ZebClient

TECHNICAL PRODUCT SPECIFICATION

FUNCTIONALITY	ZEBCLIENT SUPPORT
Deployment Modes	• Standalone, Cluster and Distributed Cluster
Supported Infrastructure for Deployment	**ZebClient Deployment Manager (installs on a separate machine):** • VM or bare-metal • AMD64 or ARM64 architecture • OS: Ubuntu 20.04 • Non-root user with sudo-privilege to run sudo-privileged commands without password **ZebClient installed in the cloud (AWS / Azure compute nodes):** • Handled by ZebClient Deployment Manager (CSP license key needed) **ZebClient installed on-prem:** • OS: Ubuntu 20.04. • **Memory/disks for** hot and warm tiers: a minimum of 3 units in total. PMem advised for optimal hot performance alternatively NVMe or SSD • Non-root user with sudo-privilege to run sudo-privileged commands without password • **Processes run on:** VMs, OS on raw metal, Hypervisor or Kubernetes **Cold storage:** S3 account in the cloud or on-prem
Input and Output Data Interfaces	**S3:** • HeadObject, CopyObject, PutObject, GetObject, DeleteObject • PutBucketVersion, GetBucketVersion, GetBucketLocation • ListVersionedObjects, ListObjects, • DeleteMultipleObjects • HeadBucket • PutBucket, DeleteBucket, ListBuckets **Filesystem:** • Reading and writing files • Seeking while reading / writing • Append mode while writing • Truncating at arbitrary offset • Removing files • Creating and removes directories • Listing directories
Internal Format and Communication	**Internal Format:** Data stored as erasure-coded objects (shards) **Internal Communication:** gRPC between hot and warm tiers
Tiering	Storage aware class-of-service (COS). The ZebClient tiering is a logical construct where each tier represents a homogenous performance class. A higher tier is faster and smaller than a lower tier.
Data Read/ Write Boost	The tiering function will place hot data on the level with fastest access and lowest latency possible. ZebClient reads and writes are boosted using striping as data are stored on multiple parallel disks.
Redundancy	1. Erasure-coding using redundancy shards 2. Support for shard distribution to separate physical hardware units (warm tier) and multiple clouds (cold tier)
Configuration Interface	ZebClient Deployment Manager
Metrics & Monitoring	Prometheus HTTP endpoint support to collect general metrics and display general system data, e.g., CPU, memory, disk, network and application specific data.

The ZebClient Software

ZebClient optimizes the utilization of modern memory technology to provide sustainable, redundant hyper-speed access to your data. It is a cloud data memory that operates by bringing cloud data to memory and by disaggregating compute from storage. This allows for a solution that speeds up, simplifies, secures and protects the data under its control and makes local storage redundant.

ZebClient offers a new versatile, scalable, hyper-performant solution designed based on cutting edge technology to provide access to data from any location. From its unique object data design and the capability to handle both cloud and legacy data. ZebClient also bridges the gap between old and new IT technology.

Documentation

Online documentation via:
https://zebware.gitlab.io/devops/zebclient-docs/

ZEBWARE

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