Apexon

SUCCESS STORE RETAIL

RE-ARCHITECTED ECOMMERCE PLATFORM DRIVES RECORD SALES FOR HEALTHCARE RETAILER

Apexon improves customer sales and satisfaction with seamless omni-channel experience; streamlines software development and IT services for growing business

This leading nutritional supplement retailer is a global, omnichannel specialty retailer and wellness lifestyle company with the mission of providing customers with the most trusted products, guidance, and services to support them on their journeys of lifelong wellness.

The client on helping people become their best selves by offering a comprehensive assortment of vitamins, minerals, sports nutrition, herbs, superfoods, and more.

Apexon engaged with the client to modernize the company's cloud infrastructure to improve its ability to support its Kubernetes-based software development, IT services and business operations. Apexon helped select a new cloud infrastructure solution and managed a seamless migration of its Kubernetes environment to the new platform.

KEY OUTCOMES

RECORD-BREAKING CYBER MONDAY SALES

50% YEAR-OVER-YEAR INCREASE IN SALES ON EVENTS LIKE BLACK FRIDAY

ELEVATED CUSTOMER SATISFACTION AND LOYALTY THROUGH AN ENHANCED OMNICHANNEL CX

THE CHALLENGE

OPTIMIZING CLOUD INFRASTRUCTURE AND REDUCING COMPLEXITY INVOLVED WITH KUBERNETES

As the company had grown, it had embraced cloud and containers in its approach to infrastructure and software development. Its container solution of choice, Kubernetes, offered the organization a number of advantages by making its applications and workloads more portable between different machines and environments, enabling the rapid scaling of containerized applications across multiple servers or multiple clusters, and supporting best practices such as CI/CD and DevOps.

As its use of Kubernetes increased though, its cloud platform faced challenges to support it on multiple levels, e.g.:

NETWORKING COMPLEXITY

Kubernetes requires a well-designed and well-managed network infrastructure to function effectively. This was challenging due to the complexity of network configurations, including load balancing, firewalls, and virtual private clouds (VPCs).

CLUSTER SETUP AND CONFIGURATION

Setting up a Kubernetes cluster on its existing cloud platform required a deep understanding of its networking and security features, as well as Kubernetes itself. This was a challenge for the client which did not have extensive experience in these areas.

SCALING AND RESOURCE MANAGEMENT

Kubernetes makes it easy to scale applications up or down based on demand. However, managing and optimizing resources, such as CPU and memory, was challenging with complex workloads.

AVAILABILITY AND UPTIME

Maintaining high availability and uptime for Kubernetes clusters on its existing cloud platform required careful planning and configuration.

MONITORING AND LOGGING

Monitoring clusters required a robust logging and monitoring infrastructure. This included setting up logging and monitoring tools that could provide visibility into the health and performance of the Kubernetes cluster and its applications.

SECURITY AND COMPLIANCE

Its existing cloud platform offered a wide range of security and compliance features, but configuring network policies, access controls, and monitoring for Kubernetes was problematic.

UPGRADES AND MAINTENANCE

Upgrading Kubernetes required ensuring that all components, such as the Kubernetes control plane and worker nodes, were upgraded in a timely and coordinated manner to avoid downtime or other issues.

With all these challenges, the client engaged with Apexon to help chart a path forward and select a new cloud platform. It had experience working with Apexon in other areas of its business, and it valued Apexon's expertise in cloud, migration and Kubernetes. The client felt that this would help minimize the risk and complexity associated with migrating its Kubernetes clusters to a new environment, while also ensuring a smooth and efficient transition.

THE SOLUTION

AWS CLOUD INFRASTRUCTURE PLATFORM OPTIMIZED FOR CONTAINER-BASED ENVIRONMENTS

Apexon started by assessing the client's current Kubernetes deployment to understand the specific process and performance bottlenecks and identify the right cloud infrastructure solution. Together, the decision was made to go with AWS, based on several reasons:

AWS's vast global network of data centers could provide better network performance and lower latency. It also offers a more extensive range of services and configurations, allowing the client to tailor its infrastructure to its specific needs. Lastly, AWS offers a range of cost optimization tools, such as AWS Cost Explorer and AWS Budgets, to help manage and optimize costs for the client's Kubernetes clusters.

Equally important, AWS addressed the primary issues the client was having with its existing cloud platform:

NETWORKING COMPLEXITY

AWS offers a more straightforward and intuitive networking configuration to help simplify the setup and management of Kubernetes clusters. AWS' range of network services, such as VPCs, load balancing, and security groups, are also easier to configure than on its existing cloud platform.

CLUSTER SETUP AND CONFIGURATION

AWS provides a range of managed Kubernetes services, such as Amazon EKS and EKS Anywhere, which simplify the setup and management of Kubernetes clusters. This includes a wide range of documentation, tutorials, and best practices for deploying and managing Kubernetes on AWS.

SCALING AND RESOURCE MANAGEMENT

AWS offers a wide range of scalable computing and storage services, such as EC2 and EBS, to help organizations manage and optimize resources for Kubernetes clusters.

AVAILABILITY AND UPTIME

AWS's high availability and fault-tolerant services, such as multi-AZ deployments, would help ensure the availability and uptime of Kubernetes clusters.

SECURITY AND COMPLIANCE

AWS provides a range of security features, such as encryption, access control, and regulatory compliance, which would help the client configure and manage security for its Kubernetes clusters.

MONITORING AND LOGGING

AWS offers a wide range of monitoring and logging tools, such as CloudWatch and CloudTrail, that provide visibility into the health, security and performance of Kubernetes clusters and their applications.

UPGRADES AND MAINTENANCE

AWS provides a range of tools and services, such as AWS Systems Manager and AWS OpsWorks, that can help organizations manage upgrades and maintenance for Kubernetes clusters.

Apexon assisted the client on multiple aspects of the migration:

Migration Planning

Apexon played a pivotal role in collaboratively planning the migration, addressing the client's unique business requirements. The team anticipated potential challenges and formulated a comprehensive strategy to ensure a seamless transition.

Migration Execution

Apexon actively contributed to the successful execution of the migration by configuring the AWS environment and facilitating the initial deployment of Kubernetes clusters. Their collaboration ensured a smooth transition for the client's applications and data.

Optimization and Support

Apexon made substantial contributions to optimization and support, kickstarting AWS monitoring using CloudWatch. Additionally, TVS successfully handled the application monitoring setup, showcasing a collaborative approach that catered to diverse aspects of the project.

Architecture and Design

Apexon took the lead in designing an advanced architecture for the client’s Kubernetes deployment on AWS. This involved optimizing the use of AWS's managed Kubernetes services and implementing best practices for enhanced security, scalability, and availability.

Testing and Validation

Apexon played a critical role in the testing and validation phase to guarantee the seamless functionality and performance of the migrated Kubernetes clusters. Their meticulous testing, while initially focusing on a specific application, laid a robust foundation for the subsequent migration of additional applications.

The AWS Well-Architected Framework Review occurred after Apexon's phase, highlighting the foundational contributions made by Apexon. Their involvement ensured that the migrated cluster adhered to AWS standards, setting the stage for a successful post-migration evaluation.

KEY OUTCOMES

- IMPROVED PERFORMANCE
- INCREASED SECURITY
- BETTER OPERATIONAL EFFICIENCY
- COMPLIANCE AND GOVERNANCE
- IMPROVED USER EXPERIENCE
- FLEXIBILITY AND SCALABILITY
- IMPROVED DISASTER RECOVERY AND BUSINESS CONTINUITY
- BETTER COLLABORATION AND AGILITY

Apexon

Apexon is a pure-play digital engineering services firm focused on helping companies accelerate their digital initiatives from strategy and planning through execution. We leverage deep technical expertise, Agile methodologies and data-driven intelligence to modernize systems of engagement and simplify human/tech interaction.

We deliver custom solutions that meet customers' technology needs wherever they are in their digital lifecycle. Backed by Goldman Sachs and Everstone Capital, Apexon works with both large enterprises and emerging innovators — putting digital to work to enable new products and business models, engage with customers in new ways, and create sustainable competitive differentiation.

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FEELING SOCIAL?