

Case Study

CI/CD and transition to the cloud for a medical app

Transfer a medical services application to the cloud and automate, simplify the files conversion for the further data analysis process.

KUBERNETES

TERRAFORM

ANSIBLE

NGINX

GCP

JENKINS



Case Info



Location:

Ukraine



Industry:

Managed Services Provider



Partnership period:

2005 - ongoing



Team size:

2 - 4 people



Team location:

Kharkiv, Ukraine



Services:

Cloud architecture, Cloud infrastructure management, CI/CD



Expertise delivered:

GCP cloud administration, DevOps services, Cloud infrastructure management



Technology stack:

GCP, Kubernetes, Nginx, Jenkins, Ansible, Terraform



Client's goals

The main goal of the project was to **transfer** a medical services **application to the cloud** and to **automate and simplify** the files conversion for **the further data analysis process**. The problems were as follows:

- Complex app deployment and configuration
- Low app performance
- Lengthy file conversion



The **cloud infrastructure deployment** or transition to another AWS region now takes around **1 hour** only



The file conversion process takes as little as **6-8 hours**



The data processing became **3 times shorter**

Project requirements

The customer wanted IT Svit to perform the following services:

- The app deployment must be made **quicker** and **error-proof through CI/CD**
- The app must be able to **receive and store .raw files** from external sources
- **.raw files** must be converted **into .zip files** through a complex process
- There must be a **storage** with folders for the ready files

Project results

We provided the following solutions:

- **Building a CI/CD pipeline** using Jenkins, allowing us to automate and drastically **shorten** the process of **app deployment and configuration**
- Enabling **several operators** to work simultaneously during app deployment, instead of waiting for a single operator to build the Docker image
- Automation of files conversion process to **speed up the app performance**
- Terraform manifests for rolling out the **required storage infrastructure** for app operations



Challenges resolved

After analyzing the project requirements and existing customer's infrastructure, **IT Svit made the following suggestions:**

- Use **Google Cloud** provider
- Use **Jenkins** pipelines for the files conversion
- Apply **Ansible** to install Jenkins, Docker, Java, Nginx, pip
- Apply **Terraform** manifests to manage the future infrastructure in the cloud and to create the bucket in Google Cloud Storage for files
- Use **Nginx** as a proxy server

Due to such structure and workflow, all the files are converted inside Jenkins pipelines and automatically stored in Google Cloud storage. There is **no need for manual control** of the process, as the output of one pipeline becomes the input for another pipeline. There will also be separate folders in the bucket for ready files from each operation, so that **any stage of data processing can be used as an input for other operations.**



This solution is another demonstration of our expertise with cloud infrastructure design and management. We helped the customer to automate the app delivery process, as well as to optimize the app performance. This resulted in significant reduction of the time and resources needed for data processing, as well as simplifying the setup process.

Vladimir Fedak,
CEO at IT Svit

**We are ready to make your project
our next successful case!**

CONTACT US



About IT Svit

For more than **12** years IT Svit helps the companies worldwide innovate and overcome their challenges. We have completed more than **600** projects, delivered successful projects for **6** Fortune 500 companies, helped **16** startups secure the investment and develop awesome MVPs. Our team of **50+** specialists provides services that earn **4.9** out of 5 customer satisfaction on [Clutch.co](https://clutch.co).

IT Svit specializes in DevOps services, Big Data technology, Machine Learning, bespoke Blockchain platforms, full-cycle services for startups, web development and QA.

