Panasonic's Migration to AWS for Accelerating Growth & Optimised Performance

Panasonic is a popular global brand that provides a wide range of solutions for spaces from home and offices to stores and other large commercial facilities. The company based in Japan specialises in appliances for multiple uses including life solutions in terms of electrical construction and housing materials, IoT connected solutions for B2B, innovative devices and appliances for the auto industry and a variety of products and services for the industrial sector. The company with a motto of "A Better Life, A Better World," is constantly innovating and creating breakthrough technology and is a leader in R&D for Technology and Design.

Panasonic with nearly 300,000 employees, and a group of 582 businesses believes in changing the lives of people around the world through advanced technology and sustainable solutions. As a world-renowned brand, the company must persistently leverage new and upcoming technology as well as industry practices to retain the competitive edge. As their offerings face both B2B and B2C sectors, they are required to ensure the following:

- Security as a trusted brand in both B2B and B2C
- Optimized performance for superior quality and experience
- High availability and scalability to keep pace with growth
- Meet customer expectations with new features and changes
- Be prepared for further global expansion

At the point Umbrella Infocare and AWS engaged with Panasonic, they were looking for an ideal cloud solution that would help their IT infrastructure and applications meet these needs. They were extremely particular about finding the right tech partner to achieve their objectives and the complex nature of their requirement compelled them to insist on a proof of concept. They were sceptical about change and were unsure how their concerns would be addressed. While multiple groups within Panasonic had different tech requirements that Umbrella sifted through and identified apps that were cloud ready, the Mobility group's challenges would positively benefit from an Amazon Web Services (AWS) solution. AWS clearly defined the advantages their solutions could bring for Panasonic offering a persuasive case for consideration.

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They had an Artificial Intelligence (AI) aggregated platform and a built-in app for Panasonic mobile phones that offers recommendations based on user behaviour. To establish that Umbrella Infocare had the capabilities they needed, a Pilot was executed that migrated a couple of sensitive applications to the cloud. The objective of the Pilot was to conduct a Cloud Migration Readiness (MRA) for more than 20 Panasonic applications; test migration of two applications and create a road map for migration with suggestions on prioritisation and categorisation of applications for cloud migration.

Challenge faced by Panasonic's Mobility Group with Two Apps – The Pilot

Panasonic Challenges
• Limited scalability & availability
• Need for better performance to achieve superior service
• Ability to add new features and changes easily was missing
• Wanted to ensure security to customers as a trusted brand

Panasonic's AI application is programmed to analyse user behaviour based on time and location. The app offers suggestions to help customers use the device efficiently to exploit its features for better efficiency. Another mobile app is a one-stop shop for user's needs such as booking a cab, real time updates on weather, music on demand and so on.

Both apps were functioning on the same environment which was limiting their scalability and availability to a considerable extent. Umbrella analysed the existing setup and suggested decoupling the apps on the AWS environment. This would enable Panasonic to ensure higher availability and scalability and fix performance issues. As the architecture for both apps were different, Umbrella took the lift and shift approach for the first app and refactoring for the second.

Panasonic insisted on zero downtime to migrate the apps to AWS asking for detailed planning and testing scenarios. The migration also involved coordination of different Panasonic teams requiring very efficient and smooth program management.

As a result of the Pilot, Panasonic realised the benefits of AWS Cloud features for ease of setup, monitoring and manageability, efficacy of security, automation, backup and other critical functions.

Umbrella's Solution for Panasonic

Umbrella's AWS Solution
• High availability & scalability through automation, DevOps & containerization
• Replatforming & restructuring of apps on AWS to enhance performance
• AWS migration for easily adding new features
• Managed services for improved monitoring, management and security

After the Pilot, Panasonic and Umbrella began focusing on the other applications that were AWS ready. Umbrella identified three applications for migration – one that manages a network of electronic displays for messages; another, which is a visual communication system; and an IoT application. It was clear that the functioning of all these apps would distinctly gain from AWS migration. Umbrella came up with a phased approach for migrating these three apps to AWS.

Panasonic had multiple environments for these applications such as Dev, UAT, Staging, PROD and a varied development stack including Linux operating systems with different flavours of databases including MySQL, MongoDB and MS SQL.

Technology & Approach Used

Based on the learnings from the Pilot, Umbrella proposed migration using a combination of re-platforming and refactoring for the three apps. The use of RDS to host DB, autoscaling and ALB were recommended for migrating one of the apps. AWS managed services such as S3, CloudFront, Lambda, API Gateway, RDS and SES were used for refactoring. Some apps were migrated from a server-based environment using multiple AWS Services including AWS DynamoDB, ElastiCache, ElasticSearch, RDS Aurora and AWS CodeDeploy.

Result

- Acceleration in performance of migrated apps leading to superior customer experience
  » Infrastructure complexity was considerably made simpler

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- Advanced security and compliance and superior quality and delivery through managed services
    - » Increased detection and remediation of potential security breaches
    - » Umbrella's solutions coupled with AWS features shifted Panasonic from a reactive stance on security to continuous compliance

- High availability and zero downtime
    - » While the Umbrella-AWS design promises high availability, automation further ensures that there is very little downtime in the event of a failure thereby facilitating maximum uptime

- Ability to innovate faster, introduce new features and go to market faster accelerating growth

- DevOps and containerization for more agility, scalability and ease of management

Umbrella was able to effectively work with Panasonic to overcome their reluctance and challenges through a comprehensive testing and Pilot approach and help them gain cost and resource saving benefits for multiple services including core apps like IoT that influenced productivity in internal, customer facing and B2B processes.