

# Enterprise Flash Array Storage

A Peek Into What Real Users Think

December 2016



# Contents

Vendor Directory	3
Top 10 Vendors	4 - 5
Top 5 Solutions by Ranking Factor	6
Focus on Solutions	
HPE 3PAR Flash Storage	7 - 9
Tintri VMstore	10 - 12
NetApp All Flash FAS	13 - 15
Pure Storage	16 - 18
Nimble Storage	19 - 21
EMC VNX	22 - 24
Kaminario K2	25 - 27
SolidFire	28 - 30
IBM FlashSystem	31 - 32
NetApp EF-Series All Flash Arrays	33 - 35
About This Report and IT Central Station	36

# Vendor Directory

Dell EMC	Dell EMC XtremIO Flash Storage
Dell EMC	EMC VNX
Dell EMC	EMC Unity
Dell EMC	EMC DSSD D5
E8 Storage	E8 Storage
Elastifile	Elastifile
Hewlett Packard Enterprise	HPE 3PAR Flash Storage
Hitachi	Hitachi Virtual Storage Platform
Hitachi	Hitachi Universal Storage VM
IBM	IBM FlashSystem
IBM	IBM Storwize
Kaminario	Kaminario K2
NetApp	NetApp All Flash FAS

NetApp	SolidFire
NetApp	NetApp EF-Series All Flash Arrays
NexGen Storage	NexGen Storage
Nimble Storage	Nimble Storage
Nimbus Data	Nimbus Data Gemini All-Flash Arrays
Oracle	Oracle FS1 Flash Storage System
Pure Storage	Pure Storage
Reduxio	Reduxio
SanDisk	SanDisk InfiniFlash System
SanDisk	Fusion-io
Tegile	Tegile
Tintri	Tintri VMstore
Violin Memory	Violin Memory

### Top Enterprise Flash Array Storage Solutions

Over 127,030 professionals have used IT Central Station research on enterprise tech. Here are the top Enterprise Flash Array Storage vendors based on product reviews, ratings, and comparisons. All reviews and ratings are from real users, validated by our triple authentication process.

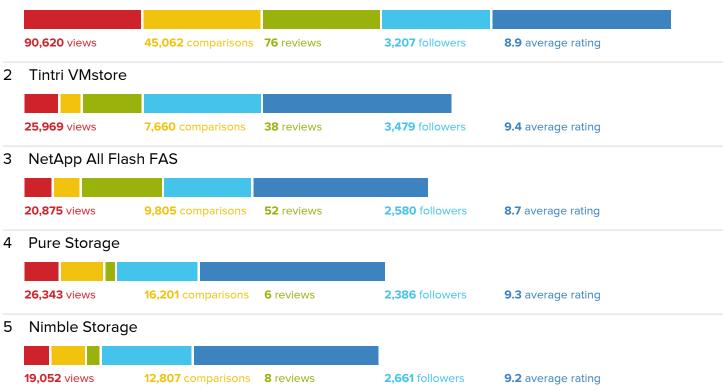
#### **Chart Key**

Views	Comparisons	Reviews	<ul><li>Followers</li></ul>	<ul><li>Average Rating</li></ul>
Number of views	Number of times compared to another product	Total number of reviews on IT Central Station	Number of followers on IT Central Station	Average rating based on reviews

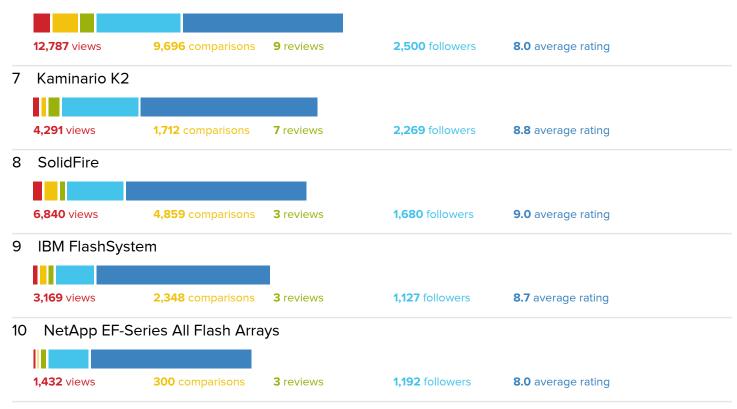
#### Bar length

The total ranking of a product (i.e. bar length) is based on a weighted aggregate ranking of that product's Views (weighting factor = 17.5%), Comparisons (17.5%), Reviews (17.5%), Followers (17.5%), and Average Rating (30%). Reviews and ratings by resellers are excluded from the rankings. For each ranking factor, the score (i.e. bar segment length) is calculated as a product of the weighting factor and its position for that ranking factor. For example, if a product has 80% of the number of reviews compared to the product with the most reviews in its category, then the product's bar length for reviews would be 17.5% (weighting factor) \* 80%.

### 1 HPE 3PAR Flash Storage



#### 6 EMC VNX



# Top 5 Solutions by Ranking Factor

### Views

SOLUTION		VIEWS
1	HPE 3PAR Flash Storage	90,620
2	Pure Storage	26,343
3	Tintri VMstore	25,969
4	NetApp All Flash FAS	20,875
5	Dell EMC XtremIO Flash Storage	19,143

### Reviews

SOLUTION		REVIEWS
1	HPE 3PAR Flash Storage	76
2	NetApp All Flash FAS	52
3	Tintri VMstore	38
4	EMC VNX	9
5	Nimble Storage	8

### Followers

SOLUTION		FOLLOWERS
1	Tintri VMstore	3,479
2	HPE 3PAR Flash Storage	3,207
3	Nimble Storage	2,661
4	NetApp All Flash FAS	2,580
5	EMC VNX	2,500

<sup>© 2016</sup> IT Central Station

### 

### Overview

HP 3PAR all-flash storage accelerates business agility by boosting application performance with over 900,000 IOPS at less than 0.7 ms latency. And it does this while delivering all the enterprise-class, Tier-1 features and functionality you expect from the storage platform that powers three of the world's four largest managed service providers.

#### **SAMPLE CUSTOMERS**

Just Energy, Latisys, team AG, DreamWorks, BlueShore Financial, Erasmus MC

#### **TOP COMPARISONS**

EMC VNX vs. HPE 3PAR Flash Storage ... Compared 8% of the time NetApp All Flash FAS vs. HPE 3PAR Flash Storage ... Compared 7% of the time Nimble Storage vs. HPE 3PAR Flash Storage ... Compared 7% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

Financial Services Firm ... 16% Marketing Services Firm ... 10% University ... 7% Healthcare Company ... 6%

#### **COMPANY SIZE**

1-100 Employees ... 18% 100-1000 Employees ... 25% 1000+ Employees ... 57%

#### **VISITORS READING REVIEWS \***

#### **TOP INDUSTRIES**

Financial Services Firm ... 21% Retailer ... 7% Government ... 6% Insurance Company ... 6%

#### **COMPANY SIZE**

1-100 Employees ... 21% 100-1000 Employees ... 24% 1000+ Employees ... 55%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.

HPE 3PAR Flash Storage

Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Dave Samic

The CPG, Dynamic / Adaptive Optimization, the CLI, and more importantly the way it's licensed as you are not "tagged" and held hostage when you're at 1TB, and another, and another, and another. The licensing is a brilliant approach to the fiscal tourniquet of scalability! Oh.. I also like the service processor and how it's out of band and monitors the SAN, how it does the updates - neat little component. [Full Review]



Philip Sellers

In a word, performance. It was primarily brought in to replace our EVA with something that was more capable from a performance perspective. We did not order solid state in our original configuration and we were looking for something which could grow with us, that could handle unpredictable VMware workloads better, and that didn't have the bottlenecks of a traditional monolithic array. Since that time, we have added solid state to accelerate the performance further. [Full Review]



Austen Ewald

\* The overall quality of the product is fantastic. Advanced Optimization is one of the best features I never thought I needed until I actually used it and saw it in action. \* The overall speed has been great as well. \* Create vVols and assigning them to the hosts is streamlined and easy. \* The ability to delegate and control every aspect of the storage array has allowed us to split the workload safely. \* The 3PAR StoreServ Management console has also given the console the fresh look that it really needed. \* Also, their support has been fantastic eve... [Full Review]



Graham Forrest

The 7200 and 7400 are both easy to manage. The reporting suite is a must and gives you all the information you need to manage storage. Thin suite helps you manage how the storage is used and reclaimed, and one of the best features is the new AFC (Adaptive Flash Cache) which combined with AO (Adaptive Optimisation) really helps performance. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



Dave Samic

Scaling and performance. Easy to add shelves, easy to move data around while everything is hot, move data from tier to tier, expanding a LUN, there are so many ways it's just amazing how much it's helped! The snapshot and sending them to different tiers by using the CPG makes life a bit easier! [Full Review]



Zane Maynard

Reporting has always been a challenge for our company. Add-on tools for reporting purposes are often expensive and require additional configuration. The 3PAR build in reporting features were the answer to all our reporting woes. We are now able to report as often as we would like, including automated report generating. [Full Review]



Austen Ewald

We have a HP 3PAR C7200 storage array with a small portion of it being Flash. Even though it's a small percentage of our total SANs usable capacity, the applications that we run off it have greatly exceeded our expectations. I can't even fathom the performance increase of having an all-Flash array. Using HP's Adaptive Optimization including the Flash storage, it's great to see if one of our applications is under heavy stress to see it move to the Flash to increase performance for the end users. This, compared to our last standard SAN setup, has easi... [Full Review]

#### **HPE 3PAR Flash Storage**

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



Removing a LUN mapping from a single host is a bit odd, worse a single host in a host set, it needs 10G ports for IP based replication (needs to be 1 or 10G). Keep working on the SSMC and allow for GUI management to be cross platform. [Full Review]

Dave Samic



Storage migration features. Comparing the 3PAR to IBM's SVC, storage migration could be much easier to perform if there are lessons to be learned from IBM's brilliant product. [Full Review]

Zane Maynard



My 3PAR array is too old to support File Persona, and I would love to be able to do that, but that's something that we would need more powerful controllers. We've got the first generation, so at some point we will get it, but we've got to wait for a refresh cycle. [Full Review]

Philip Sellers



Austen Ewald

The management console could use some work. All the functionality is there, of course, but it can be hard to find some features or do certain tasks. I feel like to get to some features, I need to dig through many sub-menus then tabs in those sub-menus to change a simple thing. Their StoreServ Console (optional) Makes this better, but it still isn't perfect. I would love to see some better help documentation on the StoreServ console other than just writing out the tooltips in a document. I would also like an easier way to reassign the shelf numbers ... [Full Review]



#### **SCALABILITY ISSUES**



Philip Sellers

We've got plenty of room to grow. We're about three or four years into our 3PARs and we've still got more than at least about 50% of our drive shelves open, so we have a lot more room to grow. With each generation of drive that comes out, we can install bigger and more capable drives in it, so we haven't hit any scale issues there. [Full Review]



Austen Ewald

We have a large population of students and we have gone full one-to-one this year. We are striving to deliver content to them as seamlessly as possible to encourage a learning environment where they can get to everything they need without having to think about it. This can be quite a challenge just by the sheer diverse volume of data that the students use. Everyday is a new challenge that we are more than happy to tackle head-on. [Full Review]



Graham Forrest

The products that we bought both scale very easily, and were bought knowing what the maximum was (which increased on the 7200 from the time of purchase). [Full Review]



### Overview

Tintri builds VM-aware storage (VAS) specifically for virtualized enterprises and cloud. It has no outdated LUNs or volumes, instead allowing you to take every storage action – manage, replicate, clone, analyze and more – at the virtual machine level. That granularity and control speed performance 6x, shrinks footprint 10x and reduces management time by 95%.

#### **SAMPLE CUSTOMERS**

Chevron, United Healthcare, Sony, GE, Toyota, NASA, the US Army, the University of California Irvine, AMD and more.

#### **TOP COMPARISONS**

Nimble Storage vs. Tintri VMstore ... Compared 20% of the time Pure Storage vs. Tintri VMstore ... Compared 11% of the time Dell EMC XtremIO Flash Storage vs. Tintri VMstore ... Compared 9% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

University ... 14% Financial Services Firm ... 10% Manufacturing Company ... 10% Software R&D Company ... 7%

#### **COMPANY SIZE**

1-100 Employees ... 14% 100-1000 Employees ... 41% 1000+ Employees ... 44%

#### **VISITORS READING REVIEWS \***

#### **TOP INDUSTRIES**

University ... 30% Insurance Company ... 10% Healthcare Company ... 10% Software R&D Company ... 10%

#### **COMPANY SIZE**

1-100 Employees ... 27% 100-1000 Employees ... 45% 1000+ Employees ... 27%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



#### **Tintri VMstore**

Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Rene Chakraborty

The overall speed of the system is the main feature that is valuable for us. The metrics and analytics it provided is great also. This product was purchased for our VMware View VDI environment. At the time we were having disk latency issues and were looking for an all Flash array. This is a Hybrid unit. At first we were skeptical it could provide the same performance as an all Flash Array, but when we tested it against one it did. So speed was our primary feature we were looking for and we certainly got. We also find the detail per-vm reporting at ... [Full Review]



Scott Vintinner

For my company, Tintri's most valuable feature is it's TCO. This system is easy to install, requires no training, and is easy to upgrade. I've worked on both EMC and NetApp SANs, and this is by far the easiest system to maintain. As a SysAdmin, I really appreciate the built-in monitoring capabilities as well as the PowerShell and REST API toolkits. [Full Review]



reviewer256 836

Speed - the hybrid flash has low latency even at high bandwidth. Performance Metrics - the ability to see which VM is having issues in now only 3 clicks away. [Full Review]



Adrian Liviu Coman

All of them. Tintri Snapshot, vCenter integration, powerCLI integration, the way you manage everything. Bye Bye time spent on managing storage arrays etc. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



Rene Chakraborty

The SAN was purchased for our VDI environment. As soon as we put it in place, we noticed a threefold speed increase in the overall system. It has greatly improved the performance of our VDI environment to start. Since the initial deployment we also attached it to our "Server VM" vsphere and even placed some of our virtual server workloads on it and it has handled that load very well. [Full Review]



Scott Vintinner

We have 300 virtual desktops running on VMware Horizon. While many VDI deployments (like call centers) are able to take advantage of non-persistent desktops, licensing and other application issues forced us to use more IO-intensive persistent desktops. The T650 allowed us to cost-efficiently provide very high performing desktops by optimizing the use of Flash. We're currently using 19 TB of storage space for the desktops, but their optimization has consistently given us a 100% flash-hit ratio. [Full Review]



reviewer256 836

Since our purchase Tintri has added QoS. While that works great the vmstores are so good at eliminating noisy neighbor issues we have not had to use it. [Full Review]



#### **Tintri VMstore**

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



Rene Chakraborty

On the physical side, I would suggest adding a light to each of the controllers that would indicate which is the active and with is the passive. On the software side, I suggest adding integration with backups software like CommVault Simpana or Veeam where these products can integrate with the array and trigger things like snapshots for backup, etc. We are considering buying another to host more of our virtual server workload. [Full Review]



Scott Vintinner

I would love to see improvements in their replication engine. Their current replication is really just enough to "check the box" that they do replication. We'll probably implement Actifio, Zerto or EMC RecoverPoint for VMs for more critical data replication. [Full Review]



reviewer256 836

I would like to see better integration of the Tintri features directly into vSphere. Some of this is an extensibility issue in vSphere. They need to keep improving single pane of glass management across many Tintri units and not just monitoring of all units. They are making progress on both of these issues. [Full Review]



Adrian Liviu Coman

Bye bye managing storage array, to create volumes and taking care to isolate big IO consumers into the production environment. Huge improvement in creating adhoc labs, pre-prod environments and dev as well, in just few minutes, etc. [Full Review]



#### **SCALABILITY ISSUES**



Charles Ferland

For now we don't have scalability issues, but It would be nice to add an external bay for additional storage space. If you need more space, you need to buy another full VMStore. [Full Review]



Jason Butler

Scaling is very easy to do, as they effectively are standalone units. You can get a Global Center OVA which monitors and manages up to 32 devices at once. We have this in-house and use it frequently. [Full Review]



Ronald Walter

We currently have about 240TB of data and add about 60TB a year. Ideally, we prefer to have a single array to manage for our primary workload. Our VDI environment is stored separately and Tintri more than fits the need of this environment. [Full Review]



### NetApp All Flash FAS

### Overview

NetApp® AFF8000 All Flash FAS systems combine all-flash performance with unified data management from flash to disk to cloud. Leverage the Data Fabric to move data securely across your choice of clouds—enabled by Cloud ONTAP™ and NetApp Private Storage for Cloud. Plus, you get the industry's most efficient and comprehensive integrated data protection suite, on premises or in the cloud.

#### **SAMPLE CUSTOMERS**

Acibadem Healthcare Group, AmTrust Financial Services, Citrix Systems, DWD, Mantra Group

#### **TOP COMPARISONS**

HPE 3PAR Flash Storage vs. NetApp All Flash FAS ... Compared 19% of the time Pure Storage vs. NetApp All Flash FAS ... Compared 19% of the time Dell EMC XtremIO Flash Storage vs. NetApp All Flash FAS ... Compared 14% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

Financial Services Firm ... 19% Energy/Utilities Company ... 9% Retailer ... 8% University ... 8%

#### **COMPANY SIZE**

1-100 Employees ... 12% 100-1000 Employees ... 20% 1000+ Employees ... 68%

#### **VISITORS READING REVIEWS \***

#### **TOP INDUSTRIES**

Healthcare Company ... 11% Energy/Utilities Company ... 10% Retailer ... 9% Insurance Company ... 7%

#### **COMPANY SIZE**

1-100 Employees ... 10% 100-1000 Employees ... 14% 1000+ Employees ... 76%

<sup>\*</sup> Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



### NetApp All Flash FAS

Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



using the All-Flash, we got almost 100% improvement on our jobs. [Full Review]

Executivcdf6



Scott Albiston

It promises to deliver lower-latency throughput to our database servers. We're pretty confident that we can take advantage because we've built out a new, lower-latency network. To date, we've migrated one SQL server workload, a fairly large one, on to it. We haven't really put it through its paces yet, but we like what we see so far. [Full Review]

We decided to use the All-Flash because of speed. Most of the time, when we looked at the SAP database, what we found was, by



MissionC38

The most valuable feature is how user friendly it is. For somebody in my position, I have to be able to bring the system up quickly, efficiently, and also shut it down, if there's a power outage, quickly and efficiently, without having troubles. It also supports VMware. That's what we use, but we use the NetApp as our filer; it's our only filer. [Full Review]



Admin2944

The input/output is the most valuable feature. When you have high-availability applications that need high IOPS, it's kind of a no-brainer to have an AFF. We're using it for some SQL databases now, and a VDI solution. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



We have a lot of applications that utilize it, and it has ties for e-commerce. Anytime there's the slightest blip in availability, it's noticeable across the entire enterprise. Upgrade and upware swaps are seamless. [Full Review]



Supercomp 24

We have moved GPFS's metadata to the SSD disks, the incremental backup is 6-8 times faster (we have over 120,000,000 files and backup takes "only" 30 hours now). Our next step is to migrate TSM database to SSD array and we hope that allows us to once again reduce backup time. [Full Review]



The best part about it is the density; otherwise, earlier, we used to use a lot of 300- or 600-GB disks. It saves space, saves power and makes us more efficient. The main thing is performance. If you can get the report done in half the time, it's good. [Full Review]

Executivcdf6



#### NetApp All Flash FAS

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



Executivcdf6

I would like to see the All-Flash FAS support virtualization better. I find that lacking in some areas; application and for disaster recovery. I know we have to do a lot of setup and we need to know exactly what needs to be done, but I would expect NetApp to make those best practices available automatically. Why do they say, "Do this, do this," when they could say instead, "For DR, click this button", which would automatically implement the best procedure, rather than having to figure it out yourself? That should be automated. There are several othe... [Full Review]



Scott Albiston

I'm not even educated enough. That's why I went to a NetApp Insight conference: to learn some of the details of flash. We're not so concerned about the value proposition of deduplication, compression. I know there are a lot of benefits of capacity. That's not our primary concern. However, as time goes on, that's going to be more and more of an issue. [Full Review]



MissionC38

The graceful shut down feature is no longer there, in the version that I have. I believe I'm using ONTAP 7.0.x. on the FAS2040 and we're also using the FAS2020. I don't know where it needs improvement because I'm not that well-versed in it. [Full Review]



Admin2944

It's worked very well. I know we'll see improvements in disk. You'll get better processors and things like that, which will make them faster, but overall, it's fantastic for our environment. Improvements in disk and better processors would be something I'd like to see in the future, but you're going to see that anyway. I always get surprised when I see a new feature. Usually when something comes out, I'll see something and say "Wow, I would have never thought they would've went there." I'm not that good at future-casting. I'm sure that people have i... [Full Review]



#### **SCALABILITY ISSUES**



Red Johnston

We haven't yet needed to scale. We only have two nodes, but I have plans to present to management for growth. I know it will be seamless in adding nodes in clusters. I'm not afraid to take it on because I know it'll be easy. [Full Review]



Supercomp 24

I/O performance is good enough, but to achieve big capacity TB/s you need better controllers and many more SSD drives (we have over 1 PB of storage and only 15 TB of SSD disks). [Full Review]



Executivcdf6

So far, I don't know the exact size that we have. I know we can add more storage. We just procured some more disk shelves to add. I don't know the limits. I probably need to go check out how large we can be. Also, we're trying to keep our environment separated. That way, there's no contamination. There are also regulations and other things we have to worry about. If we're putting everything in one box, putting all the eggs in one basket, we need to be really careful about stability, performance, and making changes. If we want to scale out in the fut... [Full Review]



### Overview

Pure Storage is fresh and modern todayÑand will be for the next decade. Without forklift upgrades or planned downtime. Pure Storage takes the work out of storage ownership Đ and delivers unprecedented customer satisfaction.

#### **SAMPLE CUSTOMERS**

Nielsen, Lamar Advertising, LinkedIn, Betfair, UT-Dallas

#### **TOP COMPARISONS**

Dell EMC XtremIO Flash Storage vs. Pure Storage ... Compared 21% of the time NetApp All Flash FAS vs. Pure Storage ... Compared 14% of the time Nimble Storage vs. Pure Storage ... Compared 12% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

Financial Services Firm ... 19% Healthcare Company ... 13% Energy/Utilities Company ... 10% Manufacturing Company ... 7%

#### **COMPANY SIZE**

1-100 Employees ... 21% 100-1000 Employees ... 22% 1000+ Employees ... 57%

#### **VISITORS READING REVIEWS\***

#### **COMPANY SIZE**

1-100 Employees ... 14% 100-1000 Employees ... 29% 1000+ Employees ... 57%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



InfoSysAnal yst121

\* It has a small footprint, as the current system is only four units per rack. \* It's got good speed for the price, as it uses eMLC, an advanced type of SSD. \* It's very scalable, and we're not paying for capacity. \* We get free controllers every three years. [Full Review]



Stanto Cole

The features of this product that are most valuable include the data reduction capabilities. Being able to write and read data at incredibly high rates of speed and reduce the footprint of your data by three to four times at least is invaluable. Also the ability to clone and snapshot the data with little to no additional size impact. In the database world this function has quickly become a must have and not just a nice option. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



Zane Maynard

The Flash Reduce feature makes use of data de-duplication techniques which in turn reduces the amount of storage required thus reducing the need to procure additional storage. [Full Review]



InfoSysAnal vst121

For VDI, there's a consistent user experience. Users don't switch to VDI if it's not at the same speed as a laptop or desktop, and Pure Storage provides that. [Full Review]



Stanton

The organization in which the product is deployed had many instances of the cache databases. There were instances in production, backup, test, development and others. There were then copies of copies. There were updates to databases and refreshes, as well as exports for reporting. There were more than 20 instances of the same data that existed in production. The space reduction and cloning capabilities alone resulted in major cost and administrative overhead reductions across the board. That doesn't even account for the ability to reduce RPO/RTO to ... [Full Review]



Henry Lacanlale

The product improved the organization functions by increasing system response time and productivity. Before the product was installed, applications ran poorly, and slow, which affected the productivity of the workforce. Once the product was in use, the applications ran quickly, and the workforce did not encounter any bottlenecks and became more productive. [Full Review]



### **Pure Storage**

Continued from previous page



### ROOM FOR IMPROVEMENT



With the introduction of Albireo technology and 81x data de-duplication reduction, Pure Storage better start looking at more effective de-duplication techniques. [Full Review]

Zane Maynard



It doesn't provide enough information on performance analytics. For example, Nimble Storage has Infosight, which provides data; Pure Storage doesn't have an equivalent. It has every other feature, but more data would be the only thing missing. [Full Review]

InfoSysAnal yst121



Stanton Cole

The overall scalability for this product could be improved as well as having a single console to management multiple arrays. The scale is constantly being addressed as SSD drives get larger so will the overall capabilities of the arrays. [Full Review]



#### **SCALABILITY ISSUES**



Henry Lacanlale

The capacity we needed did not cause any issues with scalability. However, fairly large companies may have issues expanding. The controllers are limited to a certain amount of storage. When that capacity limit is reached on what the controllers can handle, another set of controllers will be needed to compensate for the additional storage. [Full Review]



### Overview

Our Predictive Flash platform closes the app-data gap, giving you the fastest, most reliable access to data. By combining predictive analytics with flash storage, we radically simplify operations. Once you've experienced our simplicity, you'll never go back to traditional infrastructure again. Over 9,000 customers rely on Nimble to power their businesses, both on-premise and in the cloud.

#### **SAMPLE CUSTOMERS**

Ace Relocation, Atkins Nutritionals, Berkeley Research Group, Canadian International School, City of Hot Springs, Clackamas County, Corona-Norco Unified School District, Ideal Integrations, Linear Technology, P&O Maritime, Retail Apparel Group (RAG), Virtual Radiologic

#### **TOP COMPARISONS**

Tintri VMstore vs. Nimble Storage ... Compared 16% of the time HPE 3PAR Flash Storage vs. Nimble Storage ... Compared 15% of the time Pure Storage vs. Nimble Storage ... Compared 13% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

Financial Services Firm ... 16% Energy/Utilities Company ... 7% Manufacturing Company ... 7% Pharma/Biotech Company ... 6%

#### **COMPANY SIZE**

1-100 Employees ... 20% 100-1000 Employees ... 42% 1000+ Employees ... 38%

#### **VISITORS READING REVIEWS \***

#### **TOP INDUSTRIES**

Financial Services Firm ... 23% Software R&D Company ... 9% Engineering Company ... 9% Aerospace/Defense Firm ... 5%

#### **COMPANY SIZE**

1-100 Employees ... 21% 100-1000 Employees ... 50% 1000+ Employees ... 29%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Chris Childerhose

The most valuable features are - 1. Ease of setup 2. Ease of Management with Web UI 3. InfoSight - analytics sight that collects data for all Nimble arrays deployed Infosight has been very valuable with determining upgrade requirements, bottlenecks, etc. The latest update to the site now allows Per-VM monitoring within the Virtual Infrastructure now too. [Full Review]



James Mercer

Performance, reliability, InfoSight, the ability to upgrade the O/S on the SAN without taking it down, and cost. Poor performance and reliability would adversely affect my company's productivity, and thus would increase overall labor costs as people took longer to do their jobs. (Especially if and when critical systems were down due to an outage.) It would also negatively affect employee and customer perception of the quality of IT services. InfoSight is extremely valuable, because it gives us (IT) a direct understanding of historical performance an... [Full Review]



Mike DeVore

The vCenter integration is very good. I can not only see what each of my iSCSI presentations look like from a performance standpoint, I can see the snapshots, I can shrink, grow, modify, or delete them as well. In addition to that, InfoSight is a great tool to look at the "big picture" when planning what you want to do next with your Nimble Storage. [Full Review]



PatrickLai

Easy to configure and view information of the system's health. We do not need a dedicated staff member to handle the system we deploy. A regular infrastructure person that attends the Nimble training course will be able to handle the system. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



These arrays perform very well and have allowed us to move many physical servers to virtual and run them from the Nimble arrays without any performance impact and there is actual performance improvement. [Full Review]



Childerhose

Mike DeVore

The visibility and power of the vCenter integration allows me to troubleshoot, diagnose and rectify most issues before anyone notices. I can also deploy new virtual machines much more quickly because I don't have to bounce between different tools to do it. [Full Review]



InfraDirector 689

We are heavily reliant on SQL databases. Because of the performance out of the array, we are not storage bottlenecked. The price makes the value extremely appealing. [Full Review]



### Nimble Storage

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



InfraDirector 689

I used to have some gripes with how the GUI worked such as folder organization but the developers listened and released that in a new firmware version. I do want close to real time performance metrics in InfoSight. [Full Review]



David Pritt

Support for near synchronous replication. Currently the smallest snapshot window is 15 minutes, that means if we replicate data from one array to another array we will be up to 15 minutes out of date, this is the RPO. We have a small number of systems that need to be replicated in such a way that we do not lose any data if we need to fail-over to the replica on the second SAN, or at least it should be only seconds behind. Some SANs, like NetApp, have a synchronous replication feature, so when data is written to SAN1 a copy is sent to SAN2, only when... [Full Review]



ITDirector02

It would be good to have a built in way to index snapshots so that we'd be able to granularly see what files were in a snapshot and restore at a file level. We're using an add on product from Commvault to achieve this. [Full Review]



Mark Harrison

\* Web GUI should be HTML5. \* Use smaller form factor disk to provide more spindles. Streaming Backup I/O overnight would dent performance if we were a 24\*7 business. Most of our workload is 07:30 -18:30. [Full Review]



#### **SCALABILITY ISSUES**



Mike DeVore

Each one of our arrays can connect to four storage shelves. That gives us the possibility of around 240TB per array with the h90T storage shelves. In addition to that, you can federate Nimble Storage arrays as well. [Full Review]



David Pritt

The CS210 is very limited and could not be expanded despite having spare slot's for drives. But we were able to scale-out two of these to create a larger single unit. But we have first generation hardware that cannot be upgraded unlike newer systems. [Full Review]



ITManager6

No. We have not pushed the arrays to their limits, but we did cluster the CS300 and 500 when we migrated the data. The clustering was easy to do and would provide the scaling if we needed. In addition, hardware upgrades provide us another method to increase scale without downtime. [Full Review]



### Overview

With EMC VNX you'll have the right blend of flash, capacity, and application-aware software. Scale up storage for midrange workloads, optimized for virtual applications and cloud environments.

#### **SAMPLE CUSTOMERS**

Samsonite, Comanche County Memorial Hospital, Kindred Healthcare

#### **TOP COMPARISONS**

HPE 3PAR Flash Storage vs. EMC VNX ... Compared 17% of the time Compellent vs. EMC VNX ... Compared 9% of the time Nimble Storage vs. EMC VNX ... Compared 6% of the time

#### **REVIEWERS**\*

#### **TOP INDUSTRIES**

Healthcare Company ... 11% Government ... 11% Financial Services Firm ... 11% Media Company ... 9%

#### **COMPANY SIZE**

1-100 Employees ... 14% 100-1000 Employees ... 23% 1000+ Employees ... 63%

#### **VISITORS READING REVIEWS\***

#### **COMPANY SIZE**

1-100 Employees ... 30% 100-1000 Employees ... 30% 1000+ Employees ... 40%

<sup>\*</sup> Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



StorageArch 509

It's easy to use, and integrate, I'm not storage-centric, as I just integrate storage along with other things. I can go in there and follow instructions to complete the job. I know all products are different, especially how they're all clustered differently. For me, I don't care because not looking at raw data or specifications (e.g. how many SSDs, how tiered), I just follow instructions for the virtualization aspect. [Full Review]



ITDirector87 0

It's a great platform that's evolved very quickly that overtook NetApp with the Vblock initiative. Everything was valuable – HA, SRM, Vplex, metrocluster, entire suite of products [Full Review]



Gerald David

It is easy to deploy, has a simple interface, and has all the valuable features a small business would need to get going. It has thin provisioning which means a lower TCO and it has FAST cache support which means that performance is not compromised. [Full Review]



Arsalan Shafinia

They have more different/flexible models in the midrange storage area In comparison with other vendors . They have also built in VMware specific features . Lastly, it has reasonable performance/cost. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



StorageArch

It's one of the better industry-accepted names and standards. Not necessarily cheap, but for me it's all about familiarity. I've worked with this type of storage for many years. [Full Review]



Gerald David

This entry level product has just enough premium features to make it effective. One example is when a client was able to leverage the thin capabilities of the array and it's tight VMware integration to go from a legacy array taking up lots of rack space and power to a 2U VNXe1600 which helps reduce the amount of rack space and in turn power and cooling requirements [Full Review]



Michael Pennington

All our storage is now in two places, a primary site and a DR site. Network shares, VM storage, etc. all come from the same physical infrastructure at both locations. Instead of getting more servers for storage, we were able to over-provision this and have had plenty of storage for the past two years. We recently just added another DAE to both locations pretty easily which extends the storage even more. [Full Review]



#### **EMC VNX**

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



Make major changes to the file services, Celera, do something like a lite version. It used to be more solid product before unifying Clarion and Celera. [Full Review]

StorageArch 509



I can't think of anything because they're evolving more and more. They're making headway into datacenter where non-structured data-type infrastructure around Hadoop, security, encryption. [Full Review]

ITDirector87 0



As an entry level array, this is just right, but adding support for FAST-VP would be beneficial although that feature is available on the higher end VNXe3200. [Full Review]





Matthew Bradley

I preferred HP EVA over Clariion for block due to the simpler GUI, but the VNX (that uses Clariion-like block) appears more complex due to the flexibility it ultimately offers. It has more functionality/flexibility which means a more complex interface. But, all things considered, Unisphere is a very good interface. It doesn't seem too fast though, but that could be the environment rather than the VNX product, to be fair. [Full Review]



#### **SCALABILITY ISSUES**



It's definitely scalable. VNX to large SAN with SDD to all with extra storage for VDI, they're all hugely scalable. You can keep adding blocks of storage for different tiers, as well as sites of storage, with other products (replicated with backups). [Full Review]

StorageArch 509



ITDirector87 0

It's amazing, you can add and stack, and add more elements. You can group to scale horizontally and vertically, can add VMware tech, can add flash arrays, and everything integrates seamlessly. The intelligence controls everything. I don't worry about infrastructure and I don't have to move to the cloud. [Full Review]



### Overview

Kaminario K2 is the world's only storage solution that delivers the predictability needed to handle the highly unpredictable world of modern businesses. This highly flexible all flash storage platform allows customers to cost-effectively scale capacity and performance to support their ever-changing business —seamlessly, on-demand and with no disruptions. Data Sheet and eBook

#### **SAMPLE CUSTOMERS**

Wargaming.net, El Rio Community Health Center, ECN, SpotOption, Ashkelon College, Clearwater Analytics, Intigua, Cobb EMC

**Customer Case Study** 

#### **TOP COMPARISONS**

Pure Storage vs. Kaminario K2 ... Compared 13% of the time
Dell EMC XtremIO Flash Storage vs. Kaminario K2 ... Compared 12% of the time
HPE 3PAR Flash Storage vs. Kaminario K2 ... Compared 9% of the time

REVIEWERS *	VISITORS READING REVIEWS *

#### **TOP INDUSTRIES**

Government ... 14% Comms Service Provider ... 14% Retailer ... 11% Pharma/Biotech Company ... 8%

#### **COMPANY SIZE**

1-100 Employees ... 30% 100-1000 Employees ... 30% 1000+ Employees ... 40%

<sup>\*</sup> Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Latency is definitely the big key for us. Obviously all flash with the IOPS was also important, but I think latency was the bigger key to give us the performance that we wanted. [Full Review]

Informat8121



Anthon: Trafny

For us, the valuable feature has really been the speed. We moved from a Fusion IO card right on the PCI bus. We moved a 2 TB one over, and we didn't lose any speed, no degradation; everything just ran great. That's been one of our biggest features. Ease of use:

My installers - my administrators over the system - they love how easy and fast it is to install and spin up a LUN and get going. [Full Review]



Kevin Elder

Speed and ease of use. The system is very quick to get installed and up and running. The GUI is very straightforward and easy to use. Performance is exceptional. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



DevOps168 98

The biggest thing for us, second to the performance, is that we were looking for a solution that offers block-level deduplication. Right now, the capacity that we're saving by using Kaminario's K2 is giving us a four-to-one ratio for our deduplication. We're using it specifically and exclusively for block level; we probably have about 300 VMs just in our studio alone and of that, I believe that we probably have half of that or more running on the K2. It's saving us a lot of storage. [Full Review]



#### **ROOM FOR IMPROVEMENT**



DevOps168

I would like to see LDAP for the management panel; I've been notified they might be currently working on it. That is probably the biggest feature that we wanted; otherwise, everything has been just a champion with it, we've been really happy with it. [Full Review]



Informat8121

In terms of what we're looking for, I don't see anything critical at the moment. Some of the nice to haves for us, in terms of today, would be VVols but again, it's not a critical feature. We can continue to use what we use now. I'd give it a perfect rating if I could push it to 300,000 IOPS like they promote; we just haven't been able to push that many IOPS out of our system. [Full Review]



Continued from previous page



Engineer417

On the road map, I'm hoping to see Active Directory integration. Right now, you still have to use a local admin account to log in and manage everything. That's really the only downfall as of the moment. I'd like to be able to have all of my Active Directory users support this infrastructure and be able to audit who logged in and did what. Right now, it's limited to local account access, so AD integration has to happen. [Full Review]



Anthony Trafny

As of right now, I haven't done a whole lot of work on it. I would like to see them work with Cisco, so it comes off the Fls, instead of having to go through my 10-gig network. One extra hop is not a big deal, but it'd be a little bit faster if we can get it right to the back point of my Fls. I think that's the biggest feature I would like to see come down the line. [Full Review]



#### **SCALABILITY ISSUES**



DevOps168 98

I believe it will scale to meet your company's needs going forward. I like the way that they have designed it to scale up and out.

We're looking at eventually adding some more capacity to it, because I believe that we're using probably about 85% at the moment.

[Full Review]



Informat8121

Scalability was one of the key factors for us on our purchase. We haven't needed to scale yet but in the future, if we do need to, it's certainly a consideration we're going to play a part in. [Full Review]



Engineer417

It is going to meet our scalability needs. With the K-block architecture, we have the ability to expand two more full shelves if we need to. We got the dual controllers; a single shelf now with 20 TB raw in each location, and we're getting about 65 TB out of the array. It's amazing. [Full Review]



Anthon: Trafny

Based on everything I have read and seen, it's a very scalable solution; it can scale out, scale up. That's one of the reasons we chose to go with it, because we felt like in the future we could move forward with it. [Full Review]



### Overview

SolidFire delivers all five core elements needed to deliver newfound storage agility to your next generation data center and beyond. With SolidFire you can deploy new applications and capabilities faster, provide more agile and scalable infrastructure, increase application performance and predictability, enable automation and end-user self-service and raise operational efficiency and reduce cost.

#### **SAMPLE CUSTOMERS**

California Public Utilities Commission, RFA, 1&1, Ultimate Software, Endicia, ezVerify, MercadoLibre, Sungard Availability Services, ServInt, Elastx, Hosted Network, Colt, Crucial, iWeb, Datapipe, Databarracks

#### **TOP COMPARISONS**

Pure Storage vs. SolidFire ... Compared 19% of the time
Dell EMC XtremIO Flash Storage vs. SolidFire ... Compared 14% of the time
NetApp All Flash FAS vs. SolidFire ... Compared 13% of the time

#### **REVIEWERS** \*

#### **TOP INDUSTRIES**

Pharma/Biotech Company ... 11% Financial Services Firm ... 9% Transportation Company ... 8% Government ... 8%

#### **COMPANY SIZE**

1-100 Employees ... 4% 100-1000 Employees ... 45% 1000+ Employees ... 51%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Engc2f9

The quality of service features are valuable. They are able to allocate a certain number of IOPS in your throughput to your LUNs. That's something that's a little bit more difficult using traditional methods. VDI is a perfect use case. If you have ones that need more performance than others, it's easier to allocate it on a prolonged basis for a VDI environment for your specific virtual desktop users.



Platform8e5

The most valuable features for us are their QoS, the scalability and the serviceability of the environment. Our ability to add nodes or take nodes out for service and the QoS policies we're able to wrap around volumes are all very helpful. [Full Review]



Patrick Carnathan

I like SolidFire's technology and the way that it is implemented, from a node perspective instead of having a controller shelf architecture. One node can control everything, but if the node goes down, obviously the other nodes can bring everything back up. Going into the next generation data center, that's very compelling, as well as being able to use QoS settings and maintain a standard of performance for the VMs and things that are underlying it. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



Engc2f9

Right now, we're still in the testing phase but I think it definitely helps in the sense where, with traditional SAN architectures, you have to architect what kind of disk you need and how many of those disks you need in your storage pool and things like that. With the SolidFire, it's really just a number and it's really just a matter of typing in that number for that certain LUN or whatever it is that you want to allocate for your users. [Full Review]



Platform8e5

We have approximately 8,000 VMs that we had been running on our traditional storage system and it simply was not able to keep up with the workload, so we've migrated all that to the SolidFire product. Provisioning times have gone down and a lot of the random errors from different things that we've seen across time kind of all went away. It's made everything much more efficient. It has saved us time. We do a lot of tear-downs and rebuilds in non-production environments, so those processes have been reduced to minutes. It's been tremendously beneficia... [Full Review]



Patrick Carnathan

The biggest advantage is going to be the QoS settings, being able to maintain a level performance for our customers on whatever application that they're running at that particular time. For us, a business advantage is implementation time; our first cluster, four hours from un-boxing, racked, stacked and having it up and running. [Full Review]



### **SolidFire**

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



Engc2f9

I now know their best practices associated with allocating IOPS to your LUNs. I wish that was more apparent to me when actually configuring the system. That's really the only feedback so far. Also, in a competitor's solution, they have this ability to tell you what platform you should buy next to expand your environment based on your current needs and your predicted needs for the future. It tells you what models to buy. Maybe SolidFire could do the same thing. [Full Review]



Platform8e5

The upcoming release is supposed to have much richer VMware virtual volume (VVOL) support, which is something we're very interested in. For our particular environment, we also use the VMware Integrated OpenStack, and so our VVOL adoption is waiting on VMware because they have to update their VIO product, but that's definitely a direction we want to move. [Full Review]



#### **SCALABILITY ISSUES**



Engc2f9

We have not had any scalability issues at all. I think it scales out really well. We've tested it with cloning multiple VMs at the same time. The numbers it generates are pretty impressive. [Full Review]



Platform8e5

It is very easy to scale. We started with our non-production cluster. I think we started off with six nodes. It's now a 14-node cluster. That's a seamless process. It just worked. No down time, no service disruption, nothing. [Full Review]



Patrick Carnathan

Scalability is excellent; it scales very easily. I can scale from a sizing perspective as well as an IOP perspective very easily. I can add a new node to the cluster. Within about an hour or an hour and a half, it's up and running. I have more space right then and there. Power and cooling is minimal as well. [Full Review]

### IBM. IBM FlashSystem

### Overview

IBM FlashSystem products are enterprise computer data storage systems that store data on flash memory chips. Unlike storage systems that use standard solid-state drives, IBM FlashSystem products incorporate custom hardware based on technology from the 2012 acquisition of Texas Memory Systems. This hardware provides performance, reliability, and efficiency benefits versus competitive offerings.

#### **SAMPLE CUSTOMERS**

Celero, Friedhelm Loh Group, Clarks, Mingkang Natregro Health Food Group, Sofia, Etisalat Fights Fraud, UF Health Shands Hospital, Generali, Elecon Engineering Company Limited, Ventiv, Technology, CPFL Energia, Royal Caribbean Cruises Ltd., SciQuest, Coca-Cola Bottling Co. Consolidated, Paddy Power, Kelsey-Seybold Clinic, Interconnect Services, Severstal IP-Only AB, PVU Group GmbH

#### **TOP COMPARISONS**

Dell EMC XtremIO Flash Storage vs. IBM FlashSystem ... Compared 28% of the time HPE 3PAR Flash Storage vs. IBM FlashSystem ... Compared 16% of the time Nimble Storage vs. IBM FlashSystem ... Compared 7% of the time

<sup>\*</sup> Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.

### IBM FlashSystem

Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



Puneet Vashisht

IBM FlashSystem has an easy to use GUI, similar to the IBM Storewize family, which make it one of the best flash storage systems in the market. We use the IBM SAN Volume Controller to provide a single management interface for virtualized storage. It is easy to manage many storage devices from a single controller. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



Puneet Vashish

We used to provision storage from different devices. This requires a lot of manual effort to synchronize all hosts with each storage unit in an environment. IBM SAN Volume Controller helps manage all storage units from a single interface; while IBM FlashSystem provides high performance for our Tier 1 applications. [Full Review]



Maykol Lopes de Lima

I'm a Solutions Architect, so I don't have any from my company, but I do some projects for some clients where the unique performance and micro latency of the flash provides real- time information that is used to make strategic decisions. [Full Review]



#### **ROOM FOR IMPROVEMENT**



Puneet Vashisht

The two products should be unified and have a service processor to restart devices remotely. For example, NetApp has devices which include a service processor in nodes, which could be used to restart the nodes remotely. IBM should implement something like this. Both products are basically for block-level access. There should be a series that also has a file level and block-level access together, which would make it unified. [Full Review]



Cyril Cahigas

When you provision a datastore auto-format takes a long time .. to disable is you have to redo the whole process. this is a bit difficult if you want to make adjustments on the datastore [Full Review]



### **NetApp EF-Series All Flash Arrays**

### Overview

The NetApp EF560 all-flash array is an all-SSD storage system for applications that demand extremely high levels of performance and reliability. Requiring just 2U of rack space, the EF560 all-flash array combines extreme IOPS, microsecond response times, and up to 12GBps of bandwidth with leading, enterprise-proven availability features.

#### **SAMPLE CUSTOMERS**

RP Data, Western Oregon University, Toei Animation

#### **TOP COMPARISONS**

HPE 3PAR Flash Storage vs. NetApp EF-Series All Flash Arrays ... Compared 8% of the time SolidFire vs. NetApp EF-Series All Flash Arrays ... Compared 6% of the time Dell EMC XtremIO Flash Storage vs. NetApp EF-Series All Flash Arrays ... Compared 6% of the time

#### **VISITORS READING REVIEWS \***

#### **TOP INDUSTRIES**

Media Company ... 33% Healthcare Company ... 25% Energy/Utilities Company ... 8% Comms Service Provider ... 8%

#### **COMPANY SIZE**

1-100 Employees ... 7% 100-1000 Employees ... 14% 1000+ Employees ... 79%

 $<sup>^{</sup>st}$  Data is based on the aggregate profiles of IT Central Station Users reviewing and researching this solution.



### NetApp EF-Series All Flash Arrays

Continued from previous page

### Top Reviews by Topic



#### **VALUABLE FEATURES**



CloudMan19

I like the performance aspect of EF Series. It basically provides everything that we are looking for as a solution, very low latency and very high performance. That's why we're using NetApp to run our business. For example, with databases. We run a lot of Oracle databases that rely on performance because we want to have the business application respond within a certain amount of time for business transactions. [Full Review]



ManagerU7a

The most valuable feature is just the speed. Our databases perform much better since we moved over to it. That's really our value. We use it for SQL and Oracle. The DBAs are happy. [Full Review]



ServerAde9

One of the most valuable features is the overall performance it provides. You're able to throw a pile of IOPS at it and it will handle that without much issue. We had a beefy SQL server that was trying to pull a large number of transactions all the time and it was causing problems on our production SAN environment. They wound up deciding they wanted to go with EF specifically for that and haven't had any problems ever since. [Full Review]



**Bret Bagley** 

For us, the most valuable feature is the performance. We have a very strong SQL workload that was struggling on several other providers, and it solved that problem for us. [Full Review]



#### IMPROVEMENTS TO MY ORGANIZATION



CloudMan19 07

When we have certain standards for performance, the customer experience is much better as well. They expect to have that kind of performance maintained or improved in the future. If there's a glitch, for example, whether it's storage or network, that's where customers start complaining about performance and the business goes haywire after that, for a while, until we fix the problem. NetApp maintains the very high performance that we want to have. We work very closely with their engineer to make sure that every update they have will line up with what... [Full Review]



ManagerU7a

The end-user experience has improved the organization as a whole; the customers that the DBAs serve. All the application folks are happier, now that their databases are running better. [Full Review]



ServerAde9 8b

I can be less proactive about monitoring it. We don't have to mess with tweaking it as much. On the production SAN, for instance, we're always on there, monitoring performance, checking how it's doing. Whereas with the EF, because there's only one thing running on it, it runs so fast, we just let it go. We had to monitor previous solutions more; it's not that there was ever really a problem. [Full Review]



#### NetApp EF-Series All Flash Arrays

Continued from previous page



#### **ROOM FOR IMPROVEMENT**



CloudMan19 07

The EF Series has the web services outside the box, not inside. It doesn't have the full OS, like Data ONTAP. You have to have a proxy web service that interfaces with all of the EF Series and you develop your application through that. I would like to have that interface inside the EF Series, so we don't have any dependence on the proxy service. I'd like to see bigger, faster, better hardware, of course. I think that is the way the hardware is trending anyway; bigger, faster CPU, better software, fewer bugs, all that stuff. Those are things I trust ... [Full Review]



ManagerU7a

I guess the user interface could be a little more streamlined. There are too many different menus you have to go into. I've used other interfaces on other storage arrays that are just more streamlined, more intuitive. Overall, it's not that bad. It's really just a minor tweak. Other than that, I really don't see anything. [Full Review]



ServerAde9

I'm a big fan of the cluster shell and everything on the FAS series. I know the E series kind of has its own OS. (I think NetApp purchased them.) To my knowledge, that doesn't even exist in the same way. A lot of that is to provide the IOPS that it does because it doesn't have to focus on all that other stuff. From a manageability perspective, I like the look and the feel of the FAS series better than the EF. I think it's more straightforward and simplistic. Even if it's not to that extent, I would like to see it move a bit more in that direction; a... [Full Review]



**Bret Bagley** 

If you're not using DDP, it is a little tedious to configure. I've seen the new firmware with the 2800, and they've automated some things that were manual. It was a four-step process for every volume you wanted to create before, and it looks like they fixed that in the coming firmware, although from what I understand it will be a little while before it gets to the 550. [Full Review]



#### **SCALABILITY ISSUES**



CloudMan19 07

Our solution is actually focused on breaking the pieces into a manageable vertical, where we focus on performance. When it begins to have a little bit of latency, we start to split it out. That's scalability on the application side. Infrastructure-wise, we design that way because we know NetApp can meet certain requirements that we have. Beyond that, maybe not, so we have to design our application to work around that. [Full Review]



ManagerU7a

We haven't scaled it yet. We haven't added any storage to it yet, but I've worked with these arrays in the past, and I know they're pretty easy to scale out. [Full Review]



**Bret Bagley** 

We have not had to expand the product yet. We sized it for what we thought was going to be growth for three years, and we have not outgrown it yet, so I don't see an issue with it. [Full Review]

### About this report

This report is comprised of a list of enterprise level Enterprise Flash Array Storage vendors. We have also included several real user reviews posted on ITCentralStation.com. The reviewers of these products have been validated as real users based on their LinkedIn profiles to ensure that they provide reliable opinions and not those of product vendors.

#### **About IT Central Station**

The Internet has completely changed the way we make buying decisions. We now use ratings and review sites to see what other real users think before we buy electronics, book a hotel, visit a doctor or choose a restaurant. But in the world of enterprise technology, most of the information online and in your inbox comes from vendors but what you really want is objective information from other users.

We created IT Central Station to provide technology professionals like you with a community platform to share information about enterprise software, applications, hardware and services.

We commit to offering user-contributed information that is valuable, objective and relevant. We protect your privacy by providing an environment where you can post anonymously and freely express your views. As a result, the community becomes a valuable resource, ensuring you get access to the right information and connect to the right people, whenever you need it.

#### IT Central Station helps tech professionals by providing:

- A list of enterprise level Enterprise Flash Array Storage vendors
- A sample of real user reviews from tech professionals
- Specific information to help you choose the best vendor for your needs

#### Use IT Central Station to:

- Read and post reviews of vendors and products
- Request or share information about functionality, quality, and pricing
- Contact real users with relevant product experience
- Get immediate answers to questions
- Validate vendor claims
- Exchange tips for getting the best deals with vendors

#### IT Central Station

244 5th Avenue, Suite R-230 • New York, NY 10001 www.ITCentralStation.com reports@ITCentralStation.com +1 646.328.1944