Dell EMC PowerMax NVMe and
Pure FlashArray//X NVMe

Buyer's Guide and Reviews

February 2020

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Dell EMC PowerMax NVMe

PROS

Elias Riveros Malky

"It is efficient and very simple for our administrators to use." [Full Review]

StorageAa6c5

"For the migration process from the older VMAX arrays to PowerMax, we VMotioned everything." "It was easy." [Full Review]

StorageAcdff

"The stability is great." "It is five nines." [Full Review]

SystemEn3338

"It has reduced our footprint in different physical locations." [Full Review]

SeniorIn0534

"The number one most valuable feature is reliability." "I want to go home at the end of the day and come in the next day knowing it works, especially since we have storage offshore." [Full Review]

Managerbe82

"We were able to move away from a middleware solution for high availability, going right to snapshots and data replication on arrays." [Full Review]

SeniorEnc9d7

"The response time, compared to XtremIO, is far better." [Full Review]

Advice From Real Users

Dell EMC PowerMax NVMe

CONS

Elias Riveros Malky

"I would like NVMe to be end-to-end in the next release." "Right now, it is not end-to-end." [Full Review]

StorageAa6 c5

"The initial setup was complex, and we had experienced people working on it." [Full Review]

StorageAcdf f

"The initial setup was complex, as it is a complex system and you have to learn a lot." [Full Review]

SystemEn33 38

"Setting up PowerMax with VMAX is always complex." [Full Review]

SeniorIn053 4

"I would like to see the rack change." "They have defaulted to the standard rack, so our fiber cables are crowded when we shut our back door." [Full Review]

Managerbe8 2

"We have issues that we don't know about, which Dell EMC fixes." [Full Review]

SeniorEnc9d 7

"I would also like to see a real-time, graphical view of metrics." "I don't know how far back in time we can look, but if we could see the performance from two months or three months back, and how it is performing now, that would be helpful." [Full Review]

Advice From Real Users

Dell EMC PowerMax NVMe

PRICING AND LICENSING ADVICE

Elias Riveros Malky

"The cost is expensive." "While VMAX now has good pricing, PowerMax is a little expensive." [Full Review]

Solutioncc77

"From a general capital investment, it's one of the higher price points in the market." "It depends on the size and software features that you would include in a system." "So, the cost varies dramatically." [Full Review]

Dave Stromberg

"It scales enormously, but it's expensive to do so." [Full Review]

Engineer14ea

"Our costs are on a yearly basis." [Full Review]

James Hughes

"Our costs for the product are three million." [Full Review]

Paul Croteau

"From reclaiming data center space which is so tightly constrained these days, it will pay for itself in a short amount of time, which is fantastic." "Anything we can do to get more out of our current physical data center space helps us a ton, and PowerMax has helped enable that." [Full Review]

Advice From Real Users

Pure FlashArray//X NVMe

PROS

Jordan Hubbard

"The duplication algorithm allows us to get a lot more use out of less storage." "We're running a five terabyte array right now and we're running probably about 30 terabytes on it." "So the duplication rate is pretty phenomenal, without a cost to performance." "It still runs pretty smoothly." [Full Review]

SeniorSyb3f 0

"What I really like about this program, is that it is easy to use and easy to configurate." [Full Review]

ITManage6d 2c

"The most valuable feature of this solution is reliability." [Full Review]

Consulta3c8 8

"The most valuable feature of this solution is its ease of use." [Full Review]

Director295 7

"It has benefited my organization because it has reduced time to insights." [Full Review]

Mark Ballard

"The most valuable features of this solution are its ease of use and performance." [Full Review]

Ray Smith

"We're able to get higher-density workloads on the same infrastructure, and we have a smaller physical footprint." "The performance is excellent – during our test the bottlenecks are never on the X array, it just keeps picking up the pace to match what you need." "The real-time visibility is a differentiator in my opinion." [Full Review]

Advice From Real Users

Pure FlashArray//X NVMe

📊 CONS

SeniorSyb3f0

"Every time I think of something that needs to improve, they're one step ahead, which I love." "The only area I wish to see improve, I believe is coming, is in the FlashBlade product." "Blade implementation fell short on a few of the services." [Full Review]

ITManage6d2c

"The UI for this solution needs to be improved." [Full Review]

Consulta3c88

"I would like to see replication and DR features in the next release of this solution." [Full Review]

Director2957

"In the next release, I would like to see real-time analytics for further insight into consumption models." [Full Review]

Mark Ballard

"We would like to see VNC integration or be able to use Pure Storage with VNC." [Full Review]

Ray Smith

"We've seen that when we create a POD in synchronous mode, it increases the latency." [Full Review]

Sean Donaldson

"I want to see Pure Storage not only be for fast storage, but I want to see it be for the entire data center." [Full Review]

Advice From Real Users

Pure FlashArray//X NVMe

PRICING AND LICENSING ADVICE

Jordan Hubbard

"They can tout the functionality and cutting edge technology that they have, but that's where the price tag comes in." "The cost is high, but I think as they grow their business and get more customers that it will probably go down a little bit." [Full Review]

SeniorSyb3f 0

"As far as the licensing costs, everything is included in the license." [Full Review]

ITManage6d 2c

"Our licensing fees are $500,000+ USD." [Full Review]

Director295 7

"With VMware, we pay $300,000 annually." [Full Review]

Mark Ballard

"We pay approximately $50,000 USD per year in licensing fees." [Full Review]

Sean Donaldson

"With Pure Storage, we would like to continue seeing price reductions with flash storage." "I don't think we're any different than anybody else when we continue to look to the industry for price reductions of both NVMe and traditional SSD storage." "We would like to see these prices continue to decline and erode, even displacing large spinning disks." [Full Review]

Top Reviews by Topic

Dell EMC PowerMax NVMe

Pure FlashArray//X NVMe

VALUABLE FEATURES

Paul Croteau

PowerMax specifically is giving us incredible improvements in performance. Significantly decreased the latency, which is different than IOPS. I've been told by the team, "Don't focus on IOPS anymore, it's the latency. Not how fast is the data, but how quick is the data." So, we've seen great performance: Single millisecond type performance, which has been fantastic. Another huge benefit of the PowerMax has been the decreasing of our physical footprint. We recently did a consolidation where we we... [Full Review]

Solutioncc77

The most valuable feature is its global cache, which allows for uncompromised performance. It offers a high level of availability, so pretty much near zero downtime. It is the best platform for just seeing and getting visibility into performance and capacity utilization. It has very positive management. Through CloudIQ and others integrations that Dell EMC provides, visibility has excellent predictive health metrics that we can look at. [Full Review]

Saleh Al Harthy

* Availability * Reliability We are also happy with the monitoring that Dell EMC is doing for us. They have helped us to identify many issues during the routine checks, issues which we were not aware of. [Full Review]

SeniorSyb3f0

What I really like about this program is that it is easy to use and easy to configure. I am also very happy with their support. It's the first storage company that we've actually engaged with and formed a partnership that does what they say they're going to do and they meet all of the requirements given. [Full Review]

Jordan Hubbard

The duplication algorithm allows us to get a lot more use out of less storage. We're running a five terabyte array right now and we're running probably about 30 terabytes on it. So the duplication rate is pretty phenomenal, without a cost to performance. It still runs pretty smoothly. [Full Review]

Sean Donaldson

Based on the various types of workloads and environments we run, we have looked at Pure Storage as being one of the largest infrastructure-based changes we have seen in our environment in the last 10 years of infrastructure hosting. What has changed is you now have databases and applications where you can make an infrastructure change and it directly impacts the end user experience. You generally don't see that with other infrastructure changes. If I change from storage A to storage B, maybe the... [Full Review]

Top Reviews by Topic

| | DELLEMC Dell EMC PowerMax NVMe | Pure FlashArray//X NVMe |

IMPROVEMENTS TO MY ORGANIZATION

StorageEb283

It simplifies things, as we are using higher availability systems. We have always had a 70:30 effective rule between vital critical applications and those systems which are not critical, important, and discretionary. The Symmetrix's line has always been the go-to for our vital, critical application types. We are also implementing storage virtualization with VPLEX, where it is giving us the ability to move the storage to the proper platform based on the operating characteristics needed by that pl... [Full Review]

SeniorSyb3f0

The moment we started using Pure FlashArray//X NVMe, we immediately saw a 30 to 40% improvement in performance. In addition to that, we saw a highly dense configuration where we were able to eliminate costly spindle-based storage and free up valuable real estate in our data center. That was immediately recognized. VMware is really beneficial for our IT board. It benefits our IT organization by enabling us to consolidate as much of the physical hardware as possible within our data center. Essenti... [Full Review]

Paul Croteau

There are a lot of ways that PowerMax is helping our organization function. From a storage admin standpoint, there is no longer a need to rely on the command line interface (CLI) to get data which is needed for performance monitoring and troubleshooting. When you use a CLI, you're actually requesting copies of data and impacting the performance of that production's data. With the REST API, we can do things, just ask for it, and there is the info. We are not impacting production systems. [Full Review]

Jordan Hubbard

Speed has definitely been a big improvement for us. We were running a bunch of iSCSI to EMC VNX and that had a gigabyte bottleneck. Now, since we're running through a true fiber channel to the Pure array, we're getting 32-gigabyte bandwidth. That means the speed and accessibility for our users and our customers have definitely improved. The Hypervisor that ESX and vCenter use, as well as the Orchestrator for some automation, have helped to improve my organization. There's a lot that VMware does ... [Full Review]

Solutioncc77

I have customers who are using this for large Oracle and SQL applications and European SAP types of infrastructures. They are integrating PowerMax with ProtectPoint for additional data protection of their data. They are also automating the backup and recovery of those systems through AppSync, which is another product for keeping everything protected in an automated way. It's a zero light loss upgrade. So, they're upgrading the system without losing any type of light from the communications of th... [Full Review]

Sean Donaldson

The biggest impact changing to Pure is we saw an influx of tickets from customers because they thought their BI applications were broken because they were running too quickly. Operationally, we find that we are not having storage problems anymore on performance. Historically, there might be various storage performance issues when you have DBAs involved utilizing network and storage resources, since it's very operationally intensive to gather multiple teams together and do comprehensive troublesh... [Full Review]

Top Reviews by Topic

Dell EMC Dell EMC PowerMax NVMe

Pure FlashArray//X NVMe

ROOM FOR
IMPROVEMENT

StorageEb283

There are glitches in the system at this point in time. I don't get the information that we've traditionally gotten, things like the power report that used to be standard for all EMC components across the board. Now, you can't get them. You get a little bit here in that report and a little bit in another report, but you never get the total amount in one report which gives you the equipment, its power utilization, maximum recharge, the interfaces for the power, and what are the requirements for t... [Full Review]

SeniorSyb3f0

Every time I think of something that needs to improve, they're one step ahead, which I love. The only area I wish to see improve, I believe is coming, is in the FlashBlade product. Blade implementation fell short on a few of the services. Pure is an innovator. They're a disruptor in the industry and I love that. That means that they're motivated and dedicated to being at the forefront of technology. So the only thing I can say is that I wish that Pure would keep up the good work and it looks lik... [Full Review]

Paul Croteau

I would like them to continue improving the management tools and continue moving towards a RESTful API versus CLI. They should work with the storage engineers to better tweak the management tools to give them improved visibility into their data. [Full Review]

Jordan Hubbard

They can tout the functionality and cutting edge technology that they have, but that's where the price tag comes in. The cost is high, but I think as they grow their business and get more customers that it will probably go down a little bit. [Full Review]

Dave Stromberg

I started using CloudIQ two days ago, and all it's been doing is filling up my phone with alerts that aren't worthwhile. There is something going on there that the array is flagging things as inappropriate that aren't really impactful. I would like to have Snapchat scheduling and the ability to modify that instead of erase a schedule, then recreate it. There are way better ways to do that. Support for SRDF consistency groups within the GUI, instead of making that the command line. Remove the nee... [Full Review]

Sean Donaldson

With Pure Storage, we would like to continue seeing price reductions with flash storage. I don't think we're any different than anybody else when we continue to look to the industry for price reductions of both NVMe and traditional SSD storage. We would like to see these prices continue to decline and erode, even displacing large spinning disks. Ideally, in a perfect world, you would have all-flash arrays being able to displace even your traditional "cheap and deep" type storage frames. We are m... [Full Review]

Overview

SOLUTION	Dell EMC PowerMax NVMe	Pure FlashArray//X NVMe
OVERVIEW	Dell EMC PowerMax is the world's fastest storage array. It delivers new levels of performance and efficiency with a future-proof architecture that features end-to-end non-volatile memory express (NVMe) and a built-in machine learning engine. PowerMax is built on the comprehensive functionality and proven resiliency of Dell EMC's flagship storage platform. It is designed for six-nines of availability and offers data-at-rest encryption (D@RE), massive scalability, and best-in-class data...	Pure Storage FlashArray//X is the world's first enterprise-class, all-NVMe flash storage array. It represents a new class of storage – shared accelerated storage, which is a term coined by Gartner – that delivers major breakthroughs in performance, simplicity, and consolidation.
SAMPLE CUSTOMERS	Rackspace, Open Line	Fremont Bank, Judson ISD, The Nielsen Company
TOP COMPARISONS	Pure FlashArray//X NVMe vs. Dell EMC PowerMax NVMe Compared 18% of the time IBM FlashSystem 9100 NVMe vs. Dell EMC PowerMax NVMe Compared 12% of the time NetApp NVMe AFF A800 vs. Dell EMC PowerMax NVMe Compared 11% of the time	Dell EMC PowerMax NVMe vs. Pure FlashArray//X NVMe Compared 77% of the time Fusion-io vs. Pure FlashArray//X NVMe Compared 19% of the time Dell EMC Unity vs. Pure FlashArray//X NVMe Compared 4% of the time
TOP INDUSTRIES, BASED ON REVIEWERS*	Manufacturing Company ... 14% Retailer ... 18% Healthcare Company ... 23% Financial Services Firm ... 23%	
TOP INDUSTRIES, BASED ON COMPANIES READING REVIEWS*	Wholesaler/Distributor ... 4% Retailer ... 5% Comms Service Provider ... 10% Software R&D Company ... 53%	
COMPANY SIZE, BASED ON REVIEWERS*	1-200 Employees ... 7% 201-1000 Employees ... 17% 1001+ Employees ... 77%	1-200 Employees ... 10% 1001+ Employees ... 40% 201-1000 Employees ... 50%
COMPANY SIZE, BASED ON COMPANIES READING REVIEWS*		

* Data is based on the aggregate profiles of IT Central Station Users researching this solution.

DELLEMC Dell EMC PowerMax NVMe review by a real user

A huge benefit of it has been the decreasing of our physical footprint

Senior Solution Architect at Rackspace
Hosting

Paul Croteau

WHAT IS OUR PRIMARY USE CASE?

Our primary use case for Power Max is customer data. We host hundreds, if not thousands of applications, large and small, for hundreds of thousands of customers. It's the storage platform for our customers' online presence. What's not on PowerMax? Because we have hundreds of thousands of customers running thousands and thousands of applications. From the small mom and pop shops running their mission-critical eCommerce site to the major Fortune 500 companies running every major database: Oracle, SQL, MySQL, Postgres, etc. We're running the big database engines, and the database is the holy grail for all online businesses. Therefore, major database applications are very important. Big eCommerce applications for very large brands are running on top of it, as well. We are running everything on it. The role that data plays in Rackspace is two-fold because we are both a customer and a partner. As a service provider, we are monitoring millions of data points every hour for our customers. We are monitoring the health of their systems: the traditional IT monitoring, CPU, networking, storage, uptime, security, etc. We are gathering all that data and need systems where we can dump that data, then analyze it without fail, knowing that it will be there. PowerMax gives us the latency and capacity that we need at any scale for all the data that we can throw at it. On the customer side, they are using us and our underlying PowerMax infrastructure for their mission-critical applications to do things with big data, dedupe, and other applications. Our customers are using us for the foundation of their big analytics applications.

HOW HAS IT HELPED MY ORGANIZATION?

There are a lot of ways that PowerMax is helping our organization function. From a storage admin standpoint, there is no longer a need to rely on the command line interface (CLI) to get data which is needed for performance monitoring and troubleshooting. When you use a CLI, you're actually requesting copies of data and impacting the performance of that production's data. With the REST API, we can do things, just ask for it, and there is the info. We are not impacting production systems.

WHAT IS MOST VALUABLE?

PowerMax specifically is giving us incredible improvements in performance. Significantly decreased the latency, which is different than IOPS. I've been told by the team, "Don't focus on IOPS anymore, it's the latency. Not how fast is the data, but how quick is the data." So, we've seen great performance: Single millisecond type performance, which has been fantastic.   Another huge benefit of the PowerMax has been the decreasing of our physical footprint. We recently did a consolidation where we went from 58 tiles down to 5. If we had used just the PowerMax, we could have gone from 58 tiles down to 2 tiles, which is huge space savings. If you have 56 newly available floor tiles on a raised floor data center, which you previously had to cool and provide power to, then now, not only are my costs going down, I now have more revenue opportunities because I have more space to put new customers. My storage engineers are very happy with PowerMax. They are very pleased with the performance, decreased latency, and dependability. From the team, the RESTful API makes management so much easier for them versus the command line interface.

WHAT NEEDS IMPROVEMENT?

I would like them to continue improving the management tools and continue moving towards a RESTful API versus CLI. They should work with the storage engineers to better tweak the management tools to give them improved visibility into their data.

FOR HOW LONG HAVE I USED THE SOLUTION?

We've used it for well over a decade and are very happy with it.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

Stability has been fantastic on PowerMax.

WHAT DO I THINK ABOUT THE SCALABILITY OF THE SOLUTION?

Right now, we have zero concerns about scalability. It's running everything we throw at it, and we can't wait to get more.

HOW ARE CUSTOMER SERVICE AND TECHNICAL SUPPORT?

Our relationship with Dell EMC is fantastic. We have very smart storage engineers, and they in turn work with Dell EMC's very smart storage engineers. We have zero complaints. We don't ever have a question that doesn't get answered.

WHICH SOLUTION DID I USE PREVIOUSLY AND WHY DID I SWITCH?

As a major service provider, who has been working with Dell EMC for well over a decade, hosting mission-critical applications for important brands and businesses, along with some health institutions, where access to data is literally a life or death, we have to go with a system that we can trust without fail. PowerMax has been giving that to us.

HOW WAS THE INITIAL SETUP?

One of the things that we learned right away about PowerMax during the setup is that regardless of your awareness of data type, structure, or compression, we starting seeing benefits immediately. Rackspace is running a 1G, 2G, and 3G Dell EMC storage systems, then we added PowerMax into our array farm. So, we are migrating some data into the new PowerMaxs, and it has been smooth as silk.

WHAT WAS OUR ROI?

I'm going to give PowerMax a ten out of ten just for the savings that I've heard about. From reclaiming data center space which is so tightly constrained these days, it will pay for itself in a short amount of time, which is fantastic. Anything we can do to get more out of our current physical data center space helps us a ton, and PowerMax has helped enable that. PowerMax is giving us significant improvements in Oracle and VMware. We are seeing between four to eight times improvements in latency, which is serious numbers.

WHAT OTHER ADVICE DO I HAVE?

Look at Dell EMC storage solutions. They have been around for a long time and are time-tested. The R&D department is constantly improving its offerings with better features, better performance, great return on investment for your purchases, and amazing support. Dell EMC bends over backwards to help its partners and customers get what they need out of this stuff. It's time-tested and trusted.
PowerMax gives our storage engineers everything they need to do their jobs successfully.

Pure FlashArray//X NVMe review by a real user

The duplication algorithm enables us to get a lot more use out of less storage

Manager of Infrastructure at a insurance
company with 201-500 employees

Jordan Hubbard

WHAT IS OUR PRIMARY USE CASE?

We use this solution primarily for production data for our virtual environment. We run a lot of SQL out of it. We use the on-premises deployment model.

HOW HAS IT HELPED MY ORGANIZATION?

Speed has definitely been a big improvement for us. We were running a bunch of iSCSI to EMC VNX and that had a gigabyte bottleneck. Now, since we're running through a true fiber channel to the Pure array, we're getting 32-gigabyte bandwidth. That means the speed and accessibility for our users and our customers have definitely improved. The Hypervisor that ESX and vCenter use, as well as the Orchestrator for some automation, have helped to improve my organization. There's a lot that VMware does for us. Probably 95% of our infrastructure is built on VMware's platform, hosted on-premises. This is soon to be 100%. We have some physical stuff that we're converting and VMware has made it possible to pick up and drop those servers onto their platform. We'll reach 100% by the end of the year for sure. We do have VMware analytics stood up. It's a simple Linux machine that runs a Kubernetes container that talks back to Pure1, which is their public website for support as well as for analytics, which we're using also. It's just a simple API. We also use vRealize. It helps us pinpoint issues as they come. We haven't done a whole lot of the automation through vRealize, but we're probably going to work towards that so that if we have an allocation issue, it can automatically shift things for us. But the DRS and HA kind of do a lot of that for us inherently. There hasn't been a huge drive to do any of that quite yet.

WHAT IS MOST VALUABLE?

The duplication algorithm allows us to get a lot more use out of less storage. We're running a five terabyte array right now and we're running probably about 30 terabytes on it. So the duplication rate is pretty phenomenal, without a cost to performance. It still runs pretty smoothly.

WHAT NEEDS IMPROVEMENT?

They can tout the functionality and cutting edge technology that they have, but that's where the price tag comes in. The cost is high, but I think as they grow their business and get more customers that it will probably go down a little bit.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

I think it's a lot better than what we were running for production as far as the VNX, which has fail drives about every month. It had the EMC VNX protocol. And it's not the VNX product itself, it's just that we have a much older one so it has older disks and drives that will fail.

WHAT DO I THINK ABOUT THE SCALABILITY OF THE SOLUTION?

We absolutely see this working as our company grows. Even though it is fairly simplified in the way that they do their RAID and everything like that. It makes pulling drives and putting new ones in super simple. The costs could be improved though because it is quite expensive.

HOW ARE CUSTOMER SERVICE AND TECHNICAL SUPPORT?

Their customer service is phenomenal. In their escalation paths, everything is laid out in black and white and it's very streamlined. Then they even go so far as to actually talk with other vendors on those integrations. If there's a potential issue with VMware and there's a potential issue with Cisco, Pure engineers will actually talk to Cisco engineers or VMware engineers and come to a resolution together instead of pointing fingers and saying, "Well, it's their problem, not ours." I've actually seen that in action so it's not just talk. You can actually do that. It ended up being an incompatibility on the Cisco end for the UCS from one of the drivers that we had installed based on the firmware that we installed for that particular blade. But rather than Pure just saying it's Cisco's problem, call Cisco, they actually got on with a TAC engineer and talked us through it. With this method, they came to a resolution a lot quicker than it would have been to just open a ticket with Cisco and start the troubleshooting process all over again.

WHICH SOLUTION DID I USE PREVIOUSLY AND WHY DID I SWITCH?

I had worked at a different company and we switched from EMC's XtremIO flash array to Pure and we were actually one of Pure's first customers when we did that. Their simplified support model and then their Evergreen program where they upgrade controllers as they come out was pretty phenomenal. I carried that over into the company I work for now. I kind of suggested that as a route to go in. We used VNX, which we still have. I think one of the main driving points at the time was that we were running out of space on the VNX and the flash pool, and we could have added additional space, but the cost comparison between getting a Pure array and adding a new shelf to the VNX was about the same. I felt like we would get more bang for our buck going to Pure, which we have.

HOW WAS THE INITIAL SETUP?

The initial setup was very straightforward. It's pretty much plug and play.

WHAT ABOUT THE IMPLEMENTATION TEAM?

We actually used Pure professional services, which we didn't even really need, but we used anyway because it came with the implementation purchase. We did use a reseller to buy. We used RoundTower to buy the Pure array. We used professional services from Pure. It was probably set up within 20 minutes ad we could've done it ourselves, but it's always good to have trained hands on it.

WHAT WAS OUR ROI?

A SQL job that would normally take six minutes running on VNX takes two minutes on Pure. That's been pretty beneficial because we're constantly running reports out of those SQL instances. We've seen enhancement and efficiencies from that.

WHICH OTHER SOLUTIONS DID I EVALUATE?

EMC still has good products so they were still there. We were looking at adding additional space to the VNX. And then for general purpose, we did look at some stuff through Cohesity, but we needed more performance-oriented space. So that's why we went with Pure.

WHAT OTHER ADVICE DO I HAVE?

Try to get as many discounts as you can if you go with Pure. If you don't need performance-oriented space or storage, Cohesity is very well priced and scalable. If you just need file server storage, you might not want to go with Pure. You might want to go with something a lot cheaper or more cost-effective like Cohesity. The Systems Engineer that we worked with was a huge help, too. I would rate this solution as a nine out of ten. It's very functional and very cutting edge. Technology just costs a lot.

Researched Pure Storage But Chose Dell EMC

Review by a real user:

Senior Infrastructure Engineer at a retailer
with 10,001+ employees

SeniorIn0534

WHAT IS MOST VALUABLE?

The number one most valuable feature is reliability. I want to go home at the end of the day and come in the next day knowing it works, especially since we have storage offshore.

WHAT NEEDS IMPROVEMENT?

I would like to see the rack change. They have defaulted to the standard rack, so our fiber cables are crowded when we shut our back door.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

It is reliable at the end of the day.

HOW WAS THE INITIAL SETUP?

It is not complex for us because we have done so many of them. We have a lot of people with experience now.

WHICH OTHER SOLUTIONS DID I EVALUATE?

We also considered Pure Storage.

WHAT OTHER ADVICE DO I HAVE?

It is a product that people take for granted.

Researched Pure Storage But Chose Dell EMC

Review by a real user:

Sales Engineer at a tech services company
with 51-200 employees

John Lyons

WHAT IS OUR PRIMARY USE CASE?

We used it for Oracle Databases. The customer for which we did the PoC of PowerMax is planning on deploying mission-critical applications on this solution: Oracle workloads such as their quoting system and their data warehouse.

HOW HAS IT HELPED MY ORGANIZATION?

As a partner, we don't have PowerMax in-house but for my customers the SRDF replication is an advantage. The ability to have a scalable, all-flash array is pretty impressive. That's important for our customers. In terms of helping to consolidate islands of storage in a data center, the use case for the particular customer for whom we did the PoC was to move off of an Exadata environment and to move off of an AIX environment and consolidate those down to one storage platform. PowerMax did that. It is meeting our customer's requirements. They had several large Oracle databases that needed to move over, including from Exadata. Exadata is one of Oracle's fastest systems in terms of Oracle Database workloads. Our customer had to be able to hit certain timelines for jobs that would run. For example, they are running a quote database and they had to be able to hit the same timelines for jobs that were running within that, or better. As a part of the consolidation, the end goal was to limit their licensing on the front end. Being able to consolidate down into that one footprint on the back end helped them save money on the front end. When it comes to managing and monitoring PowerMax arrays, the interface has really improved compared to the old VMAX. Getting into the interface and finding out if there are any issues with the array is a lot simpler and more streamlined.

WHAT IS MOST VALUABLE?

The SRDF replication piece is probably the best feature. It's useful for maintaining recoverability in the event of a disaster.

WHAT NEEDS IMPROVEMENT?

I would like to see more cache because we are limited to two terabytes of cache now. More cache would potentially help drive better improvements in performance. Also, when it comes to Oracle and database workloads, data reduction could be a little bit better. Some of the competition, like Pure, have post-processes which do additional deduplication and compression on the backside; everything is in-line and then they do a secondary process. It would be a good option if you could start getting 5:1 or 6:1 data reduction on database workloads. That would be beneficial.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

Since our use of PowerMax was just a PoC, we didn't really have any issues with the with stability. We didn't run it for a long time, it was a 30-day PoC. There wasn't a lot of time to really explore that area. During the PoC it was fine, it was perfect, we didn't have any issues.

WHAT DO I THINK ABOUT THE SCALABILITY OF THE SOLUTION?

The ability to add additional engines, additional SSDs, is really a benefit to the customer. You can grow it as you need to. The PowerMax architecture influenced the buying decision. The ability to grow, to scale from single-engine to multi-engine, was probably the biggest factor in that.

HOW ARE CUSTOMER SERVICE AND TECHNICAL SUPPORT?

Tech support for PowerMax was pretty good. They came out and set it up and did the install. That took a day. We did have a problem with one of the compression modules and they had it out there and fixed the next day. It was during the install that they uncovered that. We weren't using the array yet anyway, so it was just a byproduct of the installation process.

HOW WAS THE INITIAL SETUP?

The improvements to the interface have really been great. It's very simple to set up and configure the storage volumes, whether it's a Fibre Channel volume or an iSCSI volume. The initial setup was straightforward. I did the setup of the iSCSI volumes to the host and it was it took me less than an hour to do that.

WHICH OTHER SOLUTIONS DID I EVALUATE?

We were initially doing a PoC and comparing PowerMax against other arrays: NetApp, XtremIO X2, and Pure. We were doing a performance benchmark and it came in second compared to XtremIO X2, so it did a good job.

WHAT OTHER ADVICE DO I HAVE?

I would give PowerMax a nine out of ten, only because we had that single issue with the compression module failing. Otherwise, it did exactly what we wanted it to. It wasn't as fast as the XtremIO, but we didn't think it was going to be as fast as that in the first place. The XtremIO was somewhat oversized. So from a performance standpoint, we were very happy with it.

Researched Dell EMC But Chose Pure Storage

Review by a real user:

Consultant at a tech services company with
10,001+ employees

Consulta3c88

WHAT IS OUR PRIMARY USE CASE?

We use this solution for our primary storage. Our deployment is in a private cloud environment.

HOW HAS IT HELPED MY ORGANIZATION?

Using this solution has benefitted us operationally by making us more efficient. VMware benefits our IT organization through cost efficiency.

WHAT IS MOST VALUABLE?

The most valuable feature of this solution is its ease of use.

WHAT NEEDS IMPROVEMENT?

I would like to see replication and DR features in the next release of this solution.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

This solution is pretty stable.

WHAT DO I THINK ABOUT THE SCALABILITY OF THE SOLUTION?

We have not tested scalability yet, so it is to be determined.

HOW ARE CUSTOMER SERVICE AND TECHNICAL SUPPORT?

Technical support for this solution is very good.

WHICH SOLUTION DID I USE PREVIOUSLY AND WHY DID I SWITCH?

We did not switch from a previous solution. We brought this in as a way to improve operational efficiency, which is something that we're always looking for.

HOW WAS THE INITIAL SETUP?

The initial setup of this solution was straightforward. It was an easy setup.

WHAT ABOUT THE IMPLEMENTATION TEAM?

We used an integrator for our deployment, and our experience was ok.

WHAT WAS OUR ROI?

We have not yet seen ROI with this solution.

WHICH OTHER SOLUTIONS DID I EVALUATE?

We considered IBM and Dell EMC for our storage solution.

WHAT OTHER ADVICE DO I HAVE?

My advice for anybody who is researching this or a similar solution is to give it a shot. I would rate this solution an eight out of ten.

Researched Dell EMC But Chose Pure Storage

Review by a real user:

Director at a software R&D company with
201-500 employees

Director2957

WHAT IS OUR PRIMARY USE CASE?

We use the on-premise deployment model of this solution. Our primary use case is for machine learning analytics.

HOW HAS IT HELPED MY ORGANIZATION?

It has benefited my organization because it has reduced time to insights. Its agility has been a benefit for our IT organization. We are running VMware on Pure. The main driver was FlashStack. The joint solution has helped my organization through its support.

WHAT IS MOST VALUABLE?

The performance is the most valuable feature of this solution. We have taken advantage of the VMware integrations developed by Pure with the validated design, FlashStack CVD. The integration has helped in the way that engineers feel competent that the solution is designed correctly.

WHAT NEEDS IMPROVEMENT?

In the next release, I would like to see real-time analytics for further insight into consumption models. The scalability and telemetry analytics could be improved.

WHAT DO I THINK ABOUT THE STABILITY OF THE SOLUTION?

The stability is good.

WHAT DO I THINK ABOUT THE SCALABILITY OF THE SOLUTION?

It is somewhat scalable but it's not infinitely scalable. They could improve the petabyte-scale with greater capacities.

HOW ARE CUSTOMER SERVICE AND TECHNICAL SUPPORT?

We haven't needed to contact technical support.

WHICH SOLUTION DID I USE PREVIOUSLY AND WHY DID I SWITCH?

We knew that we needed to switch because our system wasn't performing so we knew we had to buy something. We liked Pure because it had a good pitch.

HOW WAS THE INITIAL SETUP?

The initial setup was straightforward.

WHAT ABOUT THE IMPLEMENTATION TEAM?

We did the deployment in-house.

WHAT WAS OUR ROI?

We have seen a two year ROI.

WHAT'S MY EXPERIENCE WITH PRICING, SETUP COST, AND LICENSING?

With VMware, we pay $300,000 annually.

WHICH OTHER SOLUTIONS DID I EVALUATE?

We also evaluated Hitachi, Nimble, and EMC. We went with Pure because they have the best pitch.

WHAT OTHER ADVICE DO I HAVE?

The advice I would give to someone considering this solution is, don't wait. Go for it. I would rate it a seven out of ten. There is room for improvement.

Vendor Directory

DDN	DDN Storage Fusion Architecture NVMe		**NetApp**	NetApp NVMe AFF A800
Dell EMC	Dell EMC PowerMax NVMe		**Pure Storage**	Pure FlashArray//X NVMe
IBM	IBM FlashSystem 9100 NVMe		**VAST Data**	VAST Data
Kaminario	Kaminario K2.N NVMe			

Top NVMe Vendors

Over professionals have used IT Central Station research. Here are the top 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**

Number of views

● **Comparisons**

Number of times compared to another product

● **Reviews**

Total number of reviews on IT Central Station

● **Words/Review**

Average words per review on IT Central Station

● **Average Rating**

Average rating based on reviews

Bar length

The total ranking of a product, represented by the bar length, is based on a weighted aggregate score. The score is calculated as follows:

For each of **Reviews**, **Views**, and **Comparisons**, the product with the highest count in each area gets a maximum 18 points.
Every other product gets assigned points based on its total in proportion to the #1 product in that area.
For example, if a product has 80% of the number of reviews compared to the product with the most reviews then the product's points for reviews would be 18 * 80% = 14.4.

Both **Average Rating** and **Words/Review** are awarded on a fixed linear scale.
For Average Rating, the maximum score is 28 points awarded linearly between 6-10 (e.g. 6 or below=0 points; 7.5=10.5 points; 9.0=21 points; 10=28 points).
For Words/Review, the maximum score is 18 points awarded linearly between 0-900 words (e.g. 600 words = 12 points; 750 words = 15 points; 900 or more words = 18 points).
If a product has fewer than ten reviews, the point contribution for Average Rating and Words/Review is reduced:
1/3 reduction in points for products with 5-9 reviews, two-thirds reduction for products with fewer than five reviews.

Reviews that are more than 24 months old, as well as those written by resellers, are completely excluded from the ranking algorithm.

All products with 50+ points are designated as a Leader in their category.

1   Dell EMC PowerMax NVMe

3,029 views   **1,590** comparisons   **28** reviews   **507** words/review   **8.8** average rating

2   Pure FlashArray//X NVMe

786 views   **430** comparisons   **8** reviews   **774** words/review   **9.4** average rating

3   IBM FlashSystem 9100 NVMe

471 views   **335** comparisons   **0** reviews   **0** words/review

4   NetApp NVMe AFF A800

323 views   **256** comparisons   **0** reviews   **0** words/review

5   VAST Data

233 views   **147** comparisons   **0** reviews   **0** words/review

6   Kaminario K2.N NVMe

24 views   **12** comparisons   **0** reviews   **0** words/review

7   DDN Storage Fusion Architecture NVMe

7 views   **3** comparisons   **0** reviews   **0** words/review

Top 5 Solutions by Ranking Factor

🔴 Views

		VIEWS
1	Dell EMC PowerMax NVMe	3,029
2	Pure FlashArray//X NVMe	786
3	IBM FlashSystem 9100 NVMe	471
4	NetApp NVMe AFF A800	323
5	VAST Data	233

🟢 Reviews

		REVIEWS
1	Dell EMC PowerMax NVMe	28
2	Pure FlashArray//X NVMe	8
3	NetApp NVMe AFF A800	0
4	IBM FlashSystem 9100 NVMe	0
5	Kaminario K2.N NVMe	0

🔵 Words / Review

		WORDS / REVIEW
1	Pure FlashArray//X NVMe	774
2	Dell EMC PowerMax NVMe	507
3	NetApp NVMe AFF A800	0
4	IBM FlashSystem 9100 NVMe	0
5	Kaminario K2.N NVMe	0

About this report

This report is comprised of a list of enterprise level 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 vendors
- A sample of real user reviews from tech professionals
- Specific information to help you choose the best vendor for your needs

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