

## Ecosystem

### OS

Windows  
Linux  
macOS  
Solaris

### Environment

Physical Machine  
Virtual Machine  
Docker Container

### Cloud & Edge

ESX/ESXi  
Xen  
Hyper-v  
Qemu-kvm  
Containers  
Kubernetes

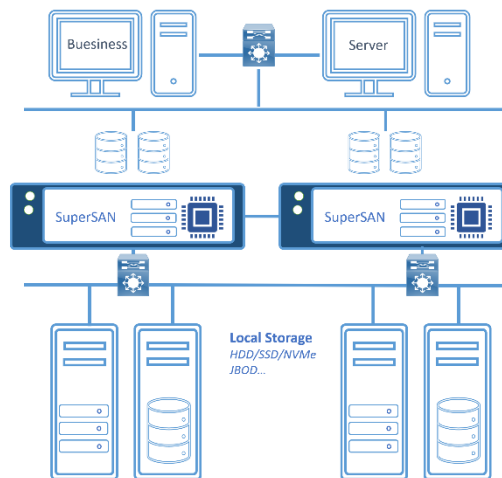
### Solutions

Cluster  
DFS  
Database

### Target Device

Disk  
Optical  
Tape

# KernSafe iSCSI SAN Linux



## iSCSI SAN Linux

KernSafe SuperSAN is an advanced and powerful iSCSI Target software for Linux, which can quickly convert any workstation, server, and even embedded device into powerful iSCSI SAN. Being a full-featured iSCSI SAN software supports a variety of media types such as Standard Image File, VHD, volumes, and physical disks. KernSafe SuperSAN supports many features and powerful authorization methods include CHAP, Mutual CHAP and IP Address authorization and support many features for enterprise such as SCSI-3 for clustering, Synchronous / Asynchronous Replication, High Availability, Snapshot and CDP. KernSafe SuperSAN is an ideal choice for storage solution in enterprise and SBS, that supports various of cloud/edge solution like VMWare, Citrix, and Hyper-v, full support docker for containerized deployment.

## Features

### Backend Device Type

- Extremely fast iSCSI RAM disk drives.
- Exclusive security disk for each client.
- Standard disk image file.
- Virtual Hard Disk image file (.vhd).
- Virtual CD/DVD-ROM emulator.
- Virtual CD/DVD-RW (virtual burner).
- Auto-mount feature for CD/DVD-RW emulator.
- Physical disk (i.e. /dev/sdb).
- Physical disk volume (partition).
- CDP (continuous data protection) image.
- CDP and snapshot linked target.
- Multiple-LUN target.
- RAID-5 target.
- Datacenter, multiple targets over servers with RAID-5 integrated.

### Security and Data Protection

- CHAP and mutual CHAP.
- Client's IP address authentication.
- Standard image file disk snapshot.
- VHD (virtual hard disk) snapshot.
- Continuous data protection (CDP).

### Replications

- Synchronous Replication (RAID-1).
- Asynchronous Replication (RAID-1)
- High availability.

### Protocol

- SCSI-2 Reserve/Release.
- SCSI-3 Persistent Reservation.
- VMWare Platform and VAAI.
- Fully conforms to the latest iSCSI Standard 1.0.

## Specifications Limit

Latency:  $\leq 200 \mu s$

Disks per Node: Unlimited

N-ways Replication: 2

4PB per Storage Pool

Millions IOPS per Node

## ZERO DOWNTIME

High availability

Active-active

Auto-recovery

Strong Consistency.

## Backends

Directly Attached:

HDD

SSD

NVMe

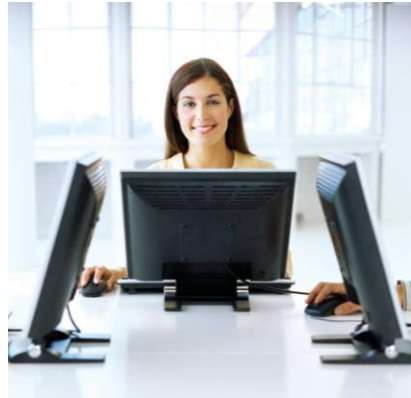
Storage Network:

JBOD etc.

IP SAN Network:

TCP/IP

# Enterprise Features and Benefits



Single Node with scale-up 50000IOPS per iSCSI session.

- In-node storage pool with multiple copies and RAID5.
- Multiple backend devices support
- Software defined storage pool provide dynamic volume and unlimited snapshots.
- Server pool to listen on multiple address and ports.
- Docker and VM friendly.
- Full restful and WEB management.

Dual-Nodes with High availability.

- All benefits above.
- Auto-recovery and high availability.
- Supports all popular cloud/edge solutions.

Two nodes HA is the ideal choice for most of SBS, that provides the lowest TCO.

## System Requirements

- Software requires:
  - Linux with kernel  $\geq 3.10$
  - Recommend OS: CentOS 7.x and Ubuntu Server 20+.
  - Physical Machine, Virtual Machine and Docker Container.
- Hardware requires (minimum):
  - Intel Xeon class processor or similar.
  - 1 GB of RAM.
  - x86, x64 based architecture.
  - Ethernet connection.
- Recommend Configuration (All Flash):
  - Intel Xeon series CPU.
  - 32 GB DDR4 memory.
  - Ethernet Network.
- Checked Compatible Client:
  - Apple Mac OS X 10.8 and later with KernSafe iSCSI initiator
  - Microsoft Windows 2000 or above, 32bit and 64bit (AMD64, EM64T and IA64), Microsoft iSCSI initiator
  - Linux with kernel  $\geq 2.6.16$ , open-iscsi
  - Citrix XenServer
  - VMware ESX Server/ESXi Server
  - SUN Solaris 10, Open-iSCSI Initiator
  - Novell NetWare 6.5 or above

## SERVICES AVAILABLE

[KernSafe Homepage](#)

[Technical Support](#)

[Installation and Setup](#)

[Product Home Page](#)

[How to Install](#)

[Deploy through Docker](#)