![Apexon logo]

SUCCESS STORY HEALTHCARE

SMOOTH CLOUD MIGRATION SAVES BIG COSTS FOR GLOBAL RESEARCH & CONSULTING FIRM

For the past 20 years, ProPharma Group (ProPharma) has improved the health and wellness of patients by providing advice and expertise that empowers biotech, med device, and pharmaceutical organizations of all sizes to confidently advance scientific breakthroughs and introduce new therapies. As the world's largest RCO (Research Consulting Organization), ProPharma partners with its clients through an advise-build-operate model across the complete product lifecycle.

With deep domain expertise in regulatory sciences, clinical research solutions, quality and compliance, pharmacovigilance, medical information, and R&D technology, ProPharma offers an end-to-end suite of fully customizable consulting solutions that de-risk and accelerate our partners' most high-profile drug and device programs.

As ProPharma has grown, it has continued to evolve and invest in new ways to make the business more agile and efficient. One of those investments has been AWS cloud infrastructure – with the goal of enabling increased innovation and faster cycle time, while also reducing costs and security risks.
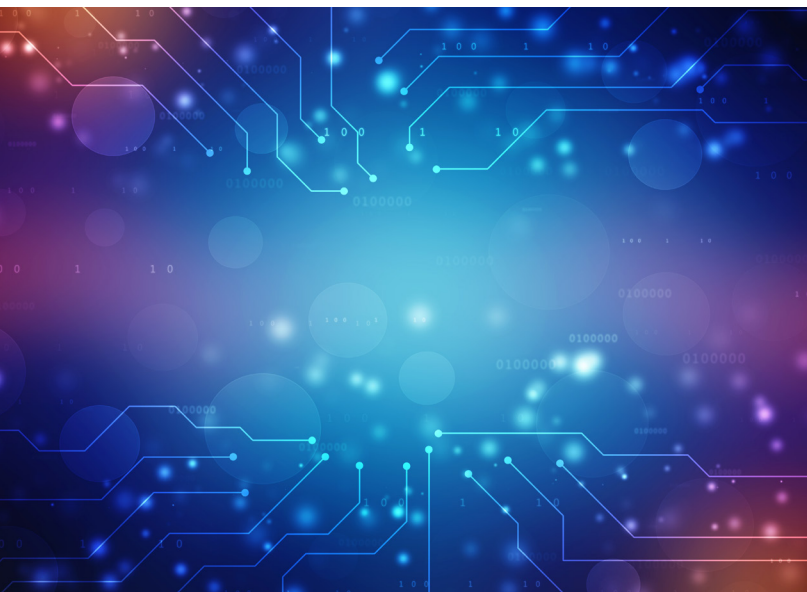
propharma

🌐 **2,500+ professionals worldwide**

🏅 **1,160 specialized degrees**

👥 **1,000 active biotech, pharma, medical device and diagnostic clients**

In late 2021, coming out of the pandemic, ProPharma was consolidating its physical offices to adjust to the increased level of hybrid work situations at the company. As part of this plan, it intended to migrate its on-prem systems to the AWS cloud around the same time.

ProPharma has thousands of users accessing its applications, and they could not afford any downtime during the migration. To help assure a smooth transition, they engaged Apexon. ProPharma's team valued Apexon's extensive experience with cloud infrastructure, and AWS in particular. They felt Apexon could help them design the right technical approach and migration strategy to minimize disruption to their business and ensure long term success on the AWS platform.

THE CUSTOMER JOURNEY

The first step in the project was for Apexon and ProPharma to jointly conduct a detailed value assessment to highlight how the transition from on-prem infrastructure to AWS cloud would reduce the company's operational and maintenance costs.

With the value clearly established, Apexon worked closely with the ProPharma team to help plan and migrate the on-prem infrastructure of ProPharma to the AWS cloud. The first phase of the project took 5 months to complete since its inception. Detailed discovery and assessment, mobilization, migration execution, and the steady state transition were planned and executed successfully within this time frame. Apexon also helped ProPharma plan for auctioning and safely disposing of its physical infrastructure.

Cloud Platform Selection

AWS was the obvious choice for ProPharma given its existing relationship with AWS and the platform's architectural principles, built-in best practices, and design.

Discovery & Assessment

Apexon worked with the ProPharma team to ensure a complete understanding of its technology environment. This helped in the development of a dependency analysis, capacity plan, and migration strategy.

Mobilization

The AWS account structure, landing zone architecture, VPC design, on-prem connectivity, and migration blueprint were designed and implemented during this phase.

Migration Execution

The migration waves were planned and executed based on application dependencies. AWS Cloud Endure was used as a tool to lift and shift the on-premises servers and DMS for migrating the data. The detailed cut-over plan was prepared and discussed with all stakeholders for seamless production migration.

Post Migration

Operational readiness and ongoing support were key to a successful migration. The joint Apexon/ProPharma migration team implemented automation on monitoring, backup, patching, log file management, and the operation runbook. The joint team also implemented the required controls to ensure security posture and cost optimization.

"Our strength with Apexon is in the team relationship. They provide a lot of unique expertise where we need it. But more importantly, they've become part of the team here at ProPharma with the same level of commitment to the success of the project that we have. We really value that about them."

Joe Donnici
Chief Information Officer, ProPharma Group

TOGETHER, APEXON & THE PROPHARMA TEAM DEVELOPED A MIGRATION STRATEGY

As ProPharma prepared to consolidate its physical locations and move its compute workloads to the AWS cloud, it wanted to ensure a smooth and efficient migration and minimal disruption to the business and users. Once in place, ProPharma's team also needed strong application security and an effective and intuitive management capability.

Together, Apexon and the ProPharma team developed a migration strategy and deployed the appropriate resources to design and architect the AWS landing zone, and then migrate ProPharma's on-prem servers to the AWS cloud.

MIGRATION STRATEGY

Deep dive into project requirements concerning migration to support strategy formulation

The migration strategy was formulated jointly based on a detailed assessment of ProPharma's requirements. This involved discussions on:

Approach to connect on-prem architecture to the cloud

Priorities defined for migrating servers based on their types

Types of databases to be migrated and their users

Need for scalability or load balancing of infrastructure

Selection between lift and shift and cloud-native migration

Active information on servers like IPs, subnets, and security groups

Approach for monitoring cloud migration activities

Data encryption for the security of information

Implementation of server security with firewalls for internet-facing machines

SERVER MIGRATION TO CLOUD

Cloud migration managed by AWS CloudEndure that allowed
movement of servers in test mode before cloud takeover

**Apexon helped ProPharma set up a new network from the ground up and added
cloud migration services. AWS CloudEndure was used to migrate servers to
the cloud as it negated the need for ProPharma to change servers.**

The steps involved include:

Creating account structure and
landing zone implementation based
on the proposed architecture

Setting-up VPN connection
between on-prem and cloud

Setting up CloudEndure for the
lift and shift migration

Installing CloudEndure
agent on-prem and
synching with the project

Changing the blueprint as
per migration needs on
CloudEndure

Moving servers to AWS
in the test mode

Migrating databases to AWS
using cloud-native migration
tools, ensuring the performance
and scalability of AWS

Setting up and configuring
cloud monitoring, logging,
and notification functionality
using CloudWatch, CloudTrail,
Security Hub, Guard Duty, AWS
Audit Manager, and SNS

Cutting over and
disconnecting
on-prem servers

Performing operational readiness review
and preparing runbook and process
documents for steady state support

SERVICES USED

Amazon EC2

AWS Auto Scaling

Amazon RDS

Amazon S3

Amazon Route 53

Amazon CloudFront

AWS WAF

Amazon CloudWatch

AWS CloudTrail

AWS Certificate Manager

AWS SecurityHub

AWS GuardDuty

AWS KMS

AWS Organisations

AWS Inspector

ELB

AWS SNS

CloudEndure

KEY OUTCOMES

Together, the joint Apexon/ProPharma team produced several important results:

Disaster Recovery Provision

Disaster recovery set-up for some servers

High Availability

Cloud-enabled high availability of servers

Cost Optimization

The cost of server maintenance was reduced as the physical infrastructure was not needed to be maintained

Enhanced Security

Data and infrastructure protection mechanisms like security group, IAM (identity and access management), network access control, and CloudTrail enhanced security posture

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