

CloudBank-D™

IDEAL FOR POWER-CONSCIOUS CENTRALIZED SITES



- 12TB to 24TB RAID-protected storage per CloudBank™
- CloudBank Arrays scale to petabytes of iSCSI SAN storage
- Embedded server saves cost, power, cooling and rackspace
- Easy-to-use open systems platform



CloudBank Scale-out Application Platform™ Overview

CloudBank appliances deliver both server and shared storage resources for centralized environments needing high-capacity protected storage. Up to twelve CloudBank appliances can be configured together as a high-performance iSCSI SAN called a CloudBank Array. Each CloudBank contributes a free virtual server that can access the shared capacity and performance of the SAN. Both storage and applications are protected in the case of a CloudBank appliance failure.

Key Features

High-availability iSCSI SAN

CloudBanks can be combined to create a scalable iSCSI SAN array with no single point of failure. Storage can be logically and physically expanded with applications running.

Save up to 40% on power

A virtual server running on each CloudBank eliminates external physical servers and reduces rackspace, power, cooling and acquisition costs.

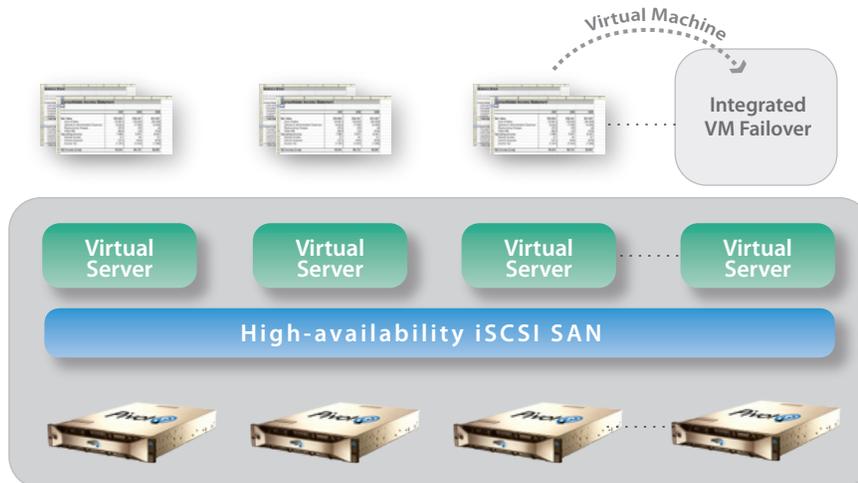
Reduce Support Cost

Improve uptime for applications with VM Failover™ which automatically restarts applications on an available CloudBank in the event of an appliance failure.

Simplify configurations

The Pivot3 scale-out architecture based on standard appliances, standard Gigabit Ethernet networks and open systems software streamlines complex installations.

CloudBank Arrays Protect Data and Applications



24TB CloudBank Usable Capacity Chart (in TB)

Data Protection	RAID 5	RAID 6
Standalone	19.8	18.0

Array Size	RAID 5e	RAID 6e	RAID 6x
3	45.3	40.6	36.8
4	68.8	61.7	55.9
5	92.5	82.8	75.0
6	116.3	104.1	94.1
7	140.2	125.3	113.3
8	164.0	146.6	132.6
9	187.9	167.9	151.8
10	211.8	189.2	171.0
11	235.7	210.5	190.3
12	259.6	231.9	209.5

* NOTE: 12TB CloudBanks usable capacity is 50% less; 1 TB = 1,000,000,000,000 bytes

Performance Specifications

Linear scaling for up to 12 CloudBank appliances

- Scales to 24 gigabits per second
- Scales to 24 Quad-core x86 CPUs
- Scales to 12 parallel x86 RAID controllers
- 4 dedicated LAN GigE ports per server
- Scales to 144 GB ECC DIMM RAM

Capacity Specifications

Linear scaling for up to 12 CloudBank appliances

- Each CloudBank Array scales to 288 TBs
- Supports up to 128 volumes
- Supports up to 128 external initiators

CloudBank-D Specifications

Dimensions: 2U Height: 3.42", Width: 17.53", Depth: 26.17"
Weight: 63.8 lbs / 29.0 kg
Processor: Two Intel® Xeon® 5600 series
Memory: 12GB DDR 1333 ECC Fully Buffered DIMM
Drives: 12x hot-swappable Enterprise SATA II 3.0 Gbps, 7200 rpm
iSCSI: Dual Gigabit Ethernet; Aggregated in Arrays
Network: Four Gigabit Ethernet

Cooling: Redundant, hot swappable fans
Operating Environment: 10°C – 35°C (50°F – 95°F)
Operating Relative Humidity: 20 – 80% non-condensing

Power Rating:
 Spec: 2 x 750W redundant hot swappable power supplies
 Voltage: 100-240 VAC, Auto Ranging, 50-60Hz

Heat dissipation:
 Spec: 2450 BTU/hour maximum

Regulatory:
 Power Supply Safety / EMC
 USA - UL listed
 Canada - CUL listed
 China - CNCA or CCC Mark
 Europe - CE Mark
 Germany - TUV Certified

Contact Pivot3 for additional product safety certification information.

Warranty:
 Three-year limited hardware warranty

Optional Hosted Operating Systems

- Microsoft Windows Server 2003 R2 32 bit
- Windows Storage Server 2003 R2
- RedHat Enterprise Linux 5.x
- CentOS 5.x
- Suse Linux 11.x

Ethernet Requirements

- 2 Gigabit Ethernet switches for fault tolerance
- Sufficient switch ports for 4 ports per appliance



Availability Specifications

Advanced disk protection with RAID 5 or 6

- With RAID 6x, up to 5 simultaneous disk failures will not affect data
- With RAID 6e, up to 3 simultaneous disk failures will not affect data
- RAID 6e and 6x support simultaneous disk and appliance failures
- With RAID 5e, one disk or one appliance failure will not affect data

No single point of failure and accelerated fault recovery methods

- Data access is protected during switch, port, NIC, power supply, fan and disk failures
- Virtual sparing and parallel rebuilds speed recovery times
- Accelerated rebuild priority for critical volumes

VM Failover for server applications in CloudBank Arrays

- Server applications restart automatically on an appliance failure
- No complex cabling or dedicated hardware
- No additional software licenses

Management Specifications

Alarms and Alerts

- State-sensitive LEDs
- GUI state change notification
- SNMP MIB provided for email notification and 3rd party integration

Pivot3 management software

- RAIGE Director** runs on any PC providing intuitive GUI or cli
- RAIGE Connection Manager** automates iSCSI connections
- RAIGE OS** automates advanced data protection

Dynamic configuration

- Add appliances seamlessly
- Automatically load balance performance and capacity to eliminate hot spots
- Change volume settings, including volume expansion, dynamically