

DHI-CSS9064X

Cloud Storage Metadata Server



- Embedded cloud storage metadata service and system maintenance service software
- Cloud storage system capacity and storage node load balancing management
- Automatic fault detection and fault tolerance
- Hot-standby mode by high availability technology
- High speed metadata service by exclusive cache acceleration technology

System Overview

Dahua standard cloud storage featuring an asymmetric distributed architecture that is composed of metadata server and storage nodes, is specially designed for massive unstructured data storage. It delivers unparalleled performance and linear scalability, and is able to provide a fundamental platform for further data mining.

Dahua standard cloud storage is ideal for a wide range of big data scenarios such as public safety, manufacturing institutions and VSaaS market, where massive data with diversity types needs to be stored and managed.

Features

High availability

Achieve high availability by keeping real time heartbeat between master and slave server. Once master server fails, slave server will take over within seconds to ensure business continuity.

Dynamic load balancing between storage nodes

Provide load balancing and evenly distribute all data between all storage nodes by tracking the performance of each storage node including spare capacity, CPU load, network I/O and disk I/O of in real time.

Control and data flow separation

Data flow is generated only between client and storage nodes, reducing the load of metadata nodes dramatically and eliminating system bottlenecks.

Innovative management with intelligent automation

User-friendly system maintenance interface, making essential management work more effective. Real-time display of system health status including capacity, network flow and workload. One-click fault detection and set recovery priority for important data files.

Open convergence

Provide a set of open interfaces including ONVIF, NFS, CIFS, HDFS API, RESTful API for integration and interoperability with diversity 3rd party VMS and web applications.

Technical Specifications

Hardware

Form Factor	1U rack server
Processor	Inter Xeon Dual E5-2609 V3 6 cores
Chipset	Intel C610
Memory	64GB DDR3, up to 768GB, ECC
RAID Controllers	PERC H330
Internal Storage	2 x 2.5-inch 500GB Enterprise SATA HDD 2 x 2.5-inch 200GB Datacenter SATA SSD
Embedded NIC	4 x Broadcom 5720, 1Gb Base-T adapter
Communications	2 x USB3.0, 2 x USB2.0, 1 x embedded USB2.0, 1 x RS232

System Architecture

Cluster Architecture	1+1 hot-standby architecture
----------------------	------------------------------

File System

File System	Dahua EFS file system, embedded metadata service
Data Type	Metadata
Data Protection	2-tier data protection: SATA HDD and SSD 1+1 backup RAID 1 protection for both SATA HDD and SSD

Performance Index

System Capacity	Up to 6 PB
Number of Storage Nodes	60
Number of Small files	2 billion
Number of Video-channels	<3000
Number of Client Connections	1024

Storage Management

Initialization	One-click system initialization
Quota Management	Data quota management based on users, user groups and directories, allocation of capacity on demand
Storage Expansion	Scale-out technology, online expansion, with less than 60 seconds for expansion of a single node
Condition Monitoring	Real time health status monitoring including processor usage, memory usage, disk capacity, etc.
Fault detection	Automatic storage node and disk fault detection
Alert By Email	Alarm notification of system exception by email

Interface

Open Interface	POSIX, RESTful API, NFS/CIFS protocol, Dahua SDK
----------------	--

Electrical

Power Supply	Platinum efficiency 495W, Redundant power, Hot-swappable
Power Consumption	<450W

Environmental

Operating Conditions	-0°C ~ +40°C / Less than 80% RH
Storage Conditions	-20°C ~ +70°C / Less than 90% RH
Ingress Protection	N/A
Vandal Resistance	N/A

Construction

Rack support	19-inch rack-mounted
Dimensions	482.4mmx42.8mmx752.1mm
Weight	16.9Kg

Certification

CE	EN 60950-1, EN55022, EN55024, EN61000-3, EN62623, EN50581
FCC	US CFR Title 47, FCC Part 2,15 ANSI C63.4 2009 Canadian ICES-3(A)/NMB-3(A), Issue5

Ordering Information

Type	Part Number	Description
Cloud storage metadata server	DHI-CSS9064X	Cloud storage metadata server