

# Arihant Capital scales up for surge in online trading with Nutanix

Arihant Capital overcame a five-fold increase in online trading by moving its trading database to Nutanix

## INDUSTRY

Financial services

## BENEFITS

- Reduces latency to milliseconds to support trading peaks
- Improves database performance by 50% and increases storage speed by 100%
- Enables 100% growth in number of concurrent trading connections
- Increases competitiveness in a rapidly changing financial services industry in India
- Raises innovation with 95%-plus of Ari-Trade Speed applications running on Nutanix
- Moves new products, features and integrations into market 60% faster
- Drives growth through partnerships with banks using API integrations
- Reallocates two-person infrastructure management team to higher value tasks
- Strengthens security through micro-segmentation of virtual machines and applications

## SOLUTIONS

- Nutanix AHV
- Nutanix Prism management software
- Nutanix Flow
- Lenovo ThinkAgile HX Appliances 5 nodes

## APPLICATIONS

- Ari-Trade Speed (ODIN DIET)
- Trading Database Server

## BUSINESS BENEFIT

Arihant Capital in India provides a wide range of products and services, including online stock trading using Ari-Trade Speed (ODIN DIET), a professional-level software-based trading solution. Following the COVID-19 lockdown, the amount of trades through Ari-Trade Speed increased five-fold. Latency on the trading database engine meant not all trades could be made. If the situation continued, the risk was customers could move to other online trading platforms, causing Arihant Capital loss of revenue and reputation.

“With Nutanix, we overcame the immediate need for much greater database performance but also the requirement for greater agility in a financial services industry that is rapidly evolving in line with greater competition, regulation, and security.”

- Dipak Rout, Head of IT, Arihant Capital Markets Ltd

By migrating the database to Nutanix on Lenovo ThinkAgile HX nodes, Arihant Capital fixed the issues—reducing latency to milliseconds. Database performance increased by 50 percent and storage speeds jumped by 100 percent. The move to Nutanix allowed the company to support a 100 percent increase in the number of concurrent connections for trading. Additionally, they can continue to scale their new hyperconverged infrastructure due to the simplicity, agility and flexibility of the Lenovo ThinkAgile HX solution. More broadly, the migration has meant Arihant Capital can be more competitive in a rapidly changing financial services industry, raising innovation, and launching new products, features and integrations 60 percent faster.

## CHALLENGE

Arihant Capital Markets Ltd (Arihant Capital), based in central India, is a financial services company, providing a wide range of products and services, including equities, commodities, currency, financial planning, and investment banking. The combination of wide-spread internet access and the liberalization of financial markets in India has fueled growth in online stock trading. In the case of Arihant Capital, it is meeting the growing demand with online services that include Ari-Trade Speed (ODIN DIET). The professional-level software-based trading solution is built on ODIN, a leading trading platform in India.

Beside the features of Ari-Trade Speed, such as the multi-exchange and multi-segment access to a range of markets, the desktop trading software's success has been down to speed and reliability. Customers know that as soon as the markets open, they'll be able to make their trades. No problem. However, this promise seemed to be at risk when a sudden increase in trades hit the Ari-Trade Speed platform in May as a result of COVID-19. Following the lockdown, the number of online traders across India suddenly increased. The amount of trades using Ari-Trade Speed during the first 30 minutes of the markets opening increased five-fold.

The number of requests from the web server was overwhelming the trading database engine, which couldn't respond in time to all of them. People were not able to make all their trades. There was little that could be done because it wasn't easy to scale the physical environment behind the platform's core database engine. "The problems started on a Monday and by the end of that day," says Dipak Rout, Head of IT at Arihant Capital, who received 300 calls from concerned employees that day asking what could be done to fix the situation. Rout continues, "The next day the same latency issues occurred when the markets opened, and the company began to fear it could start losing customers."

Only the database engine was running on a physical infrastructure at this point. Ari-Trade Speed's applications for front, middle, and back-office processes were running on a Nutanix private-cloud hyperconverged infrastructure (HCI) on Lenovo ThinkAgile HX hardware solution. "The solution seemed clear," says Rout. "Migrate the database to Nutanix, which had been delivering reliable performance to the other applications for several years." All Arihant Capital had to do was add another node to the Nutanix stack with enough compute, memory, and storage IOPs to overcome the bottlenecks. It was now the third day since latency had become an issue and it was an emergency. Rout remembers, "I told our managing director about my idea to use Nutanix, and I received the greenlight for the project straight away."

## SOLUTION

Arihant Capital worked with Nutanix, Lenovo and a local partner to ensure the hardware was onsite within 24 hours to add another node to the stack and migrate the database. At midnight work began and by 6am Thursday morning, migration had been completed. Rout says, "There was little time for testing, but everyone was confident the solution would work. We were right, and when the markets opened, everyone saw the latency issue disappear. There were no more bottlenecks and customers were trading as per normal. There were no more calls, and everyone had their lunch in peace that day."

The addition of the extra Lenovo ThinkAgile HX node increased the number of Lenovo-based appliances in Arihant Capital's Mumbai data center to five. The stack's Acropolis Operating System (AOS) combines compute, storage, networking, and virtualization capabilities. Plus, with the AHV hypervisor, the Nutanix HCI delivers performance with enterprise-grade operational intelligence and security. To streamline management, Arihant Capital manages the entire Nutanix stack, which delivers all Ari-Trade Speed's applications, through a single management plane.

## CUSTOMER OUTCOME

### **Reduces latency to milliseconds to support peaks in trading**

With Nutanix supporting the core database engine, Arihant Capital has overcome the challenges of peaks in trading volumes when markets open, or any part of the day for that matter. Database performance is at least 50 percent better, and Arihant Capital can easily scale memory or add storage speed if the need arises. "The company is no longer at risk of data bottlenecks and problems making trades, ensuring that we continuously deliver on our promise of fast and reliable trading to customers," says Rout.

### **Increases storage speed by 100% with HCI**

The possibility of too many read/write requests from the web server to the database causing issues is in the past. By migrating the database engine to the Nutanix and Lenovo solutions, Arihant Capital has increased storage speeds by 100 percent. "The team monitors performance across the stack through Nutanix Prism," says Rout. "We couldn't see the performance of our storage before, but with Nutanix we can see it in real time. We are much more in control of our IT."

### **Enables support for 100% growth in number of concurrent trading connections**

Today, 7,000 is around the maximum number of concurrent connections to Ari-Trade Speed. However, the current Nutanix and Lenovo infrastructure solution gives Arihant Capital the headroom to scale to more than 14,000 connections without the need for more hardware if demand increases. Memory and compute processing unit (CPU) utilization shows how the infrastructure behind the database is no longer being pushed to the max.

### **Increases competitiveness in a rapidly changing industry**

Beyond simply giving Arihant Capital the performance to solve its database issues, Nutanix is helping the company thrive in a rapidly changing industry. With fintech startups increasing competition, well-established financial services providers and financial institutions are driving innovation to avoid losing market share. With more than 95 percent of Ari-Trade Speed running on the Nutanix platform, Arihant Capital has the agility to accelerate innovation and safeguard the product's success. "The beauty of our Nutanix solution is we can deliver on the company's schedule for product development," says Rout, "such as browser-based trading functionality. With Nutanix, I can spin up the environments complete with servers, storage and networking in minutes for development and testing. We're moving new products, features and integrations into market 60 percent faster."

### **Drives growth through partnerships with banks**

Arihant Capital can leverage Nutanix scalability to take on new business opportunities. For example, the IT team was able to set up API integrations between Ari-Trade Speed and an Indian bank to start offering bank customers trading within a week. What's more, bank customers gained the same high-quality user experience as Arihant Capital customers, the same performance, and the same levels of data security.

### **Reallocates infrastructure management time to higher value tasks**

Thanks to the simplified management of Nutanix, Arihant Capital has been able to increase resources for strategic planning. With one-click administration, the company has been able to replace the dedicated infrastructure team with a general IT administrator and move the two people that worked on infrastructure management into higher-value tasks. Rout states, "They are looking more broadly at the overall infrastructure to fine tune performance where possible."

### **NEXT STEPS**

Arihant Capital is about to implement Nutanix Flow to deliver advanced networking and security services. At a time when regulatory changes and reputational risk are demanding greater network controls, Nutanix Flow will give Arihant Capital granular control and governance over all traffic in to and out of its network. "Micro-segmenting network policies for virtual machines and applications will give us a great level of control," says Rout, "which we can apply through our Nutanix Prism console to reduce change management workloads."



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