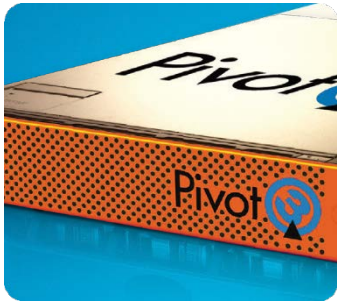


vSTAC Watch™

Purpose-Built Hyper-Converged Appliance for Surveillance



- Purpose-built for surveillance workloads
- Petabyte scalable capacity and performance
- Simple to configure, easy to manage and deploy
- Failover protected hardware, storage and applications

Purpose-Built Hyper-Converged System for Surveillance

vSTAC Watch nodes deliver globally hyper-converged (GHCI) compute and storage resources that scale as nodes are “stacked” in a Pivot3 virtual storage and compute array. Each vSTAC Watch node includes a high-performance VMware ESXi virtual server environment which allocates cross-cluster compute resources to surveillance applications. Pivot3 vSTAC OS pools storage resources across the entire hyper-converged system and presents them to the application as a virtual HyperSAN. Each Pivot3 hyper-converged system contains up to twelve vSTAC Watch nodes and can be expanded on the fly without system downtime.

KEY FEATURES

Enterprise-Class Virtual SAN Storage

Through its advanced infrastructure software, Pivot3 merges all storage capacity across nodes in an array to create a virtual HyperSAN. There is no need for complex SAN knowledge. The entire storage capacity is presented to the surveillance application as a standard storage target. New nodes added to expand the system are automatically load-balanced for capacity, bandwidth and failover as part of the expanded hyper-converged system.

Storage resources can be dynamically and automatically scaled on demand, allowing capacity and performance to be logically and physically expanded while applications are running. This enables the system to meet the needs of even the most demanding surveillance environments.

Purpose-Built for Surveillance

The vSTAC OS simultaneously runs VMS recording applications in virtual server environments. It creates, protects and load-balances IP SAN capacity and performance across all the hard drives, solid state drives and network and storage bandwidth available across the hyper-converged nodes in the system.

Improve Uptime for Applications and Storage

Each hyper-converged system is self-healing for drive failures and supports automatic VM restarts using the patented Pivot3 VM Failover technology. Hybrid failover configurations using VMS partners and VMware are also supported.

Reduce Power and Cost by 40%

Surveillance HCI nodes combine compute and scale-out storage resources in a single appliance that saves up to 40% in power, cooling costs and rack space compared to separate servers and storage.

Pivot3 vSTAC Watch Array

5 Appliance Example

Hyper-Converged Nodes

Applications running on Virtual Machines

Automatic VM Failover



Scale-out Pivot3 Virtual HyperSAN

Pivot3 Watch nodes are centrally managed

Patented vSTAC OS Technology

Pivot3 vSTAC OS creates the globally hyper-converged IT infrastructure required to securely and effectively run surveillance applications. Arrays based on vSTAC OS provide high performance, easily scalable, highly fault-tolerant storage and compute that does not require the purchase of separate server and storage hardware.



Appliance Specifications

Virtual Server and Storage Specifications



- One six-core Intel® Xeon® CPU (*Optional Second CPU)
- 16 GB 2133 MT/s RAM expandable to 384GB
- 4x 1 GigE iSCSI
- 2x10 GigE iSCSI
- Integrated VMware ESXi® 6 hypervisor (includes Foundation License)
- Dual 400GB SSD SATA write cache drives
- 12 Enterprise SATA 2.0 hard drives
- 1TB to 8TB HDD SATA drives available
- Node sizes: 12TB, 24TB, 48TB, 72TB, 96TB
- 128 dynamically expandable volumes
- ***Also available is a 16 drive model with 8TB drives for a total capacity of 128TBs per node***

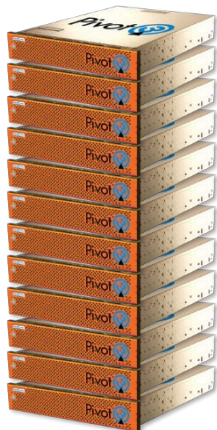
vSTAC WATCH APPLIANCE



2U 12-drive vSTAC Watch Platform

See www.pivot3.com/resources/spec-sheets for detailed hardware specifications.

vSTAC Specifications



Scalability Specifications

- Up to 12 nodes per virtual protection Group (vPG)
- Scale to 1.4PB usable iSCSI Pivot3 virtual HyperSAN across a single vPG
- Multiple scale-up vPG's unified in a vSTAC cluster managed via vSTAC Manager
- Scale to 240 Gb/sec aggregated bandwidth

Application Failover

- Pivot3 VM Failover for high availability
 - No separate licenses to purchase
 - No dedicated hardware to deploy
 - Easy one-click selection
- Optional vMotion, HA and other VMware features licensed separately through authorized VMware reseller partners

Dynamic Storage Management

- Dynamic logical and physical capacity expansion
- Automatic disk and controller load-balancing
- Dynamic load-balanced iSCSI multi-path support

Storage Protection

- No single point of failure
- Distributed virtual drivesparing
- Predictive drive sparing
- Scalar Erasure Coding Lvl.3 - 5 simultaneous disk events or - 2 drives and an entire appliance
- Scalar Erasure Coding Lvl.2 - 3 simultaneous disk events or - 1 drive and an entire appliance
- Scalar Erasure Coding Lvl.1 - 1 disk event or - an entire appliance

Management Software

- vSTAC Manager configures GHCI nodes and runs on any PC

Alarms and Alerts

- State-sensitive LEDs indicate drive events
- vSTAC Manager indicates state changes
- SNMP MIB support for email notification and third party integration
- "Phone Home" remote notification

Usable Capacity in TB (1TB=1,000,000,000bytes)

vSTAC Node count	WATCH NODE USABLE CAPACITY CHART																
	Scalar Erasure Coding Lvl.1						Lvl.2						Lvl.3				
	12TB Node	24TB Node	48TB Node	72TB Node	96TB Node	128TB Node	12TB Node	24TB Node	48TB Node	72TB Node	96TB Node	128TB Node	12TB Node	24TB Node	48TB Node	72TB Node	96TB Node
1	9.8	19.8	38.5	59.2	77.0	102.7	8.9	18.0	35.9	53.8	71.8	95.7	-	-	-	-	-
3	22.5	45.3	90.6	135.8	181.2	241.6	20.2	40.6	81.3	121.8	162.6	216.8	18.3	36.8	73.7	110.4	147.4
4	34.2	68.8	137.8	206.6	275.6	367.5	30.6	61.7	123.5	185.0	247.0	329.3	27.8	55.9	111.8	167.6	223.6
5	46.0	92.5	185.3	277.8	370.6	494.1	41.2	82.8	165.9	248.6	331.8	442.4	37.3	75.0	150.1	225.0	300.2
6	57.8	116.3	232.9	349.2	465.8	621.1	51.7	104.1	208.4	312.4	416.8	555.7	46.8	94.1	188.5	282.6	377.0
7	69.6	140.2	280.6	420.8	561.2	748.3	62.3	125.3	250.9	376.2	501.8	669.1	56.3	113.3	226.9	340.2	453.8
8	81.5	164.0	328.4	492.4	656.8	875.7	72.8	146.6	293.5	440.2	587.0	782.7	65.9	132.6	265.4	398.0	530.8
9	93.4	187.9	376.2	564.0	752.4	1003.2	83.4	167.9	336.2	504.0	672.4	896.5	75.4	151.8	303.9	455.6	607.8
10	105.2	211.8	424.0	635.8	848.0	1130.7	94.0	189.2	378.8	568.0	757.6	1010.1	85.0	171.0	342.4	513.4	684.8
11	117.1	235.7	471.9	707.6	943.8	1258.4	104.6	210.5	421.5	632.0	843.0	1124.0	94.5	190.3	381.0	571.2	762.0
12	129.0	259.6	519.7	779.2	1039.4	1385.9	115.2	231.9	464.2	696.2	928.4	1237.9	104.1	209.5	419.5	629.0	839.0

