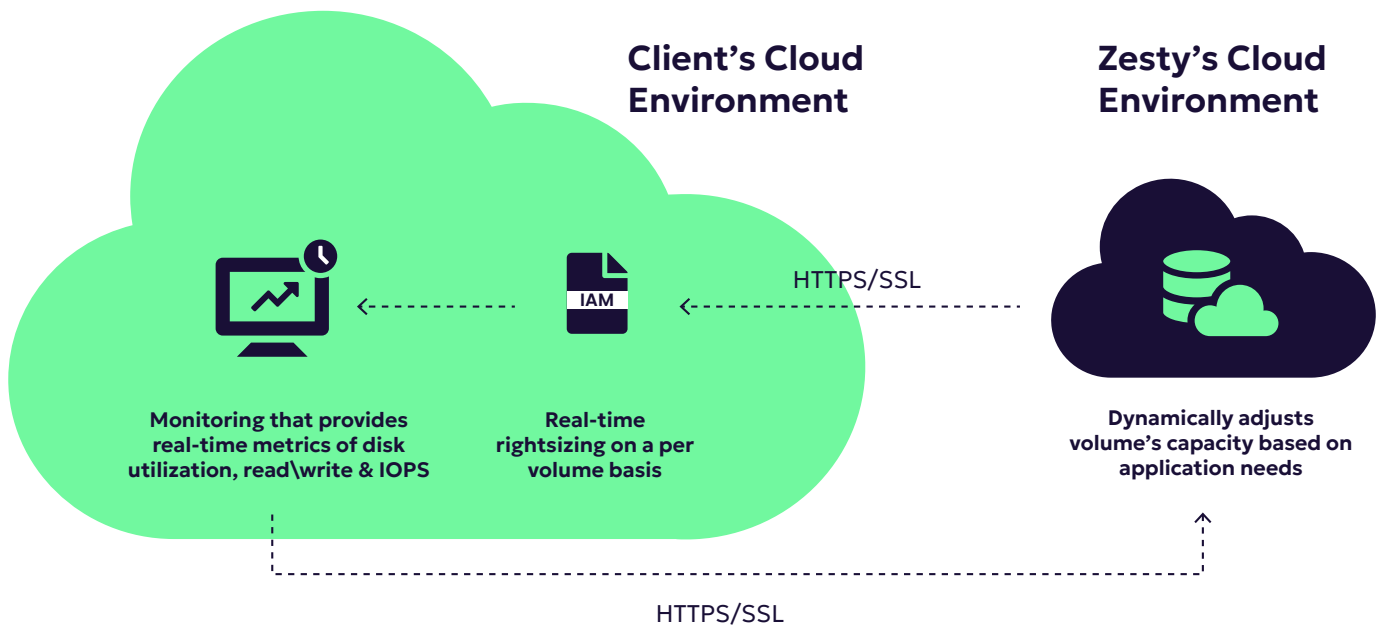


Security Guaranteed: Firstly, Zesty is never exposed to data in storage, only metadata and usage metrics are collected, which are sent unidirectionally to Zesty's backend. Secondly, when action needs to be taken, the command is sent using the appropriate IAM role on the instance. Zesty is GDPR and CCPA compliant.



How it works

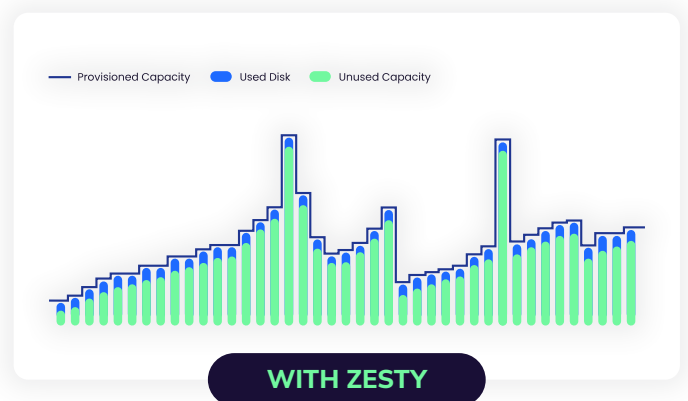
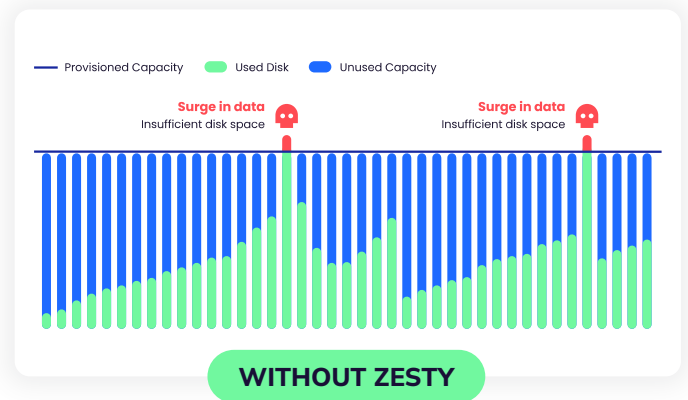
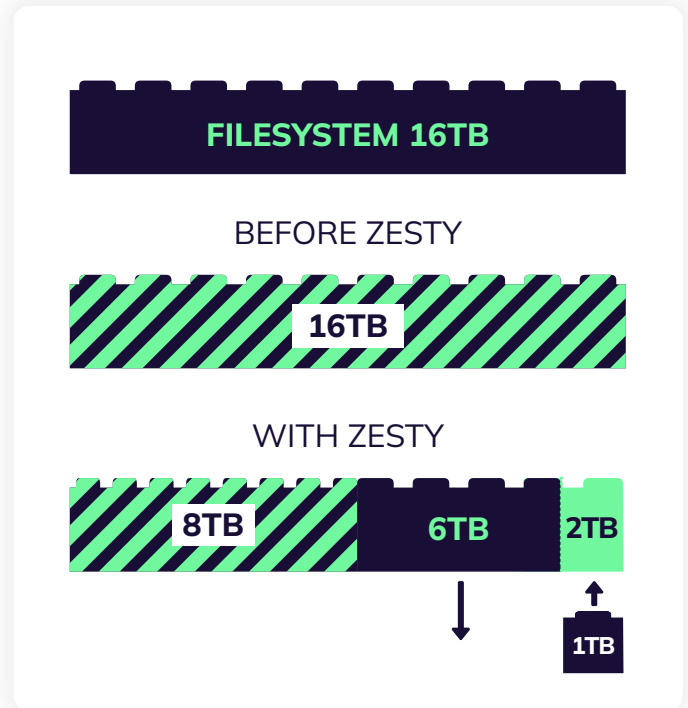
- 1** Zesty creates a virtual filesystem which consists of several small storage volumes. Since Zesty Disk leverages the native cloud provider block storage devices (AWS EBS), your native tools, procedures, and SLAs are unchanged, while you remain the owner of your data and the only one that has access to it.
- 2** Zesty Disk continuously tracks usage metrics (Capacity, IOPS, and Read/Write Throughput) as well as instance and disk metadata (such as instance type, disk type, volume names, etc) which are sent unidirectionally to Zesty's backend.



- 3** The usage and metadata metrics are then processed by an AI model which generates a behavioral profile on the instance filesystem. It uses this profile to predict the usage patterns and fluctuations of the filesystem to ensure that it has optimal IOPS and throughput for any scenario.
- 4** The volumes on the filesystem are serialized so that one large volume of 100GB for example, is replaced with a filesystem of multiple smaller volumes, say, 50GB, 35GB, and 15GB.



- 5 On day one, the Zesty disk identifies any excess provisioned storage and automatically shrinks that capacity down to just above usage levels. **Providing immediate ROI from the get-go!**
- 6 Zesty's backend issues an API command to the cloud provider with the shrink action. It then sends an update request to the Zesty Disk handler on the instance to adjust capacity.
- 7 As the application needs more storage another small volume is added or the volume is extended. When the application requires less storage, the small volume is detached, shrinking the available capacity.
- 8 If a volume is evicted, its data is moved over to other volumes in the Zesty disk filesystem before it's moved out. This reshuffling occurs in run time, without requiring any restart or and with no impact on the application performance.
- 9 A buffer is always maintained above the needed capacity, so there is no concern of insufficient storage. This buffer is based on previous trends and is usually 5-15% of capacity.
- 10 Every action is logged in the audit log and an alert can be sent to the environment's email, Slack or Teams channel.



How it integrates with Kubernetes?

Zesty Disk brings flexibility and automation to storage management in Kubernetes clusters.

By utilizing native Kubernetes features like Persistent Volume Claims (PVC) and Persistent Volumes (PV), Zesty Disk seamlessly integrates into the Kubernetes environment.

It delivers real-time volume autoscaling based on application needs. Large file systems volumes are broken into multiple smaller volumes, enabling Zesty Disk to add, remove, or extend persistent volumes without disrupting running pods. This ensures continuous operation and dynamic scalability, perfectly aligned with Kubernetes' flexible infrastructure.

