



INDUSTRY: RETAIL



WINDOWS
MIGRATION ON
AWS



JUBILANT FOODWORKS RETIRED TECHNICAL DEBT AND INCREASED FOCUS ON INNOVATING FOR CUSTOMERS WITH STRONG UPTIME, HIGH AVAILABILITY AND IMPROVED PERFORMANCE

Start Date – 4th December 2018 **Status** – In Progress



CLIENT OVERVIEW

Jubilant FoodWorks Limited is a Jubilant Bhartia Group Company. The company was incorporated in 1995 and initiated operations in 1996. It got listed on the Indian bourses in February 2010. The company & its subsidiary operates Domino's Pizza brand with the exclusive rights for India, Nepal, Bangladesh and Sri Lanka. It is India's largest and fastest growing food service company, with over 1200 Domino's Pizza restaurants across 271 cities. The company launched Dunkin' Donuts in India in April 2012 in Delhi. It operates over 30+ Dunkin' Donuts restaurants in India. The company is now well poised to address two distinct non-competing segments of the Food Service Industry in India, namely the home delivery of pizza's market and the all-day part food and beverage market.



CUSTOMER OBJECTIVES

- JFL needed a scalable and available solution that adapts to the size and seasonality of their business. When demand for their products/ services took off—predictably or unpredictably—they had to be prepared to handle business demands. Plus, they wanted to explore the advantages of cloud economics by paying only for the capacity they used.
- The business drivers for migrating to cloud from an on-premise setup were
 - Reducing Capital Expenditure (CapEx): JFL with its on-premise IT infrastructure setup needed to procure hardware based on its growing requirements. This included compute, storage, and networking devices. Moreover, organizations needed to retire and refresh hardware as soon as the new hardware is available to take advantage of improved performance and efficiency, which is quite costly.
 - Business Agility: JFL's existing infrastructure was prone to downtime and scaling the infrastructure was a huge challenge.
 - Resource Housekeeping: JFL was finding it difficult to keep track of existing on-premises resources so they decided to migrate it to the cloud, where at the time of migration multiple non-critical workloads can be discarded.
 - Expiring Annual Maintenance Contract: JFL's server's AMC was coming to an end and no vendor was reluctant to renew the AMC.



LANDSCAPE

- The current infrastructure included 60+ Applications hosted on-premises, these applications included Business Critical Applications like SAP and OLO, an online restaurant ordering application.
- Approximately 80% of the Infrastructure was Windows: 2003, 2008 and 2012.
- **45+** TB of the dataset included **1400+** Database instances (MS SQL). Creating such a complex dependency map of all these databases with the application was a big challenge.
- **65+** servers were to be migrated from on-premises to AWS



SOLUTION APPROACH

Assessment & Solution

- i. After due diligence on the required infrastructure assessment which include hardware, security, network etc the solution was designed.
- ii. RISC tool which is SAAS based tool was proposed for automated application and service discovery and grouping.
- iii. We proposed Server migration tool to manage all the complexities of the migration process, including automatically replicating volumes of live servers to AWS and creating new AMIs periodically.
- iv. Direct Connect was proposed for seamless connectivity between POS location and AWS environment via HQ.
- v. Security posture for the applications hosted on Cloud was a major concern for the customer which was addressed by allowing restricted access through EC2 security groups.
- vi. Dedicated Instances were proposed to host the physical servers and to use the existing Windows and SQL licenses using BYOL model of AWS.
- vii. NAT Gateway was proposed for providing outbound internet access to servers in private subnets.

Deployment

- i. After the solution was agreed upon, smooth deployment process was initiated which also included educating the customer on the ease to move & start on cloud.
- ii. Migration started with the least critical workloads, the User Acceptance Testing (UAT). This helped the client to get the required confidence in moving to the cloud. There onwards, we followed a phased approach for the migration of other workloads. Phases were designed based on application dependency mapping created using RISC Network Cloudscape tool.
- iii. Application team performed Smoke testing to get sure that everything will operate smoothly after moving to cloud.
- iv. The deployment planner had all the milestones and timelines mentioned which ensured that the project was completed on time with the sheet.

Validate

- i. Post successful deployment of resources on cloud, the infrastructure was validated on all the pointers (security, accessibility, etc.) before handing it over to the client.
- ii. After the application was tested by the customer on all the parameters, a cut-over date was agreed for Go-Live.
- iii. Post Go-Live, a validation tracker was sent to the customer, which ensured all the agreed activities had been done.

Transition

- i. Smooth transitioning and handover to support was ensured by having proper KT sessions with the team and introducing them to the customer.
- ii. Inventory, Credentials, Security Status, Server Hardening & Patching, best practices operational checklist were handed over.

JUBILANT'S CORE BUSINESS IS SELLING. NOT IT. They could take advantage of pre-built services in AWS with Progressive to create a scalable and available solution that enhanced their business performance and Progressive also helped them with IT managed services.

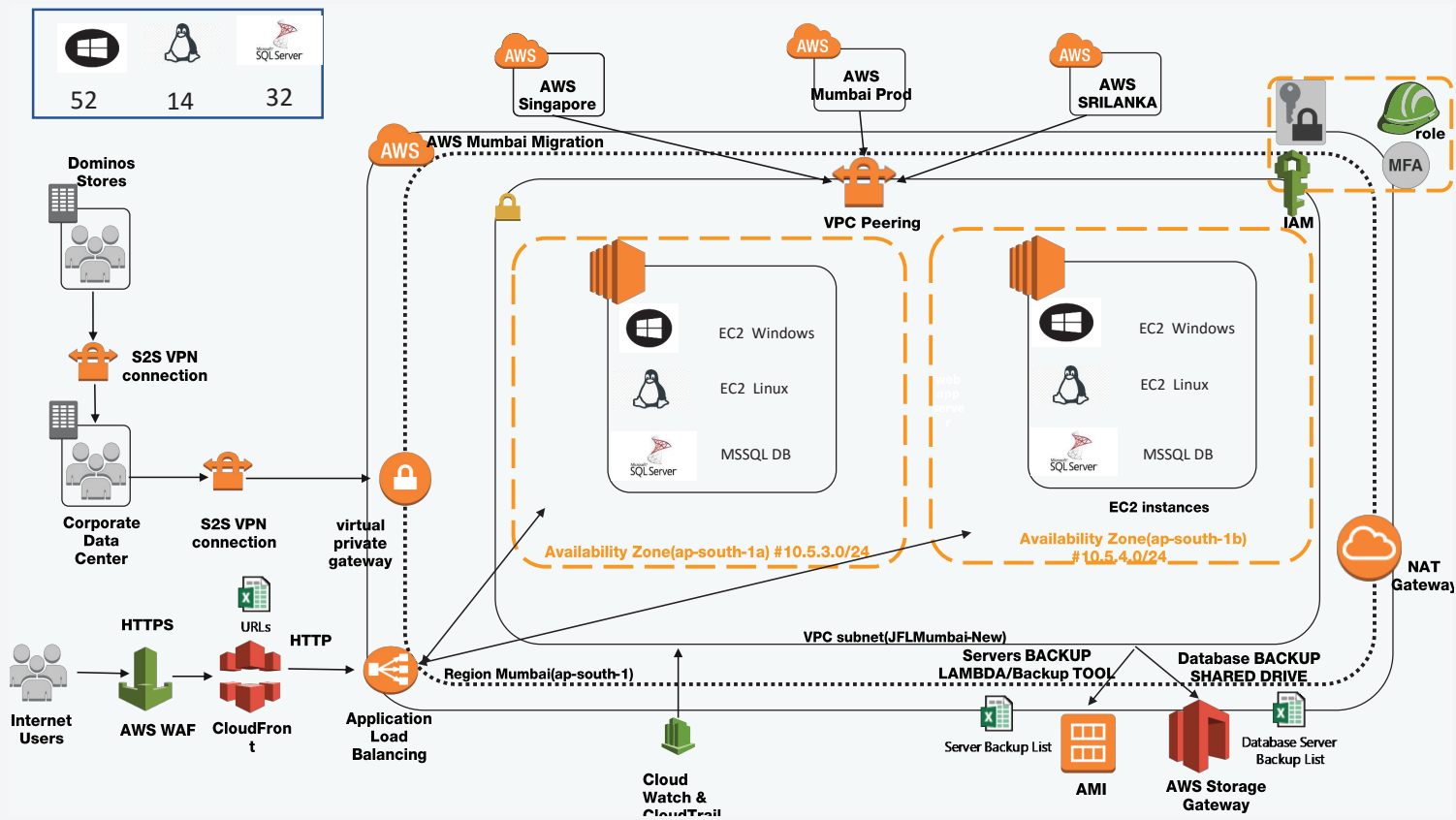


OS PLATFORMS

Windows and Linux



SOLUTION ARCHITECTURE



WHY JFL CHOSE AWS PLATFORM?

- **AWS offers:**
 - o Broader and Deeper Functionality
 - o Greater Reliability
 - o More Security Capabilities
 - o Faster Performance
 - o Lower Costs
 - o More Migration Experience
- **Licensing** can constitute a significant investment when running workloads on a public cloud. To help facilitate the maximum benefit of JFL's existing Microsoft licensing, AWS provided the options to utilize BYOL.
- The **AWS advantage** for Windows over the next largest cloud provider.

2x
More Windows Server instances

2x
More regions with multiple availability zones (20 vs. 8)

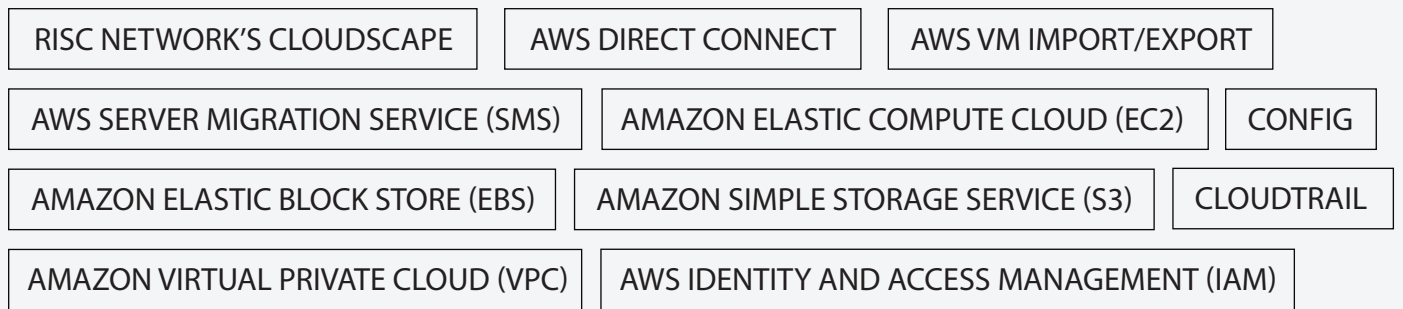
7x
Fewer downtime hours in 2018*

2x
Higher performance for SQL Server on Windows

5x
More services offering encryption



SERVICES USED



TOOLS AND SERVICES USED

- **RISC**
 - o RISC was used to assess their on-premise environment.
 - o It was used to automate application and service discovery and grouping.
 - o It was used to do mapping of which infrastructure services application stacks depend onto function (e.g. Active Directory).
 - o RISC helped in discovering application consumption by location, to quickly show which sites use specific applications and their impact on your network.
- **Server Migration Service (SMS)**
 - o AWS SMS was used to seamlessly replicate on-premise servers on AWS.
 - o Due to the automatic replication of volumes of live servers to AWS by Server Migration Service, it was proposed to the customer.
- **AWS Monitoring and Automation Services**
 - o **CloudWatch**

Amazon CloudWatch was used as it provides monitoring and management services. CloudWatch provides with data and actionable insights to monitor your applications, understand and respond to system-wide performance changes, optimize resource utilization, and get a unified view of operational health.
 - o **Config**

AWS Config was enabled for the audit purpose as it allows assessing, auditing, and evaluating the configurations of your AWS resources.
 - o **Lambda**

AWS Lambda was proposed to customer as they wanted to automate their infrastructure on event-driven, serverless computing platform and cost-effective solution.
 - o **AWS WAF**

To protect customer's web facing applications, we proposed them AWS WAF as it helps in protecting your web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources.
- **Centilytics**

To get the 360-degree visibility and granular insights into each of the accounts by services, regions, resource tags and much more, we proposed them to use Centilytics.



OUTCOMES

- o Reduction of CapEx and OpEx: After moving to AWS, both the CapEx and the OpEx got reduced as unused servers got decommissioned, development and QA servers has been configured on automatic start/stop.
- o Customer took advantage of the Reserved Instances to reduce the cost further.
- o Customer can now spin new workloads within a short span of time which increased the business agility.
- o Customer is finding it easier to manage the workloads on AWS as compared to on-premises.
- o Customer has leveraged different AWS services to achieve the scalability and high availability. The recovery time has reduced significantly.