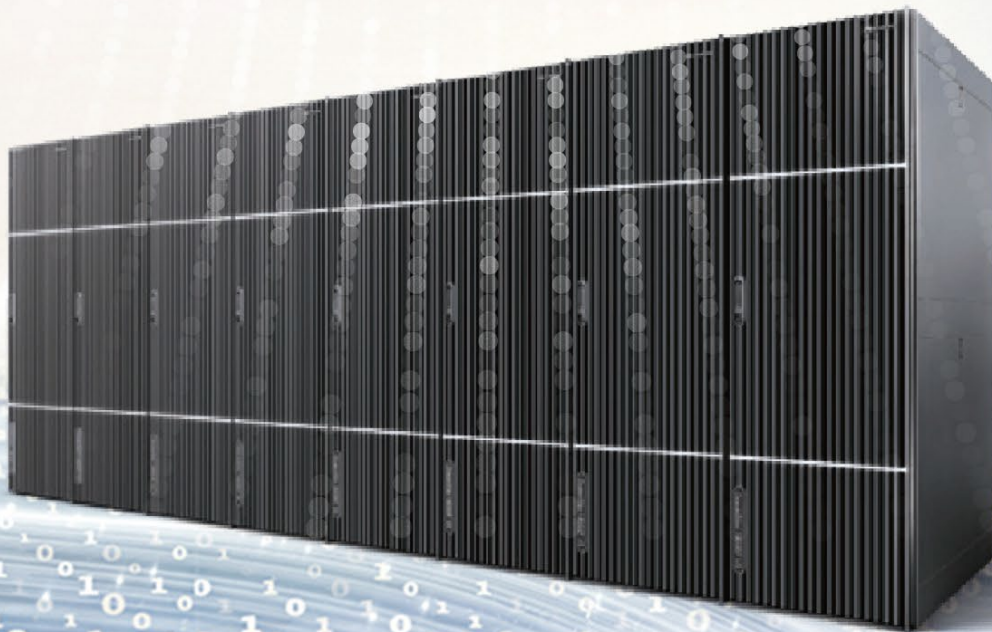


# Huawei Data Storage Portfolio



# All-Flash Storage

## All-Flash Storage

### OceanStor Dorado 8000/18000 High-End Intelligent All-Flash Storage

Huawei OceanStor Dorado 8000/18000 all-flash storage sets new benchmarks for storage performance and reliability, delivering unparalleled data services for critical enterprise applications. It delivers 40M IOPS and 0.05 ms latency with innovative hardware, FlashLink® intelligent algorithm, and E2E NVMe design. The global shared distributed file system delivers 30% faster NAS performance than the next-best player. The SmartMatrix full-mesh architecture and the industry's only integrated SAN and NAS active-active solution ensure 24/7 service continuity. OceanStor Dorado 8000 /18000 excels in core scenarios such as database and virtualization in finance, carrier, government, manufacturing, and healthcare sectors — putting digital transformation into hyperdrive.

- Four controllers per engine, up to 32 controllers.
- Up to 32 TB cache.
- Up to 28 hot-swappable I/O modules per engine.
- Up to 6,400 disks.
- Front-end channel port types: FC, FC-NVMe, iSCSI, NVMe over RoCE, NFS, CIFS, and NDMP.
- Disk types: NVMe SSD and SAS SSD.



Leading Performance with Innovative Hardware  
Always-On Applications with 5-Layer Reliability  
Efficient O&M with Intelligent Edge-Cloud Synergy

## OceanStor Dorado 5000/6000

### Intelligent All-Flash Storage

Huawei OceanStor Dorado 5000/6000 all-flash storage is a product with high-end features. It delivers 30% higher performance (than the previous generation) at a 0.05 ms latency with innovative hardware, FlashLink® intelligent algorithm, and E2E NVMe design. The converged SAN and NAS architecture provides numerous data protection, security, and efficiency boost functions, as well as comprehensive data storage and protection capabilities for customers' block and file systems. The highly stable five-level reliability design provides the industry's only integrated SAN and NAS active-active solution, ensuring service continuity. OceanStor Dorado 5000/6000 can easily handle medium and large enterprise databases OLTP/OLAP, server virtualization, file sharing, and container scenarios across government, finance, healthcare, education, energy, and manufacturing.

- 2 U controller enclosure with integrated disks, up to 32 controllers.
- Up to 24TB cache.
- Up to 12 hot-swappable I/O modules per controller enclosure.
- Up to 4,800 disks.
- Front-end channel port types: FC, FC-NVMe, iSCSI, NVMe over RoCE, NFS, CIFS, and NDMP.
- Disk types: NVMe SSD and SAS SSD.



Suitable for SAN scenarios such as database, server virtualization, and VDI, and high-performance NAS scenarios such as EDA, CAD, and PACS

## OceanStor Dorado 2000/2100/3000

### All-Flash Storage

Huawei OceanStor Dorado 2000(SAN)/2100(NAS)/3000(SAN&NAS) are easy-to-use and cost effective storage systems, which are widely applied in small and medium-sized businesses (SMBs). Featuring innovative Huawei hardware and FlashLink® intelligent algorithms, these storage systems combine the intelligence and efficiency of the Smart series with the extremely high reliability of the Hyper series. OceanStor Dorado 2000/2100/3000 make a modern, intelligent, and cloud-ready IT system infrastructure attainable.

- 2 U controller enclosure with integrated disks, up to 8/8/16 controllers.
- Up to 512GB, 1,536 GB cache.
- Up to 400, 400, 1,200 disks .
- Front-end channel port types: FC, FC-NVMe\*, iSCSI, NVMe over RoCE\*, NFS, CIFS, and NDMP.
- Disk types: NVMe SSD \* and SAS SSD.

\* NVMe SSD and NVMe over Fabric only for OceanStor Dorado 3000



Cost-effective entry-level all-flash storage with rich features



## OceanStor 5310/5510 Capacity Flash Storage

Huawei OceanStor 5310/5510 Capacity Flash Storage systems are all-flash options for all scenarios. The systems help customers achieve all-flash transformation from hybrid flash setups to build green and secure all-flash data centers. Using capacity-optimized SSDs and the FlashLink® disk-controller collaboration technology, the systems support SAN, NAS, virtualization, and container services, and reach industry-leading performance improvement, space saving, and power consumption reduction. Huawei OceanStor 5310 /5510 Capacity Flash Storage systems provide high-quality services for latency-insensitive tier 1 and tier 2 applications, such as virtualization, containers, files, and backup and archiving.

- 2 U controller enclosure with integrated disks and up to 128 controllers.
- Up to 16 PiB effective capacity per controller enclosure.
- Front-end channel port types: FC, FC-NVMe, iSCSI, NVMe over RoCE, NFS over RDMA, NFS, CIFS, and NDMP.
- Disk type: capacity-optimized SSD.



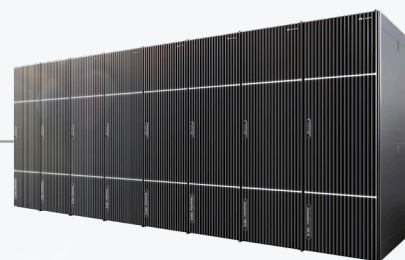
Green, energy saving, sustainable, and all flash for all scenarios

## Hybrid Flash Storage

### OceanStor 6810/18510/18810 New-Gen High-End Hybrid Flash Storage

Huawei OceanStor 6810/18510/18810 is a new-gen, high-end hybrid flash storage product designed for key and emerging applications like relational databases, containers, virtualization, and distributed databases. It features an industry-leading SmartMatrix full-mesh architecture, integrated SAN and NAS active-active solution, and a wide range of data security features to ensure 24/7 service continuity. Features like SmartAcceleration and E2E NVMe double the performance seen on the previous generation, and are crucial to the construction of new data centers.

- Four controllers per engine, up to 32 controllers.
- Up to 28 hot-swappable I/O modules per engine.
- Up to 9,600 disks.
- Front-end channel port types: FC, FC-NVMe, iSCSI, NVMe over RoCE, NFS, CIFS, and NDMP.
- Disk types: NVMe SSD, SAS SSD, SAS, and NL-SAS.

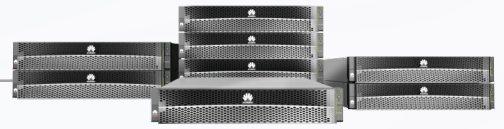


Always-On Applications with 4-Layer Reliability  
Leading Performance with Innovative Algorithms  
Future-Oriented Design for Multiple Workloads

## OceanStor 5310/5510/5610

### New-Gen Hybrid Flash Storage

Huawei OceanStor 5310/5510/5610 is a new-gen, hybrid flash storage product, which offers wide-ranging convergence capabilities and incorporates SAN, NAS, database storage engines, and computing functions. OceanStor is ideal for medium- and large-sized enterprises that require database OLTP/OLAP, server virtualization, VDI, and resource integration, and has been broadly applied in sectors as diverse as government, finance, healthcare, education, energy, and manufacturing. OceanStor is designed to deliver maximum return on investment (ROI) and is versatile enough to be utilized in a range of emerging service scenarios such as cloud, container, and distributed database environments.



Future-Oriented Design for Multiple Workloads  
High Efficiency with Premium Quality  
Simplified O&M with Intelligence Enablement

- 2 U controller enclosure with integrated disks, up to 16 controllers.
- Up to 6/12/12 hot-swappable I/O modules per controller enclosure.
- Front-end channel port types: FC, FC-NVMe, iSCSI, NVMe over RoCE, NFS, CIFS, and NDMP.
- Disk types: NVMe SSD, SAS SSD, SAS, and NL-SAS.

## OceanStor 2200/2600/2220/2620

### Hybrid Flash Storage

Huawei OceanStor 2200/2220(SAN)/2600/2620 is hybrid flash storage with ultimate convergence. The product provides powerful SAN&NAS convergence capabilities, various data protection functions, and intelligent management software. The series enabled SMBs to easily address database, virtualization, OA file sharing, and file management demands of today and tomorrow.



Hybrid Flash Storage

- High configuration with low investment: industry-leading performance and various functions compared with peer products.
- 2 U controller enclosure with integrated disks, dual controllers, 32/64/128GB cache.
- Front-end channel port types: FC, iSCSI, NFS, CIFS, and NDMP.
- Ultimate SAN&NAS convergence and active-active solution .

## OceanStor AI Storage

### OceanStor A310

The OceanStor A310 is tailored to foundation and industry-specific models. It accelerates the entire process of AI services and increases the efficiency of AI data transfers by 60%. The OceanStor A310 is equipped with the global file system (GFS) which offers a unified data view and supports quick data collection across regions, systems, and vendors. It also supports seamless multi-protocol interworking, zero data copying throughout the process, high IOPS, and high bandwidth to accelerate training and inference. In addition, the OceanStor A310 implements intelligent tiering



of hot and cold data. Each 5 U chassis houses up to eight storage nodes using all NVMe SSDs. With the PCIe 5.0 design, each chassis supports EB-level capacity expansion and provides up to 400 GB/s bandwidth and 12 million IOPS, delivering industry-leading performance.

- 5 U, 8 nodes, and 96 SSD slots.
- Half-palm NVMe SSDs, 33% more all-flash media per U space.
- Up to 400 GB/s bandwidth and 12 million IOPS per chassis.
- System-wide PCIe 5.0 design.

## Data Protection

### Data Protection

#### OceanProtect X3000/X6000/X8000/X9000 Backup Storage

Huawei OceanProtect Backup Storage adopts an E2E-accelerated, active-active high-reliability architecture that features rapid backup and recovery, efficient reduction, and solid resilience. It simplifies backup and recovery, slashes TCO, and excels in industries like government, finance, carrier, healthcare, and manufacturing.

- 155 TB/hour physical backup bandwidth, 310 TB/hour logical backup bandwidth, and 172 TB/hour recovery bandwidth.
- Multi-layer inline variable-length dedupe, feature-based compression, and byte-level compaction technologies achieve industry-leading data reduction ratios and greatly improve logical capacity; source dedupe and deduplicated replication reduce network bandwidth consumption.
- The active-active architecture supports a failover within seconds in the event of a single-controller failure without interrupting backup tasks.
- The industry-leading ransomware protection solution provides protocol/replication link/array encryption, secure snapshot, write once read many (WORM), and Air Gap features, ensuring copy security and availability.



A New Benchmark for Dedicated Backup Storage  
with Fast Speed and Efficient Reduction

#### OceanProtect E6000 Scale-Out Appliance

Huawei OceanProtect E6000 Appliance integrates backup software, server, and storage on a fully symmetric scale-out architecture. The appliance features high efficiency and resilience and an optimal ecosystem. It supports small-scale startup configuration and scale-out cluster deployment, delivering elastic expansion of performance and capacity. The device meets the requirements of centralized backup system construction and service growth and helps users achieve fast deployment and efficient backup at reduced investments on data protection. It is an ideal choice for sectors such as finance, carriers, and governments.



OceanProtect appliance with industry-leading  
capacity density



- Support for multi-node concurrent backup tasks, parallel acceleration for multiple backup proxies, and linear performance overlay. Fully symmetric scale-out cluster, ensuring zero interruption of backup tasks in the event of a single point of failure and delivering E2E backup failover in minutes. Retrieval from tens of billions of files in seconds, fine-grained recovery, and instant availability of backup copies in native format for rapid recovery of core services. Ransomware protection technologies, such as E2E data encryption, WORM, secure snapshots, and copy ransomware detection and analysis, preventing data leakage and tampering and ensuring secure and available copies.
- Unified management of backup, replication, and tiering policies, greatly improving configuration efficiency. Industry-leading capacity density, featuring 9x higher density per U than vendors, saving footprint and power consumption.

## OceanProtect X3000/X6000/X8000/X9000 Appliance



The OceanProtect X3000/X6000/X8000/X9000 Appliance is built on Huawei Backup Storage's active-active architecture and adds embedded backup software on top of it. The appliances integrate backup software, hardware, and ransomware protection features to accelerate backup and recovery from end to end. Featuring rapid backup, high resilience, and premium compatibility, the appliances help enterprises quickly back up and use data at an affordable price, making them ideal for the government, finance, telecom, healthcare, and manufacturing sectors.

Protection of emerging application data  
Instant availability of mass data  
High resilience and reliability

- Concurrent multiple backup data streams and non-synthetic forever incremental backup enable 10 PB-level ultra-large big data cluster backup and table-level restoration.
- Backup copies in native format are instantly available, allowing quick recovery of mission-critical services; no need to scan file differences; block-level incremental backup; file retrieval from 10 billion files in seconds; minute-level RTO.
- Multi-layer inline variable-length deduplication, feature-based compression, and byte-level compaction technologies achieve an industry-leading data reduction ratio and greatly improve logical storage capacity; source deduplication and deduplicated replication delete duplicate data before transmission, reducing link bandwidth usage by 90% compared to conventional solutions.
- The industry's only active-active architecture implements minute-level failover of backup tasks from end to end; flexible data anonymization policies, ransomware detection, and data anti-deletion and anti-tampering capabilities ensure the resilience and availability of data copies.
- Greatly improved configuration efficiency thanks to unified management of backup, replication, and tiering policies.

## OceanCyber 300 Data Security Appliance



The Huawei OceanCyber Data Security Appliance is a security engine that offers security policy configuration management, detection and analysis, and ransomware defense for various types of storage devices. It enables users to deploy ransomware protection features and creates a last line of defense for data resilience using storage devices.

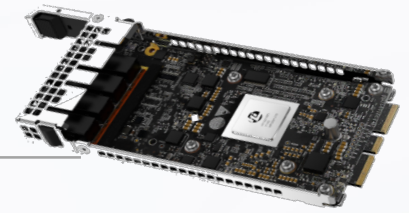
Unified ransomware protection management  
for up to eight devices in a data center

- Unified security management: The appliance supports unified access of OceanStor Dorado All-flash Storage, OceanStor Hybrid Flash Storage, OceanStor Pacific Scale-out Storage, and OceanProtect Backup Storage; visualized management and risk alarms; unified configuration and management of security policies.
- Detection and analysis: The machine learning-based algorithms developed by Huawei ensure an up to 99.9% ransomware identification rate for file systems.
- Proactive response: Real-time display of alarms for blocklist interception, abnormal read/write behavior, and file damage; multiple types of data recovery, such as snapshot copies (file system) and shared recovery (cloned file system).

# Data Security Card

## OceanCyber 100 Card Data Security Card

The Huawei OceanCyber 100 Card features built-in ransomware detection algorithms and is widely compatible with Huawei OceanStor Dorado All-Flash Storage, OceanStor Hybrid Flash Storage, OceanProtect Appliance, and OceanProtect Backup Storage. It supports plug-and-play and offloads the computing power used for detection. This unleashes the performance of storage and builds a lightweight data security defense line for users.



Built-in ransomware detection algorithms  
Computing power offloading  
Plug and play

- Lightweight and flexible: The card is plug-and-play and supports OceanStor Dorado All-Flash Storage, OceanStor Hybrid Flash Storage, OceanProtect Backup Storage, and OceanProtect Appliance.
- Detection and analysis: Machine learning-based proprietary detection algorithms enable an up to 99.9% ransomware identification rate for file systems.
- Computing power offloading: The card completely offloads the computing power used for detection, unleashing the performance of the primary storage.

## OceanStor BCManager

Huawei OceanStor BCManager eReplication is a disaster recovery (DR) management software designed to help organizations protect their critical data. It supports active /standby, geo-redundant 3DC, and active-active setups and can be configured for databases, virtualization, containers, and cloud environment services. The visualized and unified platform displays the running status of services at all times, and supports quick data recovery and test drills.



- Resilient protection: covers physical machines, virtualization, and containers with ransomware protection, and implements application data consistency.
- Automated management: one-click recovery drills, template-based and custom recovery policies, and automatic identification of host applications.
- Visualized UI: multi-site topology and processes.



# Scale-out Storage

## OceanStor Pacific Scale-Out Storage

The Huawei OceanStor scale-out storage series helps enterprises unlock the value of mass data, offering diversified storage for applications such as High Performance Computing (HPC), video, virtualization and cloud resource pools, big data analytics, content repository, and archiving.



### Performance Nodes

OceanStor Pacific  
9950 | 9920

### Hybrid Nodes

OceanStor Pacific  
9550 | 9546 | 9520

### Video Storages

OceanStor Pacific  
9350 | 9346 | 9340

## OceanStor Pacific 9950/9920 Performance Nodes



The performance nodes including OceanStor Pacific 9920/9950 provide efficient data access services for scenarios including HPC, Artificial Intelligence (AI) applications, big data analytics, and virtualization and cloud resource pools to databases.

- OceanStor Pacific 9920 is an all-flash (SSD) scale-out storage product with each 2 U chassis housing 1 storage node. A node houses 25 disks and uses Palm NVMe SSDs. A single disk supports a maximum of 30.72 TB. It delivers excellent performance and features flexible component configurations to meet the access requirements of various structured and unstructured workloads.
- OceanStor Pacific 9950 is a high-density, all-flash storage product that offers outstanding performance, capacity, and scalability. Each 5 U chassis houses a maximum of 8 storage nodes using all NVMe SSDs. Each chassis provides a raw capacity ranging from 128 TB to 614.4 TB, a bandwidth of up to 160 GB/s, and 6.4 million IOPS for data access performance. It is the perfect choice for mass unstructured data storage.

## OceanStor Pacific 9550/9540/9520 Hybrid Nodes

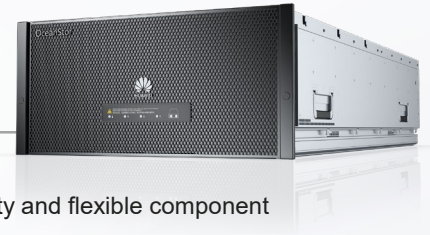


The hybrid nodes including OceanStor Pacific 9550/9546/9520 provide high-availability data access services diverse scenarios, from virtualization and cloud resource pools to HPC, AI applications, and big data analytics.

- OceanStor Pacific 9550 is a hybrid storage product that features ultra-high density and large capacity to deliver optimal cost-effectiveness. Each 5 U chassis houses 2 storage nodes and uses large-capacity HDDs as main storage. Each chassis provides a raw capacity ranging from 720 TB to 2,400 TB, reducing cabinet space consumption by 62.5% compared to general-purpose storage servers. Compared to conventional modes, the system's dual-layer air channel design and counter-rotating booster fans reduce the component failure rate by 50%, while carbon-fiber pads and phase-change Vapor Chamber (VC) heat dissipation improve the heat dissipation capability of the entire system by 20%. In addition, a full Field Replaceable Unit (FRU) design is adopted to allow 24/7 non-disruptive maintenance.

- OceanStor Pacific 9546 is a high-density hybrid scale-out storage product with each 4 U chassis houses 1 or 2 storage nodes. Each chassis has 60 disk slots.
- OceanStor Pacific 9520 is a hybrid scale-out storage product with each 2 U chassis housing 1 storage node. It provides flexible component configurations to meet the access requirements of various structured and unstructured workloads.

## OceanStor Pacific 9350/9346/9340 Video Storages



The video storages including OceanStor Pacific 9350/9346/9340 provide high capacity density and flexible component configurations to store both video and image stream data.

- OceanStor Pacific 9350 is a hybrid storage product that features ultra-high density and large capacity to deliver optimal cost-effectiveness. Each 5 U chassis houses 2 storage nodes and uses large-capacity HDDs as main storage. Each chassis provides a raw capacity ranging from 720 TB to 2,400 TB, reducing cabinet space consumption by 62.5% compared to general-purpose storage servers. It is suitable for scenarios that only store mass amounts of video stream data.
- OceanStor Pacific 9346 is a high-density hybrid scale-out storage product with each 4 U chassis houses 1 storage nodes. Each chassis has 60 disk slots. It is suitable for scenarios that only store mass amounts of video stream data.
- OceanStor Pacific 9340 is a hybrid scale-out storage product with each 4 U chassis housing 1 storage node. It provides high capacity density and flexible component configurations to store both video and image stream data.

## Intelligent Video Storage

### IVS3800



IVS3800 utilizes an open architecture design to provide platform-based resource sharing and on-demand scheduling services. Additionally, it leverages advanced technologies such as cloud computing, cloud storage, and big data, to build video cloud solutions featuring cross-domain collaboration, hardcore innovation, and data intelligence. This makes IVS3800 an ideal choice for a wide range of scenarios including smart city projects, intelligent transportation, and intelligent campus

- Direct stream storage architecture: One device implements video access, forwarding, and storage, reducing TCO.
- Ample storage space: SuperCoding performs high-resolution encoding on foreground moving objects and low-resolution encoding on the background based on the ROI technology, enabling 1 TB of storage
- space to store 3 TB worth of data. Stable storage capability: DR allows a site with a backup node to take over services in mere minutes from a site whose nodes failed.

## OceanDisk 1500/1600

Huawei OceanDisk 1500/1600 is the industry's first-ever diskless architecture-oriented storage system. It connects to diskless servers via high-speed data buses to enable independent and elastic expansion of compute and storage resources.

Designed for cloud and Internet data centers, OceanDisk uses high-speed NoF+ networks and FlashLink® disk-controller collaboration algorithms to provide customers with composable storage capabilities. It delivers a maximum of 3.5 million IOPS and 70 GB/s bandwidth. Thanks to Huawei's continual investment in storage R&D, OceanDisk provides high-performance shared storage components and native disk sub-health management capabilities (quick response to slow I/Os and intelligent slow-disk optimization), ensuring stable performance of >100 thousand disks in large-scale data centers and greatly simplifying O&M. It also supports scenario-specific data reduction using new coding technologies, together with the 23+2 high-ratio EC algorithm engine, greatly improving resource utilization, and reducing footprint and power consumption by 40%.

- Channel port types: 25/100 Gb NVMe over RoCE, 16/32 Gbit/s FC. Max. performance : 3.5 million IOPS, 70GB/s bandwidth.
- Hard disk types : NVMe SSD 1.92/3.84/7.68/15.36 TB /30.72TB. Max. number of namespaces per storage pool: 1024.
- EC support: Intra-enclosure, high-ratio hardware-based EC supports 22+3, 23+2, etc. Storage management software: device O&M (DeviceManager), remote O&M (eService).

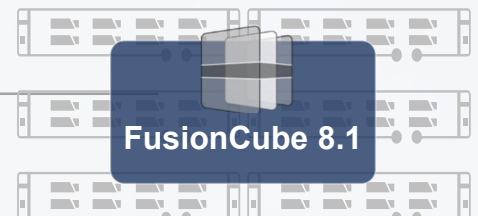


Enclosure as Storage for Digital Transformation  
Technical Innovations for Inclusive All-Flash  
Storage

## FusionCube Software

FusionCube software provides more flexible choices for end users. Complies with an open architecture and pre-integrates components such as management software and distributed storage engine. IT infrastructure resources can be flexibly configured and expanded based on service requirements.

- Software capability: One version one year, Huawei provides technical support.
- Security and reliability: Active-Active mode, bearing mission-critical applications.
- High performance: Over 120,000 IOPS per node.
- Simplified O&M: One-Click Operation and Maintenance.





## FusionCube 1000 (Kunpeng)

Designed for data centers, FusionCube 1000 (Kunpeng) is built on a scale-out architecture to provide full-stack IT capabilities for enterprises. FusionCube 1000 complies with open architecture standards. It pre-integrates virtualization platforms, management software, and scale-out storage engines to provide on-demand resource configuration and linear expansion for IT infrastructure. It can be used for virtualization, cloud desktops, and databases to help enterprises achieve simplified, efficient digital transformation.

- Multi-architecture computing platform: x86 and Kunpeng dual stack management in the same pool, enabling the smooth evolution of various computing capabilities. Resilient and reliable: Active-active solution + built-in backup deliver I/O-level data reliability for mission-critical applications.
- Ultra-high performance: 600,000 and even higher IOPS per node, high-ratio EC, and deduplication and compression for up to 92% available capacity. Simplified O&M: Pre-integration before delivery, and one-click O&M.



## Innovative Storage Media Application

### U.2 SSD

#### eKitStor Xtreme 300 / OceanDisk 300 Series Standard U.2 SSD for Servers

A standard SSD for servers offers multiple capacity options, delivering much better performance and optimized power consumption than HDD. It is compatible with mainstream servers.

- Fast: U.2 interface with support for NVMe and SAS protocols, delivering ultra-high random read/write IOPS and ultra-low write latency.
- Intelligent: intelligent multi-stream to implement fine-grained service I/O adaptation and quality of service (QoS).
- Flexible: multiple capacity options and support for hot swapping, native OS driver, and plug and play.



Widely compatible standard U.2 SSD for servers

### Portable Storage

#### eKitStor Xtreme 200 Series M.2 NVMe SSD

An industry-leading M.2 NVMe SSD with high performance, high reliability, and low power consumption is designed to unleash powerful computer performance for a wide array of application scenarios such as PCs, laptops, and DIY.

- Superb performance: up to 7,400 MB/s read performance. Durability and reliability: Up to 4,400 TBW SSD life expectancy. Multiple options: 512 GB/1 TB/2 TB/4 TB.
- Energy saving: power consumption < 5 W.



High-performance SSD to unleash PC performance

## eKitStor Shield 200 Series

### Highly Protected Portable SSD

This portable storage device is resistant to water, dust, fall damage, and pressure. Its high-strength aluminum alloy milling structure ensures durability and good heat dissipation. The high-performance interface enables a superior user experience. It is designed for on-the-go and high-value data storage application scenarios. The storage solution provides customers with a resilient and reliable portable storage device.



High portability and durability

- Superb performance: USB-C 3.2 Gen 2x2 for up to 20 Gb/s transmission performance. Rock-solid durability: IP67 water and dust resistance, 3 m drop protection, and 2 ton car crush resistance.  
Wide compatibility: support for major operating systems such as Windows, MacOS, HarmonyOS, and Android.
- Ultimate reliability: 256-bit AES-XTS hardware encryption.

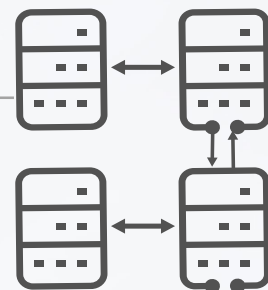
## Solution

### Data Protect Solution

Huawei OceanProtect Data Protection Solution provides Disaster Recovery (DR), backup, and archiving throughout the entire data lifecycle. Built on the concept of full DR of hot data, quick backup and restore of warm data, and warm archiving of cold data, OceanProtect ensures uninterrupted services without data loss, and delivers long-term data retention in the intelligent world.

### DR Solution

Huawei is committed to building comprehensive, multi-layered DR solutions covering active-passive, active-active, geo-redundant 3DC and 4DC deployment, and Storage + Optical Connection Coordination (SOCC). Our aim is to develop DR systems customized to different industries, thus ensuring service continuity.



- Zero service disruption: Gateway-free active-active architecture for both SAN and NAS ensures always-on services
- Zero fault impact on hosts: Failover within seconds in the event of production storage failures, without interrupting host links or affecting upper-layer services
- Visualized management: Centralized monitoring of device fault alarms with visualized global topology; simplified O&M using one-click DR drill and failover

## Backup Solution



Huawei Backup Solution provides two backup modes (backup storage and all-in-one backup) to efficiently back up multiple applications (blocks, file systems, VM, and big data) while eliminating low efficiency. It slashes TCO and prevents low data utilization of backup, preventing data loss and ensuring 24/7 availability.

- E2E acceleration: The front-end DTOE tech releases CPU resources, and the back-end parallel scheduling of a multi-core CPU implements core grouping and task partitioning to improve the node processing capability.
- Efficient data reduction: Proprietary optimized data reduction algorithms significantly improve data reduction ratios.
- Simplified management: E2E process automation driven by service level agreement (SLA) pre-configuration; only three recovery steps with unified application-centric view; capacity prediction and fault self-detection and self-recovery.

## Archiving Solution



Huawei provides an archiving solution that features instant access, high security, and easy O&M, meeting customers' requirements for long-term archiving of cold data and regulatory compliance.

- Quick access to archived data: Archived data is stored on disks and can be accessed in real time. Archived data does not need to be scheduled for reading, meeting the requirements for quick query and analytics.
- Linear expansion: Archive storage uses a distributed architecture that supports on-demand node expansion. The capacity and performance can be linearly expanded, effectively reducing customers' initial investment and facilitating massive data archiving .

## Ransomware Protection Storage Solution

### Ransomware Protection Storage Solution



Ransomware attacks that hold data hostage are some of the world's greatest threats to cyber security. As the ultimate carrier of data, storage is the last line of defense for data security. Huawei Ransomware Protection Storage Solution uses technologies such as pattern recognition and machine learning to identify ransomware, and uses data security features such as ransomware detection, secure snapshot, data isolation, and data recovery to provide logical and physical protection for data. As the final stop of data, it is critical to build storage security protection capabilities.

- Comprehensive protection: four-layer protection, 1 ransomware detection and analysis , 2 secure snapshot protection, 3 backup storage recovery, and 4 Air Gap isolation zone.  
Accurate detection: 99.9% ransomware identification rate.
- Rapid recovery: second-level snapshot recovery and Huawei OceanProtect Backup Storage provides a recovery speed of up to 172TB/hr.

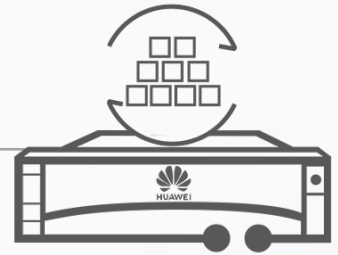


# Container Storage Solution

## Container Storage Solution

Working with container ecosystem partners, Huawei provides a state-of-the-art container storage solution powered by its Container Storage Interface (CSI), Container Disaster Recovery (CDR), and Container Storage Monitor (CSM) components. The solution is underpinned by Huawei's OceanStor storage products that deliver optimal performance, simplified O&M, easy sharing, and robust reliability. Huawei storage is able to interwork with mainstream container management platforms, including Kubernetes, OpenShift, VMware Tanzu, Rancher, CCE Agile, DCS, BoCloud, QingCloud, DaoCloud, and Alauda. Additionally, Huawei provides best practices for deploying containerized applications such as MySQL and Kafka. This helps you quickly deploy and stably run containers.

- Agility and ease of use: on-demand provisioning of storage resources and a wide range of enterprise-class features at a speed 100% faster than the competition. Reliability: the industry's only cross-cluster active-active DR for containers as well as cross-array all-in-one backup capabilities.
  - Performance: 30% better than the competition in scenarios involving massive amounts of small files, such as development, testing, and channel exchange, with no drops in performance even under high concurrency.
- Data resilience: three-layer tenant isolation, the industry's most comprehensive four-layer ransomware protection, and support for mainstream commercial antivirus software.



# Datacenter Virtualization Solution (DCS)

## DCS Full-Stack Data Center Solution

Huawei's DCS full-stack data center solution combines virtualization software and ICT hardware into a unified solution that helps enterprises build a modern, lightweight, diversified, and open infrastructure. The solution is designed for virtualization, full-stack data centers scenarios. It focuses on data to develop core competitive features such as multimodal data collection, resilient data mobility, end-to-end data resilience, and automatic data cleaning and labeling. The solution provides the optimal infrastructure for digital transformations .

- Lightweight and elastic: Two-node startup configuration and building-block configuration of all components.
- Agile and efficient: Virtualization and container dual-stack capabilities and unified DR and backup for all scenarios.
- Intelligent management: One-click resource provisioning and predictive O&M.
- Diverse ecosystem: Northbound openness for multi-cloud connection and southbound compatibility for heterogeneous management.



## DCS Big Data Solution



The DCS big data solution provides lightweight, one-stop big data platforms — a basic platform, a governance platform, and a unified management platform. The DCS data center foundation provides unified compute, storage, and network resource pools. The DCS big data solution enables one-click installation and unified management of the big data platforms. It also provides customers with big data analytics and compute components (such as Kafka, Flume, Hive, Spark, Flink, HBase, Redis, ClickHouse, and HashData) and big data governance functions. Additionally, it offers both coupled and decoupled storage-compute deployment options.

- One-stop platforms: a big data platform, a data governance platform, and an efficient data warehouse, covering the entire data analysis process (collection, storage, compute, management, and use).
- Efficient storage and fast compute: a layered and decoupled architecture that starts with a minimum of three nodes and enables flexible deployment; an innovative decoupled storage-compute solution for 1.7x higher resource utilization.
- Full-process governance: covering the full lifecycle of data assets based on Huawei's data governance methodology validated by 16 years of application, with support for offline, real-time, and interactive analysis.

## DCS eCampusCore Solution



Conventional campuses face problems such as isolated systems, scattered data, single deployment solution, and insufficient openness. The DCS eCampusCore solution is equipped with all of the core capabilities that are needed to operate a digital campus platform. It leverages the DCS unified resource pool to provide connectivity services, data services, and unified O&M. It creates and reconstructs models of people, machines, objects, and events in campuses and opens ICT capabilities, data, and services.

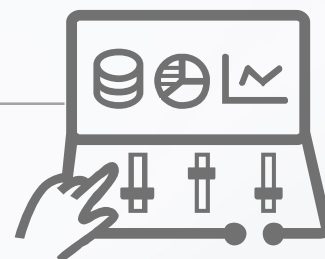
- Simplified integration and fast delivery: The platform can be installed within one day and it adapts to partners' applications within 3 days.
- Accelerated service rollout: Pre-integrated ICT components simplify application development and shorten the service rollout time from months to weeks.
- Optimized campus operations: The platform converges data from multiple systems. Equipped with nine types of data model, it displays the campus operating status graphically in real time and analyzes data from ten themed applications, making campus operations 20% more efficient.

# Data management

## Data Management

### DME Data Center Intelligent Management Platform

An intelligent data lifecycle management software deployed in data centers. It features visual, automatic, and intelligent. It uses nine functions to help enterprises reduce data center management costs and improve O&M efficiency.



- Visual: custom report and dashboard functions meet various monitoring and statistics requirements of enterprises. Reports are generated in minutes, facilitating accurate IT investment planning. The data center online insight function can identify six types of risks online, such as hardware faults, performance, and capacity insufficiency, to ensure healthy and stable running of your data center.
- Automatic: The service change simulation function is used to automatically recommend the optimal service placement policy, facilitating 100% change success. The automatic service provisioning function improves the resource rollout efficiency by 10 times. The data security and protection function enables data center copy management to be globally visible and configured in batches, greatly improving efficiency.
- Intelligent: The one-stop intelligent management function improves the routine O&M efficiency by five times. Use the global intelligent search function to sort out resource relationships and quickly view resource status. The intelligent health check function accurately identifies resource exceptions and implements 24/7 expert exception monitoring. The AI-based trend prediction function implements performance prediction 14 days in advance and capacity prediction one year in advance to detect service risks in advance. The intelligent assistant fault diagnosis function shortens the troubleshooting period by 90%.

### DME IQ Intelligent Cloud O&M Platform

A piece of remote intelligent O&M software that is installation-free and deployed on the cloud. You only need to register an account to implement proactive and predictive O&M anytime and anywhere, reducing O&M costs and improving O&M efficiency. Therefore, it provides one-stop O&M solutions for customers.



- Proactive O&M: 14-day disk prediction, 2-month performance prediction, and 1-year capacity prediction. Mobile O&M, allowing you to learn about device information and health status at any time
- Quick response: response within minutes and 24/7 support from Huawei
- Intelligent locating: prevention and prediction, achieving intelligent troubleshooting and "zero" O&M accidents
- Precise planning: allows you to plan service rollout, change, and migration in advance based on workloads to provide optimal service placement policies in all scenarios.



# Fibre Channel(FC) Switch

## Fibre Channel (FC) Switch

### OceanStor SNS3664/SNS3096/SNS3696E/ SNS5604/SNS5608 FC Switch

Huawei OceanStor SNS switch adopts industry-leading FC and Fabric Vision technologies, working with storage devices to provide a convenient, reliable, high-performance service experience.



- Higher port speeds, from 16 Gbit/s to 32 Gbit/s
- 24/48/96-port FC switches available; up to 384 ports on a high-end subrack with multi-mode optical modules
- Dual hot-swap, redundant power supplies
- Default configuration cascading



### For More Information

To learn more about Huawei storage, please contact your local Huawei office or visit Huawei Enterprise website: <http://e.huawei.com>.





Huawei Data Storage Website



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