DIGITAL EDGE CASE STUDY:
EC2 for Windows in AWS – Case Study 1

Submitted by:
Greg Master
Account Manager
Digital Edge Ventures
7 Teleport Drive
Staten Island, NY 10311
gmaster@digitaledge.net
732-896-8969

1. Company Name

Company 1

2. Case Study Title

EC2 for Windows in AWS

3. Project Dates

January 2019 – March 2020

4. Description

Assisted the customer with architecture, deployment and support of a cross-asset real-time risk and portfolio management solution for asset managers designed to provide institutional grade technology through AWS hosted solution.

5. Problem Statement

This project focused on provisioning of the hosting infrastructure, IT operations, and application support of Customer 1 software hosted in AWS:

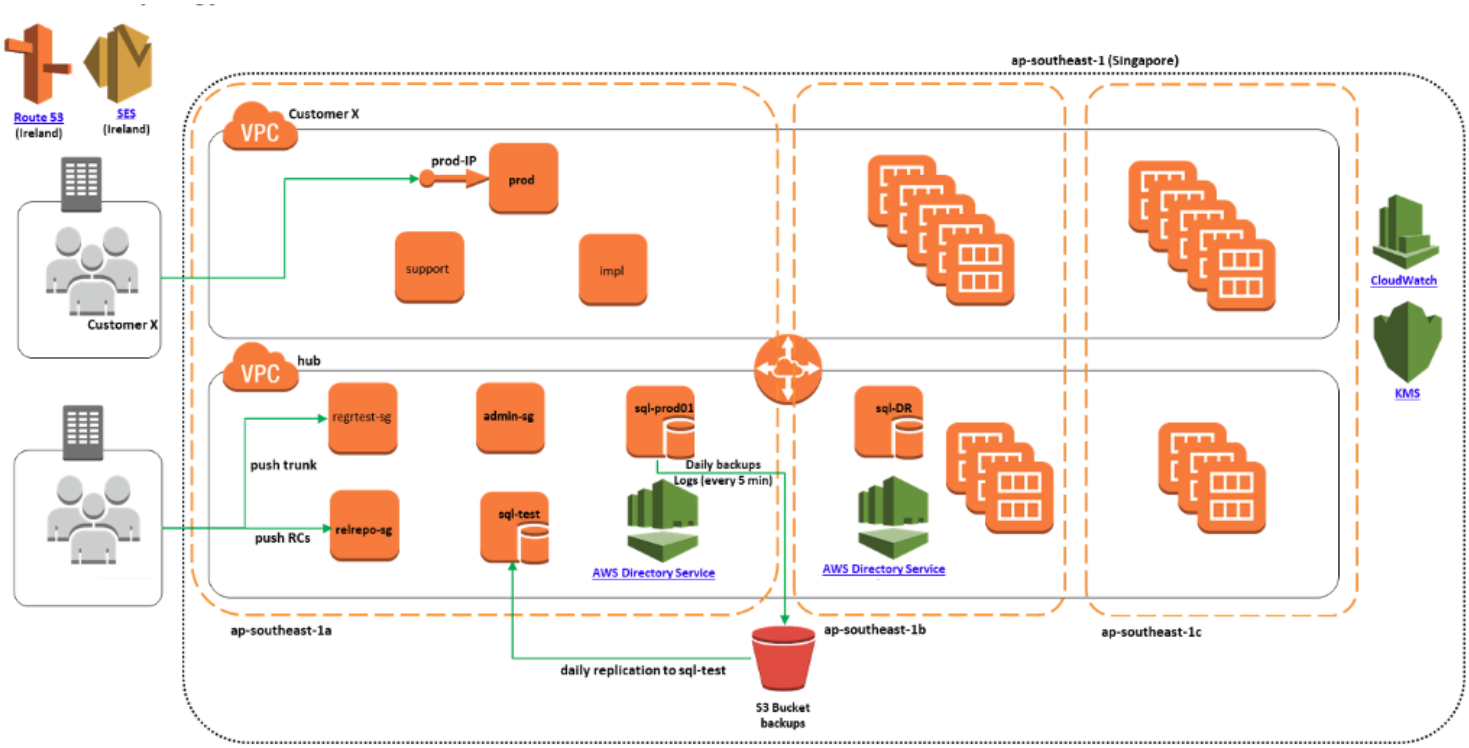
1. Design, implement, provision, and operate ISO 27001 and ISO 27017 compliant hosting environments deployed across multiple availability zones within AWS. This includes setting up a single-tenancy virtual private cloud (VPC), IAM policies, firewalls and network topology, Virtual Machine, Databases, EBS snapshots, AWS CloudWatch monitoring, AWS CloudTrail, etc.
   - PROD environment.
   - DR environment.
   - On demand Support environment.
   - On demand UAT environment.
2. Provision access from whitelisted source IPs. Site-2-site VPN (AWS of 3-d party).
3. AWS hosting Infrastructure availability monitoring.
4. Capacity monitoring and management; resize the hosting environment as needed.
5. Logging and monitoring, and protection of log information.
6. Data backups as per mutually agreed data retention policy.

7. AWS resource utilization and cost allocation reports.

6. Definition

Client production servers were deployed on a single virtual machine that hosts RDP and Application server components. Typical VM size for a small-scale customer is 8vCPUs, 32 GB RAM with 128GB (C drive) and 256GB (D drive) SSDs. Production server communicates with SQL-PROD – MSSQL Standard 2012 server that hosts production databases of all customers in the region. Full Production server image is taken daily. If Production server VM fails, it can be relaunched from the machine image within minutes. Full production database backup is taken daily, and database logs are backed up every 4 hours. Full SQL-PROD server image is taken daily. If SQL-PROD VM fails, it can be relaunched from the machine image within minutes. Application log file management remains unchanged with ability to use AWS S3 as a long-term storage.

7. Topology



8. Outcome of the Project

The project has been completed successfully. Customer 1 has 12 live customers using the application in production.

9. Success Metrics

Improved operational efficiency and reduced IT infrastructure costs. Additionally, the cybersecurity of the client environment was increased using the AWS services involved, and the customer can more effectively keep tabs on budgets and ROI metrics.

10. Lessons Learned

1) Always start from a new EC2 instance being provisioned.

2) Test the functionality in different environments (dev, staging) first

3) Keep old version around until new version is 100% and you are fully satisfied with the behavior

4) Have daily EC2 snapshot configured and tested periodically