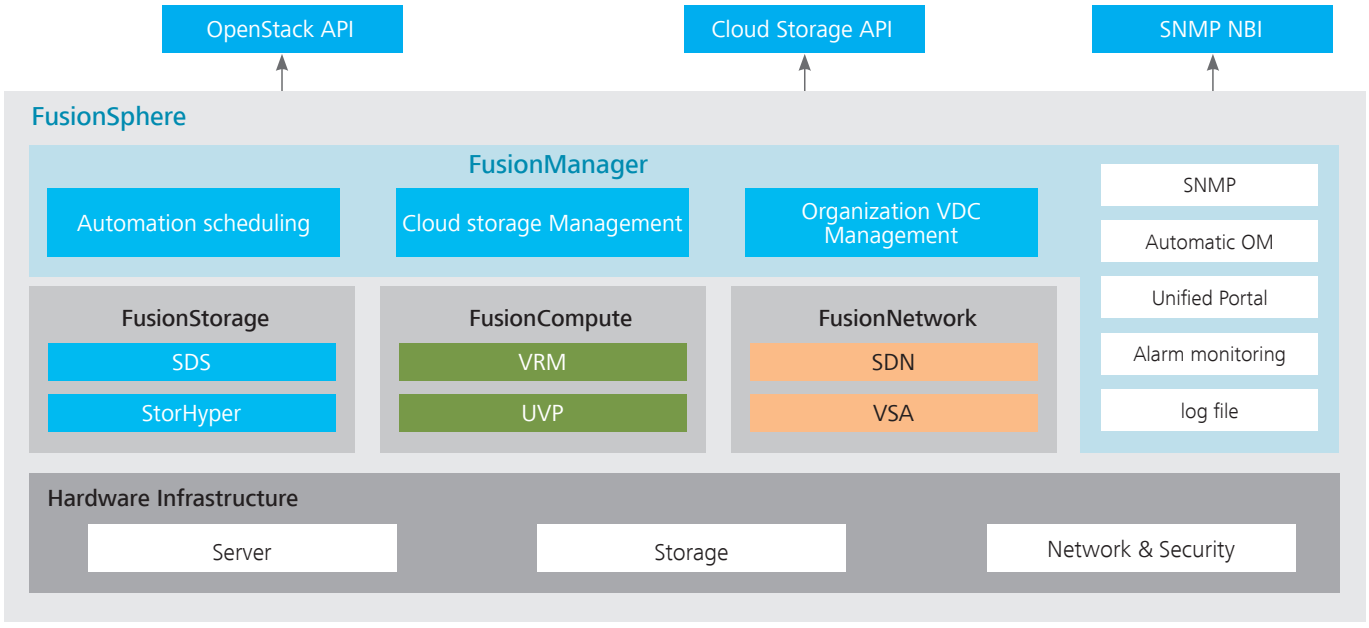
Efficient, Secure, and Reliable

Huawei FusionSphere Cloud OS

Overview

As enterprises grow, their output and deployment of new and dedicated hardware devices also increase accordingly. This growth leads to new challenges to IT infrastructure, such as low resource utilization, high service deployment costs, and long service deployment periods. In response to these new challenges, enterprises now turn to cloud computing for implementing data sharing, enhancing resource utilization, and reducing operating expense (OPEX).

They also expect the IT infrastructure to integrate upstream and downstream service chains and to improve service quality and security. To meet these demands and create more value from IT resources, Huawei provides enterprises with overall virtualization and cloud computing solutions based on the FusionSphere cloud operating system (OS).



Competitive FusionSphere Cloud OS

It helps enterprises to horizontally consolidate physical and virtual resources in data centers and vertically optimize service platforms, facilitating the construction and use of cloud computing platforms.

In addition, FusionSphere offers powerful virtualization and resource pool management functions, comprehensive cloud infrastructure components and

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tools, and open application programming interfaces (APIs). It also supports both traditional and new services, thereby improving IT resource utilization and reducing deployment costs.

Huawei FusionSphere integrates complete data center virtualization capabilities and powerful automated management capabilities. FusionSphere provides enterprises and carriers with an efficient, secure, and reliable cloud OS and helps them to deploy on-demand server virtualization, private cloud, public cloud, and hybrid cloud services. FusionSphere also provides open APIs which allow customers to easily choose third party products and services, making cloud computing easier.

Advantages

Comprehensive Functions

- Distributed virtual switch (DVS), VM live migration, storage live migration, and VM HA
- Self-service system for service application and approval
- Complete backup and disaster recovery plans
- End-to-end service migration capability

Security and Reliability

- Supports secure deletion of user data, ensuring user data security.
- Supports VM disk data encryption, ensuring VM user data security.
- Supports agentless antivirus function, allowing centralized policy configuration.
- Supports TPM2.0 specifications.

Industry-Leading Performance

- Excellent virtualization performance (FusionSphere outperforms mainstream virtualization platforms in the industry in the SPECvirt test).
- Distributed storage, which improves storage performance by three-to-five-fold and supports linear performance and capacity expansion.
- Optimal application virtualization platform that delivers equivalent performance to physical servers.

Specifications

Huawei FusionSphere supports the maximum system capacity in the industry and provides industry-leading performance. FusionSphere meets the requirements of various service deployment scenarios for customers, such as server virtualization, private cloud, public cloud, data center consolidation, and hybrid cloud services.

Management Performance Indicator	Specifications
Maximum number of hosts supported by a VRM node	1024
Maximum number of VRM sites that can be cascaded	16
Maximum number of clusters supported by a VRM node	32
Maximum number of VMs supported by a VRM node	10,000 running VMs or 30,000 registered VMs (running)
Maximum number of built-in vSwitches supported by a VRM node	128
Maximum number of hosts supported by a logical cluster	128 (LUNs storage) 64 (virtual storage)
Maximum number of VMs supported by a logical cluster	3000
Maximum number of physical servers in a system	4096
Maximum number of VMs in a system	80,000
Host Indicator	**Value**
Maximum number of logical CPU cores supported by a host	480
Maximum memory size supported by a host	12 TB
Maximum number of VMs that can be created on a host	1024
Maximum number of LUNs that can be attached to a host	512
Maximum number of volumes supported by a host	2048
Maximum number of non-uniform memory access (NUMA) nodes supported by a host	16
Maximum number of concurrently live migrated VMs supported by a host	8

VM Indicator	Value
Maximum number of vCPUs supported by a VM	128
Maximum number of NICs supported by a VM	12
Maximum number of virtual disks supported by a VM	60
Maximum memory size supported by a VM	4 TB
Maximum virtual disk capacity supported by a VM	64 TB
Maximum number of snapshots supported by a VM	32
Storage Capacity Indicator	**Value**
Maximum number of volumes supported by a VRM node	120,000
Maximum number of hard disks supported by distributed storage	49,152
Maximum number of resource pools supported by distributed storage	128
Maximum number of hosts supported by distributed storage	4096
Maximum number of snapshots supported by the system	200,000
Network Capacity Indicator	**Value**
Maximum number of DVSs supported by the system	128
Maximum number of hosts managed by a DVS	1280
Maximum number of port groups supported by a DVS	80,000

A Virtualization Resource Management (VRM) node is a management node in the FusionSphere system and can manage resources in physical clusters and logical clusters.