SIM NETWORKS

A DIVISION OF
Netversor

How to save on IT infrastructure using cloud solutions?

The experience and case studies of a German provider.

Let's go ▷

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Preface

According to CNBC, Apple and Amazon each lost **$800 billion** in market cap throughout the course of 2022; this loss is equivalent to the market cap of 10 PayPals.

How should other companies in the IT industry respond to this alarming signal and adapt to the crisis?

Saving money is a logical step for companies in an industry that is growing much slower than in previous years. **SIM-Networks has been building IT infrastructure for businesses for over 10 years and has often helped clients optimize spending**.

Our experience shows that cloud solutions are one of the most universal ways to save on infrastructure and make working with the company's IT systems easier at the same time.

How does the cloud solve the task of saving on IT infrastructure?
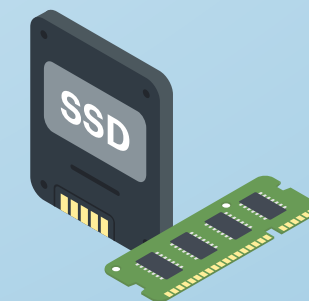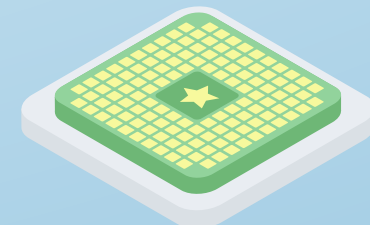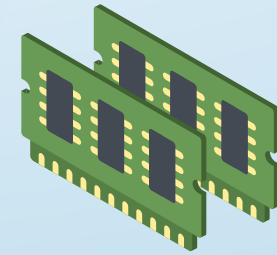
Technological and financial flexibility

Each server in the cloud is an element of a unified system. Resources are presented as a single pool, meaning the sum of the resources of each physical machine.

This kind of system is easy to scale: all you need to do is create a virtual machine with any configuration you need. **This will take only a few minutes.**

What is the financial benefit of clouds?

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Quick scaling allows you to quickly adapt the IT infrastructure to current tasks; the price changes depending on actual resource useage.

You can use resources when you need them and turn them off when the task is completed.

Here are a few cases where the cloud will help save money better than any other platform:

- you work with seasonal influxes of customers;
- another department has requested the development of new software;
- you need a test site for a new application;
- the number of client requests exceeded expectations;
- there are fewer tasks than last month.

The cloud will help you adapt to these conditions without having to buy hardware or to involve IT specialists.

Redundancy

Equipment failure is one of the biggest financial risks of local infrastructure.

To solve this problem, you need experts, spare hardware and time; the company does not generate any profits while the infrastructure is down.

To add to the problem, building redundance is one of the most expensive stages of creating an IT system. Each element of the system needs spare components: **spending on hardware will at least have to be doubled**.

Why is the cloud more reliable than local servers?

Why is the cloud more reliable than local servers?

In the cloud, server failure will not stop any processes. If this happens, the workload will be automatically transferred to another machine, which will not affect the work process.

Moreover, reliable clouds use redundancy on the architectural level. **2N+1** is an example of a redundancy formula in the cloud. 2N means that each element of the system (meaning N) has a parallel copy, and +1 is an additional backup device.

Redundancy is also organized within data centers. They use:

- backup cooling systems;
- alternative power sources;
- independent communication lines;
- availability zones, i.e. physically separated segments of the cloud.

Data Security

To protect data, you need a set of physical measures and software:

- ◆ VPN tunnels;
- ◆ DDoS protection;
- ◆ hardware-based encryption
- ◆ reliable locks;
- ◆ on-premise security, and more.

Creating these systems from scratch and maintaining them requires **significant investments**, which exceed the capabilities of many companies, especially small and medium-sized businesses.

Security issues cannot be ignored, otherwise, the money you save may end up in the pockets of malicious actors.

How to protect data without unnecessary spending?

Renting a cloud is a way to host data in an **environment where all the necessary security measures are already implemented**. The company does not need to spend resources on this task; the provider has already taken care of this.

Data in the cloud is distributed across different physical machines, and each server uses hardware-based drive encryption, making it much more difficult for hackers to gain access to them.

Regarding data centers, SIM-Networks stores equipment in professional data centers with electronic locks, differentiated levels of access to equipment, alarm systems, and other protection measures.

Additional services

Cloud infrastructure also comes with additional modules and services such as:

- user identification systems;
- load balancing tools;
- backup systems;
- VPN tunnels, and more.

In the case of local infrastructure, you would have to find, buy and implement these tools yourself. Even if you use free software, companies need IT specialists to integrate it into a single system.

What functionality does the cloud offer by default?

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SIM-Networks cloud is built on the modular **OpenStack** platform, and everything you need for efficient work is part of the basic functionality included in the rental price.

All you need to create a VPN tunnel, configure user access or install a software image from the library is to use a **single control panel**.

Setting up data backups of the most important stages of building an IT infrastructure. In the cloud, you set the frequency of the backup and select the files you need to copy; the backups will be created and stored automatically.

Technical support

Supporting and maintaining hardware is a constant expense when it comes to local hosting. This includes:

- renting the premises;
- paying electricity bills;
- buying and replacing components;
- the salaries and the time of your IT staff, and more.

Moreover, the company's employees will have to diagnose and fix any malfunctions themselves. Every company's local infrastructure is unique, so in many cases, you can rely only on your own resources.

What kind of support does a client in the cloud get?

What kind of support does a client in the cloud get?

Everything related to the stability of hardware in the cloud and the service as a whole is the **provider's responsibility**.

A company using the cloud directs the resources of its IT staff towards business goals instead of constantly maintaining the technological platform.

Every client in the cloud gets the support of experts who know the specifics of the platform and have launched many projects using it as a base. Moreover, one of the main principles of the cloud is hardware standardization. This approach minimizes the time spent on maintenance or troubleshooting.

How do companies use cloud servers?

Migration to the cloud, configuring VPN and cloud backups

At the start of the project, the client had virtual Windows servers. They had already experienced a system crash before; resolving it was difficult and time-consuming. The client did not have an up-to-date backup, so they had to redeploy the hypervisor, reinstall the OS, replicate the directory tree and the file system, the roles for each user, etc. That is why backup organization was one of the company's main tasks.

SOLUTION

SIM-Networks experts migrated the client's virtual servers to the cloud. In the cloud, we set up two-factor authentication, OS logging, and deployed a virtual router for VPN IPSec tunnels. These tunnels provided secure connectivity for the client's employees.

The system was connected to our automatic backup service, BaaS. The solution helped the company save money by allowing them to create backups of individual drives. The company also received a higher level of data protection: backups are stored both locally and in a remote location. If such a project were implemented based on traditional server infrastructure, it would require significant investments.

IT resource audit & migration to a cloud server

Before the start of the project, the client had been using an infrastructure consisting of several virtualized servers. The company's management decided to move IT resources to a European data center to improve security.

The client chose the cloud to preserve maximal flexibility in infrastructure management. The project involved not only creating the infrastructure but also a complete data migration, which was carried out by SIM-Networks specialists.

SOLUTION

Our experts conducted an audit of the infrastructure before migrating the data. During the process, we found resources that were underutilized or being used inefficiently. These resources were optimized, which helped reduce spending for the client.

The client was satisfied with the results – the platform met the requirements towards security and flexibility in infrastructure management. All work on creating infrastructure and data migration was fully carried out by our experts – the company's employees immediately started working after the project was completed.

What does SIM-Networks offer?

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SIM-Networks can provide a **ready-made cloud server configuration out-of-the-box**, in which case your employees will take care of administration.

If a company needs an **individual cloud-based solution**, administration services, or help with data migration, the SIM-Networks team will take care of these tasks.

We communicate with clients and provide consultations from the earliest stages of the project and throughout the entire cycle of cooperation. This is necessary to ensure that the technological platform accurately meets real business needs and the company's long-term vision.

Our experience shows that **choosing a cloud provider is a strategic business decision** along with choosing a platform. By signing a contract with a service provider, you are choosing a partner who will be responsible for the IT foundation of the company; **we belive this is worth the investment**.

Ready to get on board?

Contact us, we will give all the necessary information

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