

**Reval**, a business unit of ION Group, requires very high resiliency, performance, and security in its storage infrastructure to meet the needs of its software-as-a-service clients at major financial institutions. Pure Storage FlashArray™ arrays deliver on each of these requirements, and more.

**BUSINESS TRANSFORMATION**

Clients receive reliable, world-class service, while Reval enjoys radically simplified storage management with lower capital and operating costs.

**GEO**

North America

**INDUSTRY**

Financial Services

“We can just spin up as many environments as we need without worrying about how much space is being used.”

Jogen Mehta, *Director of IT Hosting*

**REVAL DEPOSITS COST SAVINGS AND PERFORMANCE BENEFITS FROM PURE STORAGE**

Reval is the leading global provider of scalable cloud solutions for treasury and risk management. Its software-as-a-service (SaaS) offerings help corporations and banks better manage cash and liquidity, financial risk and hedge accounting. With nearly 700 clients worldwide, Reval is part of ION Group, a provider of mission-critical trading and workflow automation software solutions for financial institutions, central banks, governments and corporations.

Reval’s service is mission-critical for its clients, who largely are CFOs, treasurers and fund managers who move millions of dollars daily. “We need to make sure that their money transfers go through with no failures,” noted Jogen Mehta, Director of IT Hosting for Reval at its headquarters in New York City. “Reliable performance in our IT infrastructure is absolutely essential.”

Reval operates its own private cloud in two data centers in the U.S. with identical configurations to support redundancy. Ninety percent of applications are virtualized using VMware ESX, while Microsoft SQL Server is used for physical databases.

In 2015, Reval was faced with a situation virtually all enterprises have become familiar with: its storage-area network (SAN) was nearing the end of its three-year maintenance contract and, as Mehta observed, “the cost of renewing that contract was more than what it might cost to buy all-new arrays.” So, the IT team arranged a proof-of-concept (POC) trial of storage solutions from three suppliers, including the incumbent supplier of its legacy SAN, and Pure Storage.

“Our number-one priority in evaluating the options was the stability and resiliency of the product,” Mehta said. “How fault-tolerant and redundant was the storage? What happens when there’s a component failure, the power goes out, or a user error? How quickly does the vendor respond?” Other key decision factors were performance, data-center footprint and operating costs, data-reduction ratios, management simplicity, and encryption.

Pure Storage came out ahead on all key criteria. “Because Pure was not as well-known back then, we did very thorough testing, and we met with the support organization to understand their capabilities,” Mehta said. “We tried everything we could do to break something on the Pure array, but we couldn’t find anything that did.”

**COMPANY:**

Reval  
[www.reval.com](http://www.reval.com)

**USE CASE:**

- Database – Microsoft® SQL Server
- Virtual Server Infrastructure – VMware® ESX

**CHALLENGES:**

- Legacy storage was at the end of its maintenance contract, posing the threat of a costly renewal.
- Ever-increasing volumes of client data demanded higher-performing storage.

**IT TRANSFORMATION:**

- In three years the company has had zero downtime caused by storage.
- Data-center footprint was reduced by more than 75%.
- Database re-indexing time has been cut by more than two-thirds.

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Jogen Mehta, *Director of IT Hosting*

**ADVANCING SERVICE LEVELS**

As Reval is offering software as a service, their IT infrastructure has to deliver this service to customers with consistently high performance, security and reliability. If the service doesn’t get delivered, recurring revenues suffer. If there are gaps in performance, Reval’s customers would go elsewhere.

Reval purchased three FlashArray//M20s — one each for production, disaster recovery and development/QA. Installation was “seamless, with no interruption in production workloads,” Mehta recalled. “We just ‘Vmoted’ everything over in a few simple steps. Nothing complicated at all.”

The positive impact of the Pure Storage arrays has been noted in several areas. “The most important performance metric for us is the experience end-users have with our databases when they make queries, run reports or initiate long processes,” Mehta said. “With our legacy SAN, we were beginning to hear end-user complaints about slow performance. And that had an impact on some important database maintenance procedures.”

One example he cited was the regular re-indexing of the SQL Server databases. “As the company grew and added more clients, the size of our databases increased. As a result, the re-indexing took longer and longer — to the point that by the time they were finished on Sunday in New York, it was already the workday in Asia and Australia, and the re-indexing caused a noticeable hit on end-user performance in those regions,” said Mehta.

“In the face of end-user complaints, one response would have been to delay the re-indexing. But doing so would set up a domino effect that eventually would cause even greater performance problems affecting even more clients,” Mehta explained. “But having the Pure Storage arrays has removed this as a problem. Instead of taking 20-plus hours, re-indexing is now accomplished in about six hours. That has been of huge value to us.”

Recalling that resiliency was the top selection criteria for new storage, Mehta noted that “the reliability of the Pure Storage arrays has exceeded our expectations. In the three-plus years we have had the Pure equipment, we have had zero downtime caused by the storage itself.”

He added, “In the past, we had to schedule downtime for upgrades to the SAN, and it pretty much took the entire weekend. It was a big project. Now, with Pure Storage, an upgrade takes 30 minutes to an hour, causes no disruption to operations, and in most cases is handled remotely by a Pure engineer. It’s done before we finish our coffee.”

**ACCELERATING TIME TO REVENUE**

Like any SaaS provider, software development is an essential competency for Reval. The faster development teams can get new services or upgrades into the hands of their customers, the more revenue they are able to generate. The adoption of Pure Storage also has had a positive impact on Reval’s software development operation. “In our development and QA department, we often run 15 to 20 environments simultaneously, and each one requires a copy of a database,” Mehta noted. “With our legacy SAN — which had no de-deduplication or snapshot capability — that meant 20 copies of a 10TB database required us to carve out 200TB of disk space, which is not a trivial task.”

With de-duplication and snapshot features built directly into Purity software, “we can just spin up as many environments as we need without worrying about how much space is being used, because it has almost no impact on capacity at all,” said Mehta. “That helps tremendously in refreshing databases in development and QA operations.”

Because there is so much similarity between the databases maintained for Reval's clients, Mehta said, "we are getting very close to a 40:1 de-dupe ratio, which is amazing. That, along with the snapshots, makes life much simpler."

Another standard feature in Pure Storage software that Mehta values is 'encryption at rest', a very important capability given the security and compliance requirements of Reval's clients. "In the old system, you could turn on encryption, but it resulted in a significant hit on performance," he said. "With Pure, you get encryption at rest without giving up any performance."

### **ACHIEVING OPERATIONAL ADVANTAGE**

In any SaaS provider, the cost of doing business is the cost of IT. Investing in IT is therefore an investment in the business. By leveraging efficient solutions that protect the investment and scale to easily enable the use of better technology as it comes to market, IT can make a huge contribution to the organization's health and bottom line. This holds very true for Reval where the move to Pure Storage has benefited the company's own finances. Mehta noted that a Pure array takes up 6RU of space, compared to more than a full rack for the legacy SAN it replaced — a reduction of more than 80% — "and we still have capacity left over. The savings in data center space and power requirements are phenomenal."

Another attractive business benefit to Reval management is the Pure Evergreen™ Storage program, which applies a cloud-like approach to on-premises storage. Customers buy storage once, and upgrade and modernize it as needed, without any disruption and without re-buying any capacity. Through an Evergreen Storage subscription, customers can harness software, hardware and flash innovation whenever they want. "With Evergreen Storage, you're not pushed up against a wall in the third year," Mehta noted.

As a member of a small IT staff, Mehta highly values Pure Storage's management simplicity. "Even during the POC, it was obvious that managing a Pure array was radically simpler," he said. "Just looking at the number of connections coming out of the box told us something. It's a very simple design, and that minimizes the chance of failure and reduces the attention you have to give it."

The management interface for the Pure Storage array "is very simple, and basically eliminates the need for a dedicated storage administrator. Everybody on the IT team likes it. It's like operating an iPhone or a TV."



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