

# Understanding the Cost of Computing in the Cloud

SABAREESH SURESH | CWID: A20396634

---

## OBJECTIVE

A start-up company intends to use IaaS services from Amazon EC2 to run its software stack. To drill down the cost breakdown of a private cloud to analyse and compare costs against public on-demand rented resources. In this project, I have considered Amazon EC2 as the cloud provider. A comparative analysis is to be made whether computing resources should be rented from a public cloud on-demand from Amazon EC2, or it would be cheaper to set up a private cloud.

## AMAZON EC2 Instance Types

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instance types comprise varying combinations of CPU, memory, storage, and networking capacity and give you the flexibility to choose the appropriate mix of resources for your applications. Each instance type includes one or more instance sizes, allowing you to scale your resources to the requirements of your target workload.

Generally, the storage optimized instances are designed for workloads that require high, sequential read and write access to very large data sets on local storage. They are optimized to deliver tens of thousands of low-latencies, random I/O operations per second (IOPS) to applications

**CONFIGURATION 1:** Hadoop/Spark Cluster with 32K-cores, 256TB memory, 50PB HDD, and 10Gb/s Ethernet Fat-Tree network (each VM should be equivalent to the d2.8xlarge instance); in addition to the compute resources, a 100PB distributed storage shared across the entire cloud should be procured, with enough capacity for 100GB/sec throughput (for pricing comparison, see S3)

In this configuration the instance type from Amazon that is compared with private resources is **d2.8xlarge**

D2 instances are well suited for the following applications:

- Massive parallel processing (MPP) data warehouse
- MapReduce and Hadoop distributed computing
- Log or data processing applications.

D2 instances provide the best disk performance when you use a Linux kernel that supports persistent grants, an extension to the Xen block ring protocol that significantly improves disk throughput and scalability. **d2.8xlarge** provide the ability to control processor C-states and P-states on Linux. C-states control the sleep levels that a core can enter when it is inactive, while P-states control the desired performance (in CPU frequency) from a core.

## d2.8xlarge Configuration

Specification	Performance
vCPUs	36
Memory(GiB)	244
Network Performance	10 Gbps
Enhanced Networking	Intel 82599 VF
Physical CPU	Intel Xenon E5-2676 v3
Clock Speed	2.4 GHz
Storage	24*2000 HDD
ECU	116
Theoretical GFLOPS	691
No of Cores per processor	12
IPC	16
Pricing	\$5.52

## Amazon S3 Standard Pricing

Storage Pricing (varies by region)

Region:	US East (Ohio) ▾
Pricing	
<b>S3 Standard Storage</b>	
First 50 TB / Month	\$0.023 per GB
Next 450 TB / Month	\$0.022 per GB
Over 500 TB / Month	\$0.021 per GB
<b>S3 Standard-Infrequent Access (S3 Standard-IA) Storage</b>	
All storage	\$0.0125 per GB
<b>S3 One Zone-Infrequent Access (S3 One Zone-IA) Storage</b>	
All storage	\$0.01 per GB
<b>Amazon Glacier Storage</b>	
All storage	\$0.004 per GB

**References:** <https://aws.amazon.com/s3/pricing>

## ESTIMATION OF PUBLIC CLOUD

Instance Type	vCPUs	Memory	Storage	Cost per hour	Instances Needed	Cost for 5 Years
Configuration 1(Required)	32000	256 TB	50 PB	\$5.52	1000	<b>\$241,776,000</b>

Storage Type	Distributed Storage	Data Transfer	Cost for Distributed Storage	Cost of Data Transfer	Cost for 5 years
Configuration 1(Calculated based on Amazon S3 pricing)	100 PB	100 GB/s	\$132,000,000.00	\$165,480,000	<b>\$287,640,576</b>


Total cost of Public cloud with the required configuration for 5 years = **\$529,416,576**

Products	Sub-Components	Description	Price per Item	Quantity	Total Price(\$)	Reference Purchased
Compute Servers	Processor	Intel Xeon E5-2640 V4 Broadwell-EP 2.4 GHz 10 x 256KB L2 Cache 25MB L3 Cache LGA 2011-3 90W BX80660E52640V4 Server Processor	\$975.99	3869	\$3,776,105	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16819117631&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=N82E16819117631&amp;ignorebbr=1</a>
	Memory	I have selected Kingston ValueRAM 64GB (4 x 16GB) DDR4 2400 RAM (Server Memory) ECC Reg DIMM (288-Pin) KVR24R17D8K4/64 each node to achieve 256 TB memory	\$888.65	4153	3690563.45	<a href="https://www.newegg.com/Product/Product.aspx?Item=9SIA8H54FP0850&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=9SIA8H54FP0850&amp;ignorebbr=1</a>
	Chassis	NORCO RPC-170 Black 1U Rackmount Server Chassis 1 External 5.25" Drive Bays	\$72.95	5377	392252.15	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16811219026&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=N82E16811219026&amp;ignorebbr=1</a>
	Hard Drive	Seagate IronWolf 8TB NAS Hard Drive 7200 RPM 256MB Cache SATA 6.0Gb/s 3.5" Internal Hard Drive ST8000VN0022	\$235.26	5377	1264993.02	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16822179003&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=N82E16822179003&amp;ignorebbr=1</a>
Network Switches	48 Port Gb switch	NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch	\$3,886	78	303108	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&amp;ignorebbr=1</a>
Network Cables	SFP Cables	Cisco SFP-H10GB-CU3M Compatible 10G SFP+ Passive Direct Attach Copper Twinax Cable	\$15	7467	112005	<a href="https://www.fs.com/products/30862.html?currency=USD&amp;paid=google_shopping&amp;gclid=Cj0KCQiA6enQBRDUARIsAGs1YQJtehOaRimQtrmn9fm4iXP2asL0m2RIexfYlk4OPZuunPbXOzOm8aAoCrEALw_wcB">https://www.fs.com/products/30862.html?currency=USD&amp;paid=google_shopping&amp;gclid=Cj0KCQiA6enQBRDUARIsAGs1YQJtehOaRimQtrmn9fm4iXP2asL0m2RIexfYlk4OPZuunPbXOzOm8aAoCrEALw_wcB</a>
Racks	Rack Mount	APC AR3300 42U NetShelter SX 600mm Wide x 1200mm Deep Enclosure.	\$1,670	327	546090	<a href="https://www.newegg.com/Product/Product.aspx?Item=9SIADY Y67D8361&amp;ignorebbr=1">https://www.newegg.com/Product/Product.aspx?Item=9SIADY Y67D8361&amp;ignorebbr=1</a>
Storage Servers	Storage	Dell Storage MD1280	\$42,779	237	10138623	<a href="http://www.aei.com/en-us/work/snap/server-ipoo-expansion/md1280/spd/storage-md1280">http://www.aei.com/en-us/work/snap/server-ipoo-expansion/md1280/spd/storage-md1280</a>
Electric Power	Cost for compute and storage nodes	$((120 \text{ W/hr} * 2667) + (161 \text{ W/hr} * 60) + (3300 * 70)) / 1000 * 5 * 365 * 24 = (321960 + 9660 + 231000) = 24558660 \text{ kw/hr}$ Cost = 0.10(rate)	\$562,620	5	2813100	<a href="https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a">https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a</a>
Cooling	Cooling required for Servers		\$10,000	5	\$50,000	<a href="https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a">https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a</a>
Administration	System Administration	Considering the cost of one admin for 1000 instances	\$100,000/year	5377	\$1,000,000	<a href="https://www.payscale.com/research/US/Job=Systems_Administrator/Salary">https://www.payscale.com/research/US/Job=Systems_Administrator/Salary</a>
<b>TOTAL</b>	N/A	N/A	N/A	N/A	<b>\$24,086,840</b>	


Total cost of Private Cloud with the given Specifications = **\$24,086,840**

## PRODUCT DETAILS

### Processor, Network Switch, Chassis, Hard Drive

**PRIVACY PROTECTED**


Our Privacy Policy states that we will only share your personal information with third parties working on our behalf to complete your order such as UPS and FedEx.

**SECURITY SAFEGUARDS**

Security is a top priority at Newegg. When you submit sensitive information via the website, your information is protected both online and offline.


**Newegg Standard Shipping Service** [Important Shipping Information](#)

☐


**Seagate IronWolf 8TB NAS Hard Drive 7200 RPM 256MB Cache SATA 6.0Gb/s 3.5" Internal Hard Drive ST8000VN0022**


IN STOCK  
LIMIT 3

[Standard Return Policy](#)


**SquareTrade Protection Plan** 

☒ 3 Year Hard Drive Protection Plan: \$24.99 ([remove](#))


 **Recover Your Data** [View Details](#)

☐ Send this item as a gift 

**\$272.99**  
**\$235.26**  
Save: 13.82%

**PREMIER**  
[JOIN TODAY](#)


☐

**NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch**


IN STOCK

[Standard Return Policy](#)

**\$3,885.99**

**PREMIER**  
[JOIN TODAY](#)


☐

**NORCO RPC-170 Black 1U Rackmount Server Chassis**


IN STOCK

[Standard Return Policy](#)

**\$72.95**


**PREMIER**  
[JOIN TODAY](#)

☐

**Intel Xeon E5-2640 V4 Broadwell-EP 2.4 GHz LGA 2011-3 90W BX80660E52640V4 Server Processor**


IN STOCK  
LIMIT 1

[Replacement Only Return Policy](#)

**SquareTrade Protection Plan** 

☒ 3 Year CPU Protection Plan: \$149.99 ([remove](#))


**\$989.99**  
**\$975.99**  
Save: 1.41%

**PREMIER**  
[JOIN TODAY](#)

## MEMORY


**Newegg Marketplace Direct Delivery Service** [Important Shipping Information](#)

☐


**Kingston 16GB 288-Pin DDR4 SDRAM ECC Registered DDR4 2133 (PC4 17000) Server Memory Model KVR21R15D4/16**

IN STOCK

**Capacity:** 16GB / **Type:** 288-Pin DDR4 SDRAM

Sold by [Tunny LLC](#) 


**\$223.41**

**PREMIER**  
[JOIN TODAY](#)

**Subtotal:** **\$223.41**

**Shipping:** **\$0.00**

**Shipping Options**

 Please enter your Zip Code so we can show you the most relevant shipping options for your location.

Choose a delivery method

☒ Expedited Shipping (3-5 business days)


☐ Two-Day Shipping (2 business days)


☐ Next Day Shipping (One business day)

## RACK

**Newegg Marketplace Direct Delivery Service** [Important Shipping Information](#)

☐

**APC AR3300 42U NetShelter SX 600mm Wide x 1200mm Deep Enclosure**

Sold by [Dell](#) 

1

IN STOCK

**\$1,669.99**


**Subtotal:**

**\$1,669.99**

**Shipping:**

**\$0.00**

**Shipping Options**


 Please enter your Zip Code so we can show you the most relevant shipping options for your location.

**Choose a delivery method**

☒ Standard Shipping (5-7 business days)

☐ Expedited Shipping (3-5 business days)

## CHASSIS



ALL PRODUCTS ▾

DEALS & SERVICES ▾


FEATURED SELLERS ▾

Keywords, Model # or Item # 


Search all ▾

SEARCH


Home > **My Shopping Cart**

 **SHOPPING SATISFACTION**

Nearly all of Newegg.com's offerings are covered by a full 30-day [refund policy](#).

 **PRIVACY PROTECTED**

Our [Privacy Policy](#) states that we will only share your personal information with third parties working on our behalf to complete your order such as UPS and FedEx.

 **SECURITY SAFEGUARDS**

[Security](#) is a top priority at Newegg. When you submit sensitive information via the website, your information is protected both online and offline.

**1 Item(s) in your shopping cart: \$67.04**

☐ Select All


Remove Selected

Move Selected to Wish List

Update Qtys

**Newegg Standard Shipping Service** [Important Shipping Information](#)

☐

**NORCO RPC-230 2U Rackmount Server Case**

[Standard Return Policy](#)

1

IN STOCK

**\$67.04**

**PREMIER**  
[JOIN TODAY](#)


**Subtotal:**

**\$67.04**

**Shipping:**


**\$0.00**

**Shipping Options**

 Please enter your Zip Code so we can show you the most relevant shipping options for your location.

Zip/Postal Code 

Update

**Choose a delivery method** 


**Will Call Service**

Your products can be picked up from multiple locations.

You will be notified by E-mail once your products are ready for pick-up.

Use Will-Call


**Pick up at FedEx Location**




Order from Newegg, pick up at FedEx Office. [Learn more](#)


Choose FedEx Location


# NETWORK CABLES



Global Shipping



 Sign in

 Cart

All Categories


Products

Solutions






Resources

Contact Us

Home > Fiber Optic Transceivers > Direct Attach Cables > 10G SFP+ to SFP+ DAC > Cisco 10G SFP+ DAC



Click to open expanded view



3m (10ft) Cisco SFP-H10GB-CU3M Compatible 10G SFP+ Passive Direct Attach Copper Twinax Cable #30862

Every cable is individually tested on a full range of Cisco equipment and passes the monitoring of FS.COM intelligent quality control system.

★★★★★

1454 reviews

share

need help?

FS P/N:

SFPP-PC03

MFG PART#:

SFP-H10GB-CU3M

Length:

0.5m

1m

1.5m

2m

2.5m

3m

4m

5m

6m

7m

Price:

US\$ 15.00

Item location:

Seattle, United States

Availability:

2092 pcs in stock, [U.S. Warehouse](#)


Shipping:

FREE Shipping on orders over \$79


4.8 ★★★★★

Google Customer Reviews

# STORAGE SERVER


 > [For Work](#) > [Servers, Storage & Networking](#) > [Storage](#) > [Dell Storage MD1280 Dense Enclosure](#) > [Dell Storage MD1280](#)

[Get to know](#)



Intel® Xeon® Scalable Processors. Intel Inside®. Powerful Productivity Outside.

[Compare](#)




Dell Storage MD1280

Dell Storage MD1280 Dense Enclosure

Benefit from the Dell Storage MD1280 Dense Enclosure — ultra-dense server storage capacity at an affordable price per gigabyte.

Starting at \$42,779.01



**CONFIGURATION 2** Support 1 million virtual machines (VM) where each VM requires 2-core, 15GB RAM, 32GB SSD storage, and 1Gb/s Fat-Tree network (each VM should be equivalent to the r3.large instances); in addition to the compute resources, a 10PB distributed storage shared across the entire cloud should be procured, with enough capacity for 10GB/sec throughput (for pricing comparison, see S3)

### r3.large configuration

Specifications	Performance
VCPUs	2
Memory(GiB)	15
SSD Storage(GB)	1x32
Processor	Intel Xeon Ivy Bridge
Memory Bandwidth	63000 MB/s
On Demand price(\$/hr)	0.175

R3 instances provide:

- The latest Intel Xeon Ivy Bridge Processors
- Support for Enhanced Networking that provides lower latency, low jitter, and very high packet per second performance
- Faster random I/O Performance - up to 150,000 4kb random reads per second
- Support for EBS optimization (r3.xlarge, r3.2xlarge, and r3.4xlarge only)

R3 instances are recommended for In-memory analytics, high performance databases including relational databases and NoSQL databases such as MongoDB, and Memcached / Redis applications. R3 instances support Hardware Virtualization (HVM) Amazon Machine Images (AMIs) only.

**References:**<https://aws.amazon.com/about-aws/whats-new/2014/04/10/r3-announcing-the-next-generation-of-amazon-ec2-memory-optimized-instances/>

### COST OF PUBLIC CLOUD

Configuration 2 - Public Cloud							
S.No	Instance Type	vCPUs	Memory	Storage	Cost per hour	Number of Instances Required	Cost for 5 Years
	Configuration2 (required 1M VMs)	1M	15 GB per each Virtual Machine	32 GB per each VM	\$0.17	1M	\$7,446,000,000.00
S.No	Storage Type	Distributed Storage	Data transfer	Cost for Distributed Storage	Cost for data transfer		Cost for 5 Years
	Configuration2 (required)	10 PB	1GB/s	\$13,212,057.60	\$1,555,200.00		\$14,767,257.00
				(.021*12*5*1024*1024*10)	(.01*60*60*12*24*5*30)	Total Cost	\$7,460,767,257.00

The total cost for r3 instance is **\$7,460,767,257.00**



## COST OF PRIVATE CLOUD

S.No	Products	Sub Products	Description	Price Per Item (\$)	Quantity	Total Price (\$)	Web Links
1	Compute Servers	Cores (processors)	I have considered a server with CPUs each with 12 core.Intel Xeon Scalable Silver 4116 SkyLake 12-Core 2.1GHz (3.0 GHz Turbo) LGA 3647 85W BX806734116 Server Processor	\$1,050.00	45000	\$47,250,000.00	<a href="https://secure.newegg.com/Shopping/ShoppingCart.aspx">https://secure.newegg.com/Shopping/ShoppingCart.aspx</a>
		Memory	I have considered a RAMs of 16 GB (15 GB RAM )	\$229.00	45000	\$10,305,000.00	<a href="http://www.acmemicro.com/Product/11790/16GB-PC3-14900-DIMM-DDR3-1866-Registered-ECC-Dual-Rank-1-\$V-Brand-Name-Original?CritekCheckValue=Memory+Capacity%7C+up+to+16+GB&amp;pager_index=">http://www.acmemicro.com/Product/11790/16GB-PC3-14900-DIMM-DDR3-1866-Registered-ECC-Dual-Rank-1-\$V-Brand-Name-Original?CritekCheckValue=Memory+Capacity%7C+up+to+16+GB&amp;pager_index=</a>
		Hard drive	I have considered one 32 GB SSD for each server. Intel 32GB MEMPEK1W032GAXT Optane Memory Series NVMe PCIe M.2 2280 1350MB/sec Read 20nm 3D Xpoint, Retail	\$79.00	45000	\$3,555,000.00	<a href="http://www.acmemicro.com/Product/15735/Intel-32GB-MEMPEK1W032GAXT-Optane-Memory-Series-NVMe-PCIe-M-2-2280-1350MB-sec-Read-20nm-3D-Xpoint-Retail?CritekCheckValue=Product+Type%7CSSD&amp;CritekCheckValue=Hard+Drive+Capacity%7C+up+to+64+GB&amp;pager_index=">http://www.acmemicro.com/Product/15735/Intel-32GB-MEMPEK1W032GAXT-Optane-Memory-Series-NVMe-PCIe-M-2-2280-1350MB-sec-Read-20nm-3D-Xpoint-Retail?CritekCheckValue=Product+Type%7CSSD&amp;CritekCheckValue=Hard+Drive+Capacity%7C+up+to+64+GB&amp;pager_index=</a>
		Chassis	LIAN LI PC-V320X Black Aluminum Mid Chassis Computer Case	\$179.99	45000	\$8,100,000.00	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E1681112570&amp;ignorebb=1&amp;nm_mc=KNC-GoogleAdwords-PC&amp;cm_mmc=KNC-GoogleAdwords-PC-pla--Cases+%28Computer+Cases+-+ATX+Form%29-">https://www.newegg.com/Product/Product.aspx?Item=N82E1681112570&amp;ignorebb=1&amp;nm_mc=KNC-GoogleAdwords-PC&amp;cm_mmc=KNC-GoogleAdwords-PC-pla--Cases+%28Computer+Cases+-+ATX+Form%29-</a>
2	Network Switches	48 Port Network Switch	NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch	\$3,886.61	1684	\$6,544,024.00	<a href="https://www.amazon.com/NETGEAR-ProSAFE-48-Port-Gigabit-Managed/dp/B0015W5M12">https://www.amazon.com/NETGEAR-ProSAFE-48-Port-Gigabit-Managed/dp/B0015W5M12</a>
3	Network Cables	SFP cables	Juniper Networks SRX-SFP-10GE-DAC-3M Compatible 10G SFP+ Passive Direct Attach Copper Twinax Cable	\$15.00	45637	\$684,555.00	<a href="https://www.fs.com/products/36630.html">https://www.fs.com/products/36630.html</a>
4	Racks	Rack Mount (Istar USA w4210 42U 1000 mm depth Rackmount Server Cabinet)	Assuming that we can place 10 nodes per Rack of Istar	\$1,245.99	62500	\$77,874,375.00	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16816215077">https://www.newegg.com/Product/Product.aspx?Item=N82E16816215077</a>
5	Storage Servers	Dell Storage MD1280	High capacity 8TB hard drives. To achieve 1PB distributed storage I have decided to go with 225 numbers to achieve 10PB	\$42,779.00	175	\$7,486,325.00	<a href="http://www.pogolinux.com/quotes/editsys?sys_id=1067693">http://www.pogolinux.com/quotes/editsys?sys_id=1067693</a>
6	Electric Power	Electric Power cost for Compute Nodes	As per the current Industrial charges, the power cost for kwh per node is 6.47 The total power consumed by each compute node is considered to be 800 W	\$2,267.00	45000	\$102,015,000.00	<a href="https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a">https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a</a>
7	Cooling	Cooling and Power required for storage	Total BTU/hr generated is 535780136518.77 units.	\$2,544.82	45000	\$114,480,000.00	<a href="https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a">https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a</a>
8	Administration	System Administartion	We have considered one admin for each 1000 servers	\$100,000.00	5	\$500,000.00	
<b>Total Cost of private clou</b>		Not Applicable	Not Applicable	Not Applicable	Not Applicable	<b>\$456,194,279.89</b>	


The total cost of private cloud for the given configuration is **\$456,194,279.89**



# PRODUCT DETAILS

## PROCESSOR

<https://secure.newegg.com/Shopping/ShoppingCart.aspx>



Log in or Register Try **PREMIER** \$1,049.99 (1 Items) Wish List Customer Service


TRENDING NOW: msi gs63vr ryzen 1700x lg g6 radeon rx 480 570x


newegg Business FEEDBACK

ALL PRODUCTS DEALS & SERVICES FEATURED SELLERS

Keywords, Model # or Item # Search all SEARCH

Home > Components > CPUs / Processors > Processors - Servers > Intel > Item#: N82E16819117890





### Intel Xeon Scalable Silver 4116 SkyLake 12-Core 2.1GHz (3.0 GHz Turbo) LGA 3647 85W BX806734116 Server Processor

Be the first to review this product... Ask Or Answer A Question [SHARE](#)

In stock. Ships from United States.

Sold and Shipped by Newegg

Option: Silver 4116

Silver 4108

Silver 4110

Silver 4112

Silver 4114

**Silver 4116**

- Socket LGA 3647
- 6 Channels DDR4 DRAM
- 48 Lanes PCIe 3.0
- 16.5MB L3 Cache
- TDP 85W

12 New from \$1,049.19

Sold and Shipped by: Newegg

**\$1,049.<sup>99</sup>**

\$4.99 Shipping (restrictions apply)

**PREMIER - FREE 3 DAY or faster shipping**

1

+

-

**ADD TO CART**

This product is available at a lower price from other sellers.

☐ ADD TO COMPARE ☐ PRICE ALERT

☒ ADD TO WISH LIST

Best Sellers

**NothingButSavings.com**  
★★★★★ 2,095 (89% Positive)

## MEMORY

<http://www.acmemicro.com/Product/11790/16GB-PC3-14900-DIMM-DDR3-1866-Registered-ECC-Dual-Rank-1-5V-Brand-Name-Original>

MICRO SYSTEMS

Solutions

Products

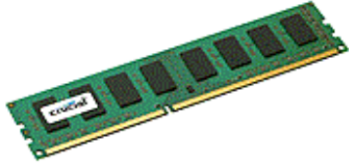
Promotion

Customer Service

About Us

Memory

Home > Products > Memory



### 16GB PC3-14900 DIMM DDR3-1866 Registered ECC Dual-Rank 1.5V Brand Name Original

Product Code: DR3-16G-R14900E  
Manufacturer: Crucial

**Your Price: \$229.99 / Each**

★★★★★ 0 Review(s)

1

▼

**Update Cart**

Features

Reviews

Hynix, Kingston, Samsung etc. brand names of DDR3 SDRAM Memory Products

**Clearance : 2pcs M393B2G70DB0-CMA left only. Please check with salesperson for the details.**

**Specifications:**  
Module name: PC3-14900  
Package: 240-pin DIMM  
Module Size: 16 GB  
Feature: DDR3 PC3-14900 • CL=13 • Dual Ranked • Registered • ECC • DDR3-1866 • 1.5V • 2048Meg x 72

Memory Module

☐ DIMM (12)  
☐ SO-DIMM (4)

Memory Type

☐ DDR4 (13)  
☐ DDR3 (3)

Module Spec

☐ Registered (6)  
☐ Unbuffered ECC (5)  
☐ Unbuffered non-ECC (5)

Capacity

☐ up to 1 GB (19)  
☐ up to 2 GB (4)  
☐ up to 4 GB (16)  
☐ up to 8 GB (17)  
☒ up to 16 GB (16)  
☐ up to 32 GB (5)  
☐ up to 64 GB (2)

Memory Bus Speed

☐ (2666 MHz) (5)  
☐ (2400 MHz) (7)  
☐ (2133 MHz) (1)  
☐ (1866MHz) (1)  
☐ (1600 MHz) (2)

## HARD DRIVE

<http://www.acmemicro.com/Product/15735/Intel-32GB-MEMPEK1W032GAXT-Optane-Memory-Series-NVMe-PCIe-M-2-2280-1350MB-sec-Read-20nm-3D-Xpoint-Retail>

**ACME MICRO SYSTEMS**

My Account Shopping Cart

All Products Product keywords, Model Name, Item #

Solutions Products Promotion Customer Service About Us

Hard Drive | SSD | SATADOM

Product Type

- ☐ NVMe (6)
- ☐ SATADOM (6)
- ☒ SSD (8)

Capacity

- ☒ up to 64 GB (8)
- ☐ up to 200 GB (12)
- ☐ up to 400 GB (32)
- ☐ up to 600 GB (28)
- ☐ up to 800 GB (4)
- ☐ up to 1 TB (27)
- ☐ up to 2 TB (23)
- ☐ up to 4 TB (11)
- ☐ up to 25 TB (2)

Home > Products > Hard Drive | SSD | SATADOM

**Intel 32GB MEMPEK1W032GAXT Optane Memory Series NVMe PCIe M.2 2280 1350MB/sec Read 20nm 3D Xpoint, Retail**

Product Code: SSD-IT-PEK1W032GAXT  
Manufacturer: Intel

**Your Price: \$78.99 /**

0 Review(s)

1

Add to Cart

## CHASSIS

<https://www.newegg.com/Product/Product.aspx>

**newegg**

Log in or Register Try PREMIER \$1,049.99 (1 Items) Wish List Customer Service

TRENDING NOW: x470 god of war gs65 mx500 geforce 1060

newegg Business FEEDBACK

ALL PRODUCTS DEALS & SERVICES FEATURED SELLERS

Keywords, Model # or Item # Search all SEARCH

Home > Components > Computer Cases > Computer Cases > Lian-Li > Item#: N82E16811112570

**LIAN LI PC-V320X Black Aluminum Mid Chassis Computer Case**

+ 40% off w/ promo code NAFDECLIA422, ends 4/30

Be the first to review this product... Ask Or Answer A Question

SHARE

In stock. Ships from United States.

Sold and Shipped by Newegg

- Aluminum Mid Chassis
- USB3.0 x 2 / USB3.1 (Type-C) / HD Audio Front Ports
- 2 Internal 3.5" Drive Bays

TOOLS AND ACCESSORIES FOR EVERY BUILD Shop Now

**FREE SHIPPING**

Sold and Shipped by: Newegg

\$179.99

**\$178<sup>19</sup>**

PREMIER - FREE 3 DAY or faster shipping

1 ADD TO CART

ADD TO COMPARE PRICE ALERT

ADD TO WISH LIST

Advertisement

THIS WON'T DISAPPOINT


YOU'RE GETTING UP TO 38% OFF

TOP SELLER

AdChoices

## NETWORK SWITCH

Reference : <https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&ignorebbbr=1>



Log in or Register Try **PREMIER** 0 Items Wish List Customer Service


TRENDING NOW: ryzen 2nd gen mining rig dell latitude msi b350m gaming pro amd cooler

newegg Business FEEDBACK

ALL PRODUCTS DEALS & SERVICES FEATURED SELLERS

Keywords, Model # or Item # Search all SEARCH

Home > Networking > Wired Networking > Switches > Netgear Inc. > Item#: N82E16833122845



**NETGEAR**  
**NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch**  
Be the first to review this product... Ask Or Answer A Question SHARE  
In stock. Ships from United States.  
Sold and Shipped by Newegg

Primary Port: 48 Port  
8 Port 16 Port 28 Port 48 Port

- Advanced VLAN features such as protocol-based VLAN, MAC-based (Media Access Control) VLAN and 802.1x Guest VLAN
- Advanced QoS (Quality of Service) with L2 / L3 / L4 awareness and 8 priority queues
- Static Routing (IPv4 and IPv6)
- Private VLAN
- Dynamic VLAN assignment
- IGMP and MLD snooping
- Advanced security
- IPv6 for management, QoS and ACL
- Easy-to-use Web browser-based management GUI

★ FREE SHIPPING

Sold and Shipped by: Newegg

**\$3,885<sup>99</sup>**

PREMIER - FREE 3 DAY or faster shipping

1 ADD TO CART

☐ ADD TO COMPARE ☐ PRICE ALERT

ADD TO WISH LIST

Best Sellers

**NothingButSavings.com**  
2,074 (88% Positive)  
See price in cart + FREE SHIPPING VIEW DETAILS


**BuyVPC.com**  
3,769 (91% Positive)

## NETWORK CABLES

Reference: <https://www.fs.com/products/36630.html>

All Categories Products Solutions Resources Contact Us

Home > Fiber Optic Transceivers > Direct Attach Cables > 10G SFP+ to SFP+ DAC > Juniper Networks 10G SFP+ DAC



Click to open expanded view

★★★★★

1457 reviews share need help?

FS P/N: SFP-10G-DAC

MFG PART#: SRX-SFP-10GE-DAC-3M

Length: 0.5m 1m 1.5m 2m 2.5m 3m 4m 5m 6m 7m

Price: US\$ 15.00

Item location: Seattle, United States

Availability: 2487 pcs in stock, U.S. Warehouse

Shipping: FREE Shipping on orders over \$79

## STORAGE SERVER

[http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv\\_md1280\\_1084](http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv_md1280_1084)

[Home](#) > [For Work](#) > [Servers, Storage & Networking](#) > [Storage](#) > [Dell Storage MD1280 Dense Enclosure](#) > [Dell Storage MD1280](#)

Get to know  Windows 10 Pro

Intel® Xeon® Scalable Processors. Intel Inside®. Powerful Productivity Outside.

[Compare](#)



### Dell Storage MD1280

#### Dell Storage MD1280 Dense Enclosure

Benefit from the Dell Storage MD1280 Dense Enclosure – ultra-dense server storage capacity at an affordable price per gigabyte.

Starting at \$42,779.01



## RACKS

<https://www.newegg.com/Product/Product.aspx?Item=N82E16816215077>



[Log in or Register](#) Try **PREMIER** [0 Items](#) [Wish List](#) [Customer Service](#)

TRENDING NOW: [core i9](#) [cell phones](#) [apple macbook pro](#) [10gb switch](#) [obi200](#)

**newegg Business** [FEEDBACK](#)

[ALL PRODUCTS](#) [DEALS & SERVICES](#) [FEATURED SELLERS](#)

Keywords, Model # or Item #

[Search all](#) [SEARCH](#)

[Home](#) > [Components](#) > [Server Components](#) > [Server Racks / Cabinets](#) > [APC](#) > [Item#: 9SIADYY67D8361](#)



#### APC AR3300 42U NetShelter SX 600mm Wide x 1200mm Deep Enclosure

Be the first to review this product... [See 1 Question](#)

[SHARE](#)

In stock. Ships from United States. Most customers receive within 4-10 days.

Sold and Shipped by [Dell](#)

- Black
- 1363.64 KG (static load) 1022.73 KG (dynamic load) Weight Capacity
- Rack Enclosure

13 New from **\$1,669.99**



★ **FREE SHIPPING**

Sold and Shipped by: [Dell](#)

**\$1,669<sup>.99</sup>**

1

+

-

[ADD TO CART](#)


☐ [ADD TO COMPARE](#)

[PRICE ALERT](#)

[ADD TO WISH LIST](#)

Best Sellers

**FactoryBuy**

 79 (85% Positive)

**\$1,740.08**

+ FREE SHIPPING

[VIEW DETAILS](#)

**Newegg**

**\$1,662.34**

+ \$119.99 Shipping

[VIEW DETAILS](#)

## CONFIGURATION 3

Support deep learning with 1 exaflop of mixed precision performance (hint: each VM should be equivalent to p3.16xlarge instances; you will want to use the NVIDIA V100 GPUs (8 GPUs per node), and allocate 8-cores per GPU (64-cores per node) with 8GB of memory per core (512GB per node); the network to use is at least 10Gb/s per GPU (100Gb/s should work), and should be organized in a Fat-Tree network; in addition to the compute resources, a 1PB distributed storage shared across the entire cloud should be procured, with enough capacity for 10GB/sec throughput (for pricing comparison, see S3)

### p3.16xlarge Hardware Configuration

SPECIFICATION	PERFORMANCE
vCPUs	64
Memory(GB)	488
Processor	Intel Xeon E5(Broadwell) and 488 GB DRAM
Network Bandwidth	25 Gbps
EBS Bandwidth	14 Gbps
GPU Memory	128
GPUs Tesla v100	8
On Demand Price	\$24.48

P3 instances are well-suited for distributed deep learning frameworks, such as MXNet, that scale out with near perfect efficiency. P3 instances are fundamentally disrupting how organizations typically consume computing hardware for artificial intelligence/machine learning/high-performance computing services.

**References:** <https://aws.amazon.com/ec2/instance-types/p3/>

PUBLIC CLOUD								
S. No	Instance Type	GPUs	Memory	VCPUs	Main Memory	Cost per Hour	Number of Instances	Cost for 5 Years
1	Configuration3 (1 Exa flop Precision)	1000	128 GiB per each node	64 cores per node	512 GB per node	\$24.48	1,000.00	\$1,072,224,000.00
S. No	Storage Type	Distributed Storage	Data transfer	Cost for Distributed Storage	Cost for data transfer			Cost for 5 Years
1	AWS S3	Over 500 TB/month	> 5 PB per month	\$0.021 per GB	Assuming \$0.01 per GB			
	Configuration3 (required)	1 PB	10Gb/s	\$1,321,205.76	\$15,768,000.00			\$17,089,205.00
							<b>Total Cost</b>	<b>\$1,089,313,205.00</b>

## COST EVALUATION OF PRIVATE CLOUD

S.No	Products	Sub Products	Description	PRIVATE CLOUD		Total Price (\$)	Web Links
				Price Per Item (\$)	Quantity		
1	Compute Servers	Cores (processors)	I have decided to go with NVIDIA v100 8GPUs each of 8 core per GPU to achieve 1 exaflop of mixed precision	\$164,986.00	1000	\$164,986,000.00	<a href="http://www.nextwarehouse.com/cart.cfm?action=ADD&amp;itm_id=2707240&amp;qty=1">http://www.nextwarehouse.com/cart.cfm?action=ADD&amp;itm_id=2707240&amp;qty=1</a>
		Memory	I have selected Kingston ValueRAM 64GB (4 x 16GB) DDR4 2400 RAM (Server Memory) ECC Reg DIMM (288-Pin) KVR24R17D8K4/64 each node to achieve 256 TB memory	\$888.65	1000	\$888,000.00	<a href="http://www.acmemicro.com/Products/Memory?Crits_CheckValue=Memory+Capacity%7C+up+to+64+GB&amp;pager_index=">http://www.acmemicro.com/Products/Memory?Crits_CheckValue=Memory+Capacity%7C+up+to+64+GB&amp;pager_index=</a>
2	Network Switches	48-Port Switch	NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch	\$3,885	26	\$101,010	<a href="https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&amp;ignorebb=1">https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&amp;ignorebb=1</a>
3	Network Cables	SFP Cables	Juniper Networks SRX-SFP-10GE-DAC-3M Compatible 10G SFP+ Passive Direct Attach Copper Twinax Cable	\$15	1050	\$15,750	<a href="https://www.fs.com/products/36630.html">https://www.fs.com/products/36630.html</a>
4	Racks	Rack Mount	APC AR3300 42U NetShelter SX 600mm Wide x 1200mm Deep Enclosure. I have assumed to place 4 nodes per Rack summing up 1000 together	\$1,670	250	\$417,500	<a href="https://www.newegg.com/Product/Product.aspx?Item=9SIADYY67D8361&amp;ignorebb=1">https://www.newegg.com/Product/Product.aspx?Item=9SIADYY67D8361&amp;ignorebb=1</a>
5	Storage Servers	Dell Storage MD1280	84 hard drives in a 5U standard rack mount chassis with a High capacity 8TB hard drives. To achieve 1PB distributed storage I have decided to go with 2 numbers	\$42,779	3	\$128,337	<a href="http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv_md1280_1084">http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv_md1280_1084</a>
6	Electric Power	Power of compute nodes	As per the current Illinois Industrial wages, the cost of one kilowatt per hour is 7.59 cents	\$11,387	1000	\$11,387,000	<a href="https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a">https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a</a>
7	Cooling	Cooling for servers and nodes	There are 1000 nodes considered for this configuration		1000	\$1,200,000	
8	Administration	System Administration	Considering one admin for 1000 servers	\$100,000/year	5 years	\$500,000	<a href="https://www.payscale.com/research/US/Job=Systems_Administrator/Salary">https://www.payscale.com/research/US/Job=Systems_Administrator/Salary</a>
	TOTAL COST	N/A	N/A	N/A	N/A	\$179,123,597.00	



# PRODUCT DETAILS

## PROCESSOR

Reference: [http://www.nextwarehouse.com/cart.cfm?action=ADD&itm\\_id=2707240&qty=1](http://www.nextwarehouse.com/cart.cfm?action=ADD&itm_id=2707240&qty=1)

**NextWarehouse**

Enter Part #, Keyword

Categories

Water Solution

Cart

Contact Us

About Us

Account

## Your Shopping Cart

Continue Shopping

Checkout



**NVIDIA CORP 8-GPU/512GB DGX-1 DL WITH V100**

Part Number: 920-22787-2510-000, Item #: 2707240

**\$164,986.46**

1

Remove

☐ \$18,148.51/unit for Hot Swap Warranty

Select a Destination Country: United States  
(Including Guam, US Territory)

**US\$ Sub-Total:**

**\$164,986.46**

Continue Shopping

Update

Checkout

Sales tax will be collected for CA,MA,MD,TN,DC customers.

We Accept     PO and Wire.

## MEMORY

Reference: <https://www.newegg.com/Product/Product.aspx?Item=9SIA8H54FP0850&ignorebbr=1>



Log in or Register

Try **PREMIER**

0 Items

Wish List

Customer Service

TRENDING NOW:

ryzen 2nd gen

mining rig

dell latitude

msi b350m gaming pro

am4 cooler

**newegg Business**

FEEDBACK

ALL PRODUCTS

DEALS & SERVICES

FEATURED SELLERS

Keywords, Model # or Item #

Search all

SEARCH

Home > Components > Memory > Server Memory > Kingston Technology Corp. > **Item#: 9SIA8H54FP0850**



**Kingston ValueRAM 64GB (4 x 16GB) DDR4 2400 RAM (Server Memory) ECC Reg DIMM (288-Pin) KVR24R17D8K4/64**

Be the first to review this product... See 1 Question | 1 Answer

SHARE

In stock. Ships from United States. Most customers receive within 6-10 days.

Sold and Shipped by **Compute4Less Corp**

Capacity: 64GB (4 x 16GB)

**64GB (4 x 16GB)**

16GB

- ECC
- Registered
- Designed and Tested to meet JEDEC
- Free Technical Support

2 New from **\$888.65**

**★ FREE SHIPPING**

Sold and Shipped by: **Compute4Less Corp**

**\$888.65**

1

+

-

ADD TO CART

☐ ADD TO COMPARE

☐ PRICE ALERT

☐ ADD TO WISH LIST

Best Sellers

**TELeasy**

264 (81% Positive)

**\$927.26**


+ FREE SHIPPING

VIEW DETAILS



## NETWORK SWITCH

Reference : <https://www.newegg.com/Product/Product.aspx?Item=N82E16833122845&ignorebbr=1>




Log In or RegisterTry **PREMIER**0 ItemsWish ListCustomer Service

TRENDING NOW:ryzen 2nd genmining rigdell latitudemsi b350m gaming proam4 cooler

newegg BusinessFEEDBACK

ALL PRODUCTSDEALS & SERVICESFEATURED SELLERSKeywords, Model # or Item #Search allSEARCH

Home > Networking > Wired Networking > Switches > Netgear Inc. > Item#: N82E16833122845



**NETGEAR**  
**NETGEAR ProSAFE XS748T 48-Port 10-Gigabit Ethernet Smart Managed Switch**

Be the first to review this product... Ask Or Answer A QuestionSHARE

In stock. Ships from United States.  
Sold and Shipped by Newegg

Primary Port: 48 Port

8 Port16 Port28 Port48 Port

- Advanced VLAN features such as protocol-based VLAN, MAC-based (Media Access Control) VLAN and 802.1x Guest VLAN
- Advanced QoS (Quality of Service) with L2 / L3 / L4 awareness and 8 priority queues
- Static Routing (IPv4 and IPv6)
- Private VLAN
- Dynamic VLAN assignment
- IGMP and MLD snooping
- Advanced security
- IPv6 for management, QoS and ACL
- Easy-to-use Web browser-based management GUI

★ **FREE SHIPPING**

Sold and Shipped by: **Newegg**

**\$3,885<sup>99</sup>**

**PREMIER - FREE 3 DAY or faster shipping**

1+ADD TO CART

☐ ADD TO COMPARE☐ PRICE ALERT

☐ ADD TO WISH LIST

Best Sellers

**NothingButSavings.com**  
2,074 (88% Positive)

**See price in cart**  
+ FREE SHIPPINGVIEW DETAILS


**BuyVPC.com**  
3,769 (91% Positive)

## NETWORK CABLES

Reference: <https://www.fs.com/products/36630.html>

All CategoriesProductsSolutionsResourcesContact Us

Home > Fiber Optic Transceivers > Direct Attach Cables > 10G SFP+ to SFP+ DAC > Juniper Networks 10G SFP+ DAC



Click to open expanded view

3m (10ft) Juniper Networks SRX-SFP-10GE-DAC-3M Compatible 10G SFP+ Passive Direct Attach Copper Twinax Cable #36623

Every cable is individually tested on a full range of Juniper Networks equipment and passes the monitoring of FS.COM intelligent quality control system.

★★★★★1457 reviewsshareneed help?

FS P/N: SFP-10G-DAC

MFG PART#: SRX-SFP-10GE-DAC-3M

Length:0.5m1m1.5m2m2.5m3m4m5m6m7m

Price:US\$ 15.00

Item location:Seattle, United States

Availability:2487 pcs in stock, U.S. Warehouse

Shipping:FREE Shipping on orders over \$79

## STORAGE SERVER

[http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv\\_md1280\\_1084](http://www.dell.com/en-us/work/shop/server-jbod-expansion/md1280/spd/storage-md1280/pv_md1280_1084)

Home > For Work > Servers, Storage & Networking > Storage > Dell Storage MD1280 Dense Enclosure > Dell Storage MD1280

Get to know Windows 10 Pro

Intel® Xeon® Scalable Processors. Intel Inside®. Powerful Productivity Outside.

Compare



## Dell Storage MD1280

### Dell Storage MD1280 Dense Enclosure

Benefit from the Dell Storage MD1280 Dense Enclosure – ultra-dense server storage capacity at an affordable price per gigabyte.

Starting at \$42,779.01



## ELECTRICITY PRICING

Reference: [https://www.eia.gov/electricity/monthly/epm\\_table\\_grapher.php?t=epmt\\_5\\_6\\_a](https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a)

Memory | DDR4 /DDR3 /DC APC AR3300 42U NetShelte Juniper Networks SRX-SFP- Dell Storage MD1280 high- EIA - Electricity Data

← → ↻ Home https://www.eia.gov/electricity/monthly/epm\_table\_grapher.php?t=epmt\_5\_6\_a

Search eia.gov

**Table 5.6.A. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, January 2018 and 2017 (Cents per Kilowatthour)**


Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	January 2018	January 2017	January 2018	January 2017	January 2018	January 2017	January 2018	January 2017	January 2018	January 2017
<b>New England</b>	<b>19.82</b>	<b>18.34</b>	<b>16.38</b>	<b>14.53</b>	<b>13.75</b>	<b>12.49</b>	<b>13.74</b>	<b>9.56</b>	<b>17.64</b>	<b>15.88</b>
Connecticut	20.00	19.28	16.99	15.63	15.57	13.32	21.52	11.80	18.48	17.15
Maine	16.02	15.95	12.48	12.36	9.68	9.56	--	--	13.46	13.38
Massachusetts	20.60	18.38	16.77	14.34	15.09	13.50	9.79	8.01	18.22	15.79
New Hampshire	19.23	18.43	15.56	14.33	13.88	12.74	--	--	17.08	15.92
Rhode Island	22.24	18.91	17.53	15.44	16.19	14.22	16.51	18.70	19.28	16.80
Vermont	17.36	17.05	15.15	14.34	10.62	10.20	--	--	15.14	14.49
<b>Middle Atlantic</b>	<b>15.46</b>	<b>15.46</b>	<b>12.36</b>	<b>12.04</b>	<b>7.63</b>	<b>7.05</b>	<b>9.75</b>	<b>10.48</b>	<b>12.76</b>	<b>12.43</b>
New Jersey	15.52	15.83	12.14	11.94	10.95	10.34	8.14	9.46	13.36	13.29
New York	17.74	17.30	14.41	13.89	6.37	5.87	10.34	11.90	14.67	14.22
Pennsylvania	13.69	13.79	9.16	8.98	7.60	6.99	7.48	6.67	10.73	10.36
<b>East North Central</b>	<b>12.68</b>	<b>12.40</b>	<b>10.04</b>	<b>9.73</b>	<b>7.32</b>	<b>6.96</b>	<b>7.97</b>	<b>6.52</b>	<b>10.26</b>	<b>9.85</b>
Illinois	12.49	11.28	9.58	8.29	7.59	6.33	7.93	6.19	10.07	8.75
Indiana	11.09	11.28	10.07	10.10	7.23	7.35	10.47	11.14	9.46	9.48
Michigan	15.26	15.23	10.76	10.84	7.25	7.38	10.41	12.28	11.54	11.53
Ohio	11.82	11.55	9.58	9.69	7.02	6.59	6.91	7.41	9.79	9.46
Wisconsin	14.01	14.00	10.78	10.74	7.70	7.66	12.71	13.08	10.96	10.92
<b>West North Central</b>	<b>10.48</b>	<b>10.47</b>	<b>8.98</b>	<b>8.86</b>	<b>6.94</b>	<b>6.82</b>	<b>7.85</b>	<b>7.84</b>	<b>9.09</b>	<b>8.99</b>
Iowa	10.93	10.79	8.97	8.67	5.82	5.50	--	--	8.39	8.12
Kansas	12.10	11.94	10.05	9.73	7.48	7.50	--	--	10.19	9.96

Type here to search

9:29 PM 4/16/2018

RACK

Reference: <https://www.newegg.com/Product/Product.aspx?Item=9SIADYY67D8361&ignorebbr=1>



Log in or Register

Try **PREMIER**

0 Items

Wish List

Customer Service

TRENDING NOW: core i9cell phonesapple macbook pro10gb switchobi200


newegg BusinessFEEDBACK

ALL PRODUCTSDEALS & SERVICESFEATURED SELLERS

Keywords, Model # or Item #

Search allSEARCH

Home > Components > Server Components > Server Racks / Cabinets > APC > Item#: 9SIADYY67D8361



### APC AR3300 42U NetShelter SX 600mm Wide x 1200mm Deep Enclosure

Be the first to review this product... See 1 Question

In stock. Ships from United States. Most customers receive within 4-10 days.

Sold and Shipped by Dell

- Black
- 1363.64 KG (static load) 1022.73 KG (dynamic load) Weight Capacity
- Rack Enclosure

13 New from \$1,669.99

FREE SHIPPING

Sold and Shipped by: Dell

\$1,669<sup>99</sup>

1

+

-

ADD TO CART

☐ ADD TO COMPARE

☐ PRICE ALERT

☐ ADD TO WISH LIST

Best Sellers

FactoryBuy

79 (85% Positive)

\$1,740.08

+ FREE SHIPPING


VIEW DETAILS




Newegg

\$1,662.34

+ \$119.99 Shipping

VIEW DETAILS





## SUMMARY TABLE

	Configuration 1	Configuration 2	Configuration 3
<b>Public Cloud (including EC2 and S3) Cost over 5 years, 24/7 operation, with 100% usage</b>	<b>\$529,416,576</b>	<b>\$7,460,767,257</b>	<b>\$1,089,313,205.00</b>
<b>Private Cloud cost over 5 years, 24/7 operation, with 100% usage</b>	<b>\$29,613,840</b>	<b>\$456,194,279.89</b>	<b>\$179,123,597.00</b>
<b>What utilization must be achieved with the private cloud to make the private cloud option more attractive than the public cloud?</b>	The cost of private cloud setup is almost one third of the total cost of public setup in this configuration. So <b>private cloud seems to be more attractive and economical</b> unless the utilization reduces to 50% If this happens then the public cloud will be preferred over private.	The total public cloud is extremely expensive in this configuration when compared to the total cost for setting up the private cloud where the cost of public is almost 7 times more than the private cloud setup. So, it is <b>preferable to go with private setup</b> in this configuration.	The difference between the public cloud setup and the private cloud setup is almost 10 times higher, so any kind of utilization won't affect much and the <b>private cloud will always be advised to purchase and economical</b> than the public cloud setup.

## CONCLUSION

We can clearly estimate based on the above analysis that the total cost of private cloud is cheaper than the total cost of public cloud. So, it is better to purchase a private cloud. However, it depends on the amount of utilization for each configuration for a span of 5 years. Public cloud seems to be attractive and affordable with lesser utilizations over a long time.