DDN SUCCESS STORY | NTC NIS - NAFTAGAS LLC

NTC Unlocks Growth and New Business Opportunities with Faster, More Efficient DDN Storage

Reaping the Advantages of a High-Performance, Scalable and Easily Managed Unified Platform for Data Intensive Oil and Gas Applications

Energy Industry:
Republic of Serbia

CHALLENGING DATA-INTENSIVE WORKLOADS

BUSINESS BENEFITS

- Accelerated data management to support mission-critical oil and gas applications
- Simplified and more efficient operation with the ability to scale in the future
- Ability to run legacy and new compute side by side
- Frees up staff by minimizing management and support resource requirements
- Potential to win new business, lower costs and improve margins
- Easy access to local team to address on-going needs

▶ NTC NIS-NAFTAGAS

NTC NIS-Naftagas LLC - Scientific and Technological Centre NIS is part of NIS Group.

NIS Group is one of the largest vertically integrated energy systems in Southeast Europe. With headquarters and production facilities in the Republic of Serbia, the company's activities include exploration, production, and oil and natural gas refining, as well as the sales and distribution of petroleum products.

In addition, NIS Group also participates in petrochemistry and energetics projects. The company continues to expand operations in oil and gas exploration and production and is developing a retail network throughout the Balkans region.

Comprised of more than 11,000 employees throughout its operations in Serbia, Bosnia and Herzegovina, Bulgaria, and Romania, NIS Group seeks to set an example for the industry in operating efficiency and sustainable growth.

> " With DDN we have a solution that can work with our existing architecture while enabling us to leverage our storage investment. For our business, DDN is the best solution on the market.
>
> **~ Ljiljana Glišić**
> Team Leader | NTC Linux Specialized IT Systems "

▶ THE CHALLENGE

In the energy industry, the ability to process and store massive amounts of data is critical to ensuring efficient operations, competitive differentiation, and sustainable growth.

NTC NIS-Naftagas LLC (NTC) had a slower legacy storage solution which was reaching 95% capacity almost every day, impacting team productivity and the ability to support mission-critical projects.

The NTC team had to transfer data back and forth to backup or other storage to create space for new projects. It also meant that the IT team had to plan for backups and recycling of storage on a daily basis.

The company recognized that it needed a multi-purpose IT infrastructure for seismic data processing while also accommodating the existing legacy HPC systems so that applications would not need to be reconfigured.

> "
> We needed a storage platform that would be agile and flexible enough to run the applications and process the data our business relies on without obsoleting our existing IT investments. Without faster, high performing storage our data scientists are unable to perform the very work that supports our customers and our growth.
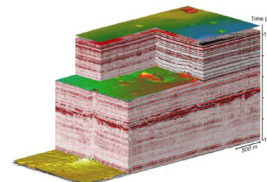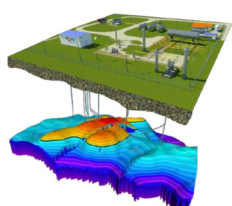>
> **~ Ljiljana Glišić**
> Team Leader | NTC Linux Specialized IT Systems
> "

NTC sought proposals from several storage vendors to help solve this challenge. The company wanted a solution that didn't require significant effort to implement and manage long term.

Multiprotocol access was especially important, as NTC relies on software applications that aren't necessarily Windows or Linux based, and yet all of the applications need to be able to use the same data. At the same time, because the number of projects and volume of data continues to grow, NTC needed to be able to simply and seamlessly scale storage capacity as needs expand.

DDN STOOD OUT NOT ONLY FOR ITS ABILITY TO DELIVER THE SPEED AND EFFICIENCY NTC WAS AFTER, BUT ALSO ITS ABILITY TO DO SO AT A LOWER COST.

And because DDN powers over half of the world's largest oil and gas sites, NTC can have confidence in a team that understands the unique requirements of its business.

"Our storage needs to achieve extreme scale to handle huge volumes of dynamic data, and that meant exploring a new partner that could see our business into the future," notes Glišić. "After evaluating DDN's capabilities and experiencing the high level of support the team could provide to our organization on a local basis, DDN was clearly the right solution to meet our needs."

▶ THE SOLUTION

In NTC's demanding environment, DDN provides the performance and scalability of a unified platform for data ingest, processing and visualization.

And, because DDN eliminates the need to have a full rack of servers and network equipment, NTC doesn't have to allocate valuable IT resources to managing and supporting storage, which frees up resources to focus on the business imperatives driving growth and customer satisfaction.

"With DDN we were not required to rework applications – which wouldn't have been feasible – and that meant we could continue working with our legacy architecture and still future proof our storage infrastructure to take advantage of new protocols and faster InfiniBand connections," says Glišić.
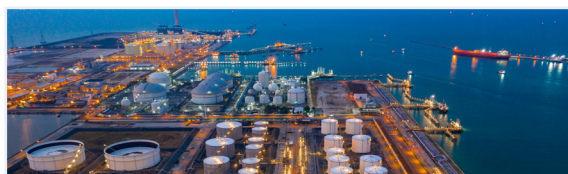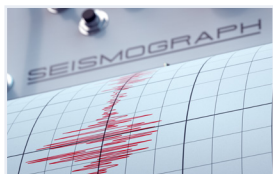
> "
>
> With DDN we have a solution that can work with our existing architecture while enabling us to leverage our storage investment. For our business, DDN is the best solution on the market.
>
> **~ Ljiljana Glišić**
> Team Leader | NTC Linux Specialized IT Systems
>
> "

NTC implemented DDN AI AI400X storage with its existing compute cluster. Because the AI400X appliance is a compact and low-power storage platform, it provides significant raw performance with the use of NVMe drives for storage, and InfiniBand or Ethernet (including RoCE) as its network transport. In addition, the appliance integrates the DDN EXAScaler parallel filesystem, which is optimized for AI and HPC applications. EXAScaler is based on the Lustre filesystem with the addition of extensive performance, manageability, and reliability enhancements.

NTC's new system was designed and implemented with the assistance of Braineering, DDN's leading integration partner in the region.

"Unlike other solutions we evaluated, DDN had a team on the ground for local support. This was key to ensuring that implementation and migration was fast and easy, and reduced the time that the system was off-line," explains Glišić. "Users had access to data quickly, so it was easy for them to transition to the new storage, and our business operations were not significantly disrupted."

THE EXISTING HPC SYSTEMS WILL USE THE RESOURCES OF THE NEW DDN STORAGE WITH SEISMIC DATA PROCESSING SOFTWARE FROM PARADIGM ECHOS AND SCHLUMBERGER OMEGA.

Existing virtual infrastructure that will be connected to the new storage will enable the operation of current and future software solutions to meet emerging and evolving business requirements.

BUSINESS RESULTS AND BENEFITS

The move to DDN storage has given NTC a total of 1.1 petabytes for HPC storage compared to the 100 terabytes with the previous system.

Migration took just weeks instead of months, and all applications are working smoothly without any storage constraints. The added capacity is expected to meet the organization's growing data needs for years to come without requiring additional investment or significant upgrades to keep pace with software changes. As a result, applications run faster, even on the older compute servers.

THE NEW DDN STORAGE HAS UNLOCKED NEW BUSINESS OPPORTUNITY FOR NTC AS WELL.

Their customers can be confident that NTC can process data quickly and reliably, with the assurance that their fast storage has the ability to meet even the most demanding data needs. At the same time, the data processed can result in faster and safer exploration. The business outcome for NTC: the potential to win more business, lower costs, and realize better margins.

LOOKING AHEAD

In the future, NTC will be upgrading with new compute nodes and IB switches, which will allow the company to take full advantage of the power of DDN storage.

In addition, AI will be playing an important role in transforming data into a business advantage. DDN's AI-optimized intelligent infrastructure will be up to the challenge. With storage optimized for maximum GPU productivity, NTC investment in DDN technology will accelerate AI workflows and learning with a single, scalable data management platform.

DDN's collaboration with DDN and NVIDIA will also help NTC take AI integration to the next level by combining unmatched performance and scale with complete end-to-end visibility and control across all AI workflows.

"This was a complex implementation with InfiniBand and other protocols, and when you add to that the need to integrate older and newer systems and a wide range of software applications, our requirements and expectations were high," concludes Glišić. "DDN took the time to understand our business, our goals, and the results we wanted to achieve, and then delivered a storage solution that reduced our risk while positioning our business for success well into the future."

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations.

DDN has designed, developed, deployed, and optimized systems, software, and solutions that enable enterprises, service providers, research facilities, and government agencies to generate more value from their data and information, on premise and in the cloud.

REACH OUT!