Customer Story

AllCloud | pango

The Journey to the Cloud

Customer: Pango | **Slogan:** "Pay and Go" | **Location:** Israel
Product: Comprehensive mobile app for all road, driver and car services
Serves: 2 million customers

Established in 2007, Pango is a mobile hub for Israeli drivers that provides an up-to-date approach to the on-road experience. The Pango app offers a complete suite of services for car, road and driver, including on-street parking payments, parking garage payments, toll road subscription & payments, tow truck services, insurance services, annual car inspection services, and more. The app is available in Hebrew, Arabic and English, and is used by the majority of drivers in Israel.

Recently, Pango decided it was time to make the journey to the cloud. Its current on-premises infrastructure could provide only moderate scalability. Storage space was too small and running out - fast. The lack of a suitable disaster recovery solution was also a major issue. Pango was looking for a cloud-based solution that could provide availability, durability and scalability with optimal IT efficiency, without the limitations of local servers and hardware, and without the cumbersome investment required for the ongoing management and development of those resources.

From on-prem to AWS with AllCloud

Once they decided to move to the cloud, the Pango team set out to find the right partner to manage the move from end-to-end. They found that partner in AllCloud.

The first stage was for AllCloud to gain a comprehensive understanding of Pango's current architecture, pain points, challenges, and goals. To that end, AllCloud conducted a Cloud Architecture Workshop with Pango developers, a deep-dive session that culminated in the provision of a design outline, scope of work, cloud cost estimation, and everything Pango needs to take the first step. In consultation with Pango, the AllCloud team concluded that AWS (Amazon Web Services) was the best-fit cloud platform for their needs. The decision was based on AWS' vast and comprehensive array of services that Pango could leverage, starting today and growing into the future. As an AWS Premier Consulting Partner and audited AWS Managed Service Provider (MSP) Partner, AllCloud was well-positioned to guide Pango throughout the migration process to AWS.

Pango on the go...to the cloud

The initial plan was to move Pango to the cloud in a "lift-and-shift" operation, moving everything over to the cloud "as is", in order to get up and running on cloud as soon as possible, and avoiding any downtime for customers. However, it soon became clear that this was not the optimal choice. Lift-and-shift would not provide the opportunity to leverage the rich benefits of AWS from the get go, while also not delivering an optimal redundancy solution. In true agile style, AllCloud adjusted the tailored architecture blueprint away from lift-and-shift, and designed a phased implementation, beginning with deploying Pango's redesigned architecture in two AWS Availability Zones for redundancy. This initial deployment was conducted as per AWS practice for security, reliability, performance and cost, which is the gold standard for AllCloud when designing a cloud migration.

Climbing the Beanstalk to the golden egg

Another benefit of the AWS cloud environment is that it provides a platform for Pango's in-house developers to upload their code directly, without requiring expertise in managing or configuring infrastructure. The AllCloud team utilized AWS Elastic Beanstalk for app deployment and orchestration. Today, the Pango app runs on approximately 10 Beanstalk environments.

With AllCloud handling the planning and development of the Beanstalk environments, the Pango development team can focus their energies on creating new features, writing code and growing the app's capabilities. The Pango dev team works closely and constantly with its dedicated AllCloud consulting team, who guide them with best practices about how to efficiently build and expand an app that is cloud native.

Facing the HA Giant

An important challenge for Pango and AllCloud to overcome was high availability. The move from on-premises environment to the cloud presented the perfect opportunity for Pango to develop a high availability solution to ensure their app's performance and provide automatic recovery.

Today, the Pango app operates from multi-availability zones working together to support the app's operations. On AWS, the app is deployed in zones via duplicate infrastructures that are updated simultaneously and in real time. These seamless clones provide a durable and efficient redundancy solution, enabling high availability by design and nearly 100% uptime.

From monolith to microservices

The migration to the cloud supported a key strategic move for Pango - breaking out of the traditional monolith infrastructure to a microservices structure.

In moving to an orchestration platform, the AllCloud team implemented docker containers with Amazon's EKS (Elastic Container Service for Kubernetes). EKS places parts of the infrastructure in separate "containers". During development and deployment of tests, features and updates, the dev team can work in isolated containers, using only specific parts of the system, rather than tying in the whole system to the effort.

In the event of downtime caused by bugs, issues and updates, only the container is affected, rather than the whole app.
Along with EKS, the AllCloud team implemented Amazon RDS, a managed Relational Database Service, for Pango's microservices. The use of DaaS (Database-as-a-Service) enables the microservices to directly access their data, reducing the usual operational time and maintenance efforts required for database management.

In the long term, microservices ensure robustness and agility for Pango, enabling much faster development while reducing risk and lowering the impact on users of the Pango app.

The future is found in the cloud

Following AllCloud's successful migration of the Pango app to the cloud, the AllCloud team continues to provide ongoing managed services, keeping its finger on the Pango pulse, working on new developments and constantly improving the UX for both Pango developers and end users of the app.

The CI/CD (continuous integration, continuous delivery) practice enabled by AWS ensures that Pango in the cloud is a flexible, automated solution that minimizes human error and drives efficiency. Before moving to the cloud, the Pango dev team would release perhaps one new version a month to production. Now, they can update the system once a week or even a few times a day, automatically and in the early hours of the morning when usage is low. The result is efficient, frequent deployments that enable Pango to innovate faster without disrupting its customer experience. Pango's cloud infrastructure also includes a staging area where the dev team can experiment and test new ideas without affecting system deployments, igniting innovation and advancement.

In addition to the vast, almost infinite development possibilities opened up by the cloud, AllCloud's FinOps team is constantly working to optimize ongoing cloud costs and resources, ensuring that Pango's AWS infrastructure is not just scalable and durable, but ROI effective.