JDA ON AWS

Case Study

About The Client

Our Client is a transnational consumer goods company co-headquartered in London, United Kingdom and Rotterdam, Netherlands. Its products include food, beverages, cleaning agents and personal care products. Client is organised into four main divisions – Foods, Refreshment (beverages and ice cream), Home Care, and Personal Care.

Challenge

Our multinational FMCG Client had two major system outages to the current United States (US) Warehouse Management System (WMS) hosted in the Unilever Trumbull Data Centre over the past year resulting in lost revenue to Unilever and the risk for further outages remain. The WMS serves the North American ambient "dry" Distribution Centers (DC's), HPC Plants, twenty-one contract packer (co-packer) locations and a LENS system for quality control responsible in completing the final leg of supply chain. So, need for a reliable and stable cost-effective warehouse management system is the main requirement.

The current Client owned Red Prairie DLxP application service (the US WMS) is no longer supported by the vendor (JDA) and resides on outdated systems hardware, operating systems and databases.

Solution Overview

JDA Application will be hosted in AWS on the Remote Desktop Gateway infrastructure and presented to the end users and administrators as published applications (seamlessly accessed by the user).

All servers will be built consuming hardware resources (using Virtual Machines) on AWS. The design will utilize AWS Availability Zones (AZs) to provide the High Availability (HA) and Disaster Recovery (DR) aspects to the environment

Application Layer

Four application servers will be installed in the AWS internal application tier network These will be load balanced to ensure DR and HA according to existing on-premise architecture standards. Plant / DC Standard Moving Forward – Two application servers will be installed in the AWS internal

application tier network in the eu-central-1 region with one server in each AZ. One will act as the primary (Production) server while the other will act as the HA/DR service as per the architecture standards in the CTO Document Repository. Two servers will form the Production / HA / DR environment with one server in the primary AZ for Production and the other server hosted in the other AZ for DR / HA in accordance to CTO standards for Unilever. Load Balancing will be configured to provide no single point of failure. As this is a load-balanced service a DNS A Record will be created for its service name as per section DNS Service Names and assigned to the load balancer

Database Layer

Four database servers will be installed in the AWS internal database tier network. These servers will each host one database to ensure Production, Production HA, DR and DR HA as per the architecture standards in the CTO Document Repository.

These EC2 instances are running on a Virtual Private Cloud (VPC) connected to our client's data centers via a dedicated network link, providing secure and reliable access for employees and systems who are on the company network. Amazon S3 is leveraged for data backups, and Amazon EBS volumes for storage.

Value Delivered

Our client estimates that the implementation will reduce 10 M US $ in lost revenue due to non-availability of WMS systems compared to the previous year. Company had savings in software, hardware and maintenance in the form of 30 % resource reduction from existing hardware set up. Client will also benefit from the robustness and speedy transactions provided by the AWS environment.

Maintaining infrastructure results in better manageability. Highly available per Amazon standards. Due to multi-AZ architecture design, it is possible in the AWS environment to have for higher resiliency in case one of the instances (application servers) were to go down. The main challenge for which the Project was initiated has been duly addressed.

Our client thrilled with the solution approach and plans to expand the implementation to other Distribution centers and Plants within 2 years..