

**Ingosstrakh** is a leading Russian insurance company and one of Pure's first Russian customers. Today's insurance companies are catching up with banks and diving deeper into digital transformation. Ingosstrakh's challenge was to quickly respond to market changes and embrace all of its customer needs with wide range of opportunities. Ingosstrakh installed Pure Storage FlashArray™ arrays to gain a competitive edge and facilitate growth.

**BUSINESS TRANSFORMATION**

Pure Storage ensured transparent migration of Ingosstrakh's main storage infrastructure, which was performed almost on-the-fly. The highly-balanced solution provides all of the capacity, performance, and required functionality to improve the business.

**REGION / COUNTRY**

Russia

**INDUSTRY**

Insurance

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Alexey Klepikov, CIO

**LARGE-SCALE INSURANCE BUSINESS USES PURE STORAGE TO EMBRACE DIGITAL TRANSFORMATION**

Ingosstrakh's business has long been data-centric, its IT projects are comprehensive challenges of practical digital transformation. The very core of the insurance market implies that a successful company that protects people from risks and quickly responds to changes is always shaping its customers' needs.

To increase its digital power, Ingosstrakh continually develops new products and launches new communication channels. The future of the insurance industry is in overall intelligence; thus, the company plans to implement new-generation telematics, sensors, and services to automate every case and service chain in human health, car insurance, and traveling.

"We already have a steadily growing share of customers who buy policies remotely 24/7," said Alexey Klepikov, CIO of Ingosstrakh. "And the next generation digital services bring us, the insurance company, to every customer: you do not need to physically visit offices to communicate with agents. The mobile insurance application knows everything you need and will do everything that is required."

The IT infrastructure must be absolutely reliable. The regulator's requirements (Bank of Russia) for insurance businesses are much more stringent from the point of view of online accessibility than similar requirements for banks. The operation of Ingosstrakh's IT systems — their reliability and availability of services — involves both a high level of redundancy and high availability of backup servers.

It is also critical that during each software release, system downtime should be minimal. In addition, since February 2019, the company makes reports in accordance with the international XBRL standard, and this is a very resource-intensive process. It implies a data-centric approach to reporting, based on the data model. This allows company to eliminate duplication and reduce the redundancy of indicators, as well as improve the transparency of information, reliability and quality of reporting.

"The main challenge for us, given the extent of improvements we make, is to not allow any decrease in the quality of services," said Klepikov. "Therefore, when choosing a system, partners, vendors, or specific equipment from the vendor line, we very carefully analyze all possible risks and benefits for our business. And then, we definitely take it for testing."

**COMPANY:**

Ingosstrakh  
[www.ingos.ru](http://www.ingos.ru)

**USE CASE:**

- Database – Oracle

**CHALLENGES:**

- The company needed a solution for storage availability, lifecycle extension, and maximum productivity.
- The solution needed to be cost-effective in order to grow profitability.
- Services needed to be high-quality at all times in order to meet ever-growing client needs.

**IT TRANSFORMATION:**

- The company developed twice the amount of software with no deterioration in quality.
- The storage solution compressed Oracle data by 3.5x, and offers 99.9999% availability.
- Data was successfully transferred to the new system, which provided new opportunities for reliable data storage and high availability at no extra cost.

“Pure Storage honestly fulfills all of its warranty obligations, including the guaranteed level of compression and deduplication, and this is really important.”

Alexey Klepikov, CIO

**CHOOSING PURE STORAGE FOR AN ADVANCED STORAGE SOLUTION**

Ingosstrakh's previous vendor began to experience serious financial difficulties. Its future was in doubt, increasing the company's risk. At the same time, performance losses during a vendor change would have been completely unacceptable.

Each long-term partnership needs thorough checking. Ingosstrakh's representatives visited the Pure Storage headquarters in California and were convinced that the vendor knows how to create and serve advanced data storage solutions.

“Choosing a data storage vendor is always a long-term story,” said Klepikov. “You don't change storage every year, so for at least three years we have to work on the new system. And taking into account the Pure Evergreen™ Storage program, which provides the possibility of a permanent upgrade, the choice of Pure Storage turns out to be a decent, strategic decision: we can regularly upgrade controllers, each time receiving even more functionality and speed, throughout the long lifecycle of the solution.”

In less than a month, Ingosstrakh was able to check Pure Storage functionality to ensure that the operating parameters of the system fully corresponded to those stated in the vendor's documentation. Among them, tests on redundancy of controllers were conducted, which showed no drop in performance.

“Pure Storage delivers functionality that enables a company to work more efficiently with their data. You do not need long periods of copying, duplication, or extra load — everything is done in one chain, and is displayed in high-quality analytical reports, understandable to a specialist of any level. Pure also offers a decent API to automate the access to any company information, and to manage the data on the array.”

**MEETING THE CHALLENGES OF RELIABILITY AND AVAILABILITY**

The goal was to make the company's storage more cost-effective to improve business profitability. Ingosstrakh needed all-in-one deduplication and compression functionality to reduce storage costs. The greater the compression ratio, the more data can be placed on one storage system, and, accordingly, reduce the cost of a storage unit. “The cost of storage on previous systems that we used was several times higher than on Pure Storage,” said Klepikov.

Thus, the challenge was to get a balanced solution that could provide all necessary capacity, high performance, and the required functionality. The company was looking for a modern storage solution with advanced functionality, and a main criteria of its evaluation were cost per terabyte and cost per IOPS (Input / Output Operations Per Second).

“Today, any business is based on storing and processing a certain amount of data,” explained Klepikov. “Storage strategy development is to reduce the cost of a terabyte and thus reduce associated costs. Among the fairly large storage systems that exist on the market, Pure Storage offers an enterprise level storage system that provides ‘six nines’ (99.9999%) of system reliability. The vendor also provides comprehensive functionality for deduplication and array compression.”

**PURE STORAGE PROVIDES HIGH PERFORMANCE AND HIGH RELIABILITY**

Pure Storage FlashArrays have become a real alternative, providing not only high performance but also high reliability that is important for Ingosstrakh's critical systems. Now, Ingosstrakh is developing twice the amount of software, and this growth has not led to a deterioration in quality. This is an excellent result, because the growing pile of software code always comes with an increase in the number of errors. Today, the system copes with it.

The company uses a FlashArray//M20 for the main business system, //M50 for the reporting system, and two //X70s for the rest of their needs, including VDI (Virtual Desktop Infrastructure). For the latter, another 300 TB of Pure Storage were purchased in late 2018.

Test environments are also deployed on Pure Storage. Ingosstrakh operates a continuously growing 60 TB database. After a year it will increase up to 70-80 TB, after a year and a half up to 90 TB minimum. Pure Storage can successfully handle this growth, and guarantees the ability to update the firmware or operating system without stopping access to data.

One of the main tasks was to improve the accessibility parameter when rolling out releases. Releases are done weekly, with at least 100 tasks, which requires maximum productivity for the pre-production environment. Within the scope of changes that occur in the company, it is critical to keep the high-quality level of services. In addition, it is very important to prevent service interruption when rolling out releases.

### THE BENEFITS OF CHOOSING PURE STORAGE

Pure Storage offers not just a flash array with a good controller and a minimal pack of software, but a whole data storage service that helps improve business and provides a simple, clear and reliable administration interface.

"We choose Pure Storage because it is a secure high-end storage system that provides 'six nines' of fault tolerance," said Klepikov. "And Pure offers additional functionality, included in the price, that we don't have to license at extra cost — as we would with offerings from other manufacturers. We don't have to think about what this or that piece of software does. Pure is a ready-made solution offering the rapid creation of snapshots and deduplication. And, according to our estimates, Pure's deduplication and compression ratio is high. Using this mechanism allows us to reduce the cost of data storage, and this reduction is dramatic in relation to using previous solutions."

Pure Storage guarantees data compression: for Ingosstrakh's Oracle data, the rate is 1:3.5; that is, data is compressed three and a half times. "Pure supplies additional equipment as part of its warranty, even if you need just 3 or 5 TB," said Klepikov. "When our reporting data was not compressed with a promised factor, Pure supplied the equipment free of charge in order to increase the capacity of our array."

Besides deduplication, Pure's rapid creation of snapshots, which is practically the cloning of several terabytes of information in a few seconds, also improved Ingosstrakh's processes. This made it possible to get instant access to duplicate data from another system without copying this data to another location. This mechanism allowed the company to use an array as a platform for conducting various tests without doubling the cost of their system and purchasing additional equipment — reducing storage costs further.

"All Pure Storage services are offered in a pack at the cost of a standard array," Klepikov explained. "Besides fully-packed functionality, Pure Storage solutions feature astonishing simplicity of the interface. You don't need to have special knowledge in order to understand the process."

Pure Storage's UX simplicity and comprehensive analytics help the company eliminate errors during data operations. Now, Ingosstrakh's professionals are provided with an easier and more convenient solution for servicing storage systems. Pure does not require the involvement of a third-party specialist. As a result, it shortens the service chain, boosts operation processes, cuts TCO, and removes additional control over the contractor on the part of the company.

"Pure Storage allows hardware and software upgrading on-the-fly, so we can easily switch to a more powerful configuration with no extra costs."

Alexey Klepikov, CIO

"With the Remote Intelligent Monitoring Service, Pure Storage provides centralized control of the entire storage system," said Klepikov. "In our practice, one of the devices caused suspicion in the centralized monitoring system. We did not see any deterioration in the SMART status on our side, but our colleagues from Pure suggested replacing the device with a new one. For the whole year, we had no downtime or other problems with the storage elements."

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With its advanced digital technologies, Pure Storage allows all devices to be connected to the monitoring system. "Thus, we have a common knowledge and awareness," said Klepikov. "Smart management technologies work for us and at the business application level: the application monitoring service automatically learns how corporate business systems work using a set of basic agents. This helps us improve SLA performance. By the way, this is one of the reasons why we chose Pure Storage: you cannot afford the availability of 'six nines' uptime from other manufacturers for the same budget."

From the cost-oriented point of view, according Klepikov, a Pure physical all-flash array is optimal at its price, if you take into account its quality, and the entire pack of indicators, including the number of input/output (IOPS) operations and the deduplication ratio.

"When you choose a storage system, you have to find a balance between them. The choice of a specific solution is always the sum of certain parameters, in terms of the cost of your initial purchase plus its additional capacity you need to buy. In our case, Pure Storage honestly fulfills all of its warranty obligations, including the guaranteed level of compression and deduplication, and this is really important."

### **INCREASING THE FUNCTIONALITY OF INSURANCE SERVICES**

With the new storage system, Ingosstrakh has acquired new horizons and advantages: guaranteed reliability, remote monitoring service for the entire data storage infrastructure, a very high deduplication ratio, and compact placement, which is also critical for saving space in the data center.

"We have successfully transferred our data to the new storage system, and gained new opportunities for reliable data storage and high availability," concluded Klepikov. "However, the sky is the limit. We plan to further improve the availability of our systems and our approaches to power management. Together with Pure Storage, we still have a good job to do. In this regard, the vendor is just great, helping us with advice on how best to use their systems. As a modern company, we are going to the cloud and will be happy to make this journey with Pure. Even better, Pure allows hardware and software upgrading on-the-fly, so we can easily switch to a more powerful configuration with no extra costs."



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