

## nClouds | AWS Case Studies

# "Game Developer"

nClouds helps an educational game developer build reliable, scalable infrastructure in the cloud with zero latency.

## About Game Developer

The company creates educational learning games to help K-6 students learn and understand difficult math concepts such as number sense, place value, mental arithmetic, multiplication, fractions, the number line, and estimation. The platform uses adaptive technology to enable learners to build math fluency, conceptual understanding, and a love of challenge.

## Benefits Summary



Better security



Better scalability



Improved customer experience



Better visibility

### CHALLENGE

## Building reliable, scalable infrastructure in the cloud with zero latency

Since 2010, the company has been creating fun learning games that let kids play with numbers. The company's first product earned a coveted industry educational gaming award, and a rigorous efficacy study found the game improved test scores by 15% and attitudes towards fractions by 10%.

Initially, the company had all their environments in a single VPC, which created a variety of challenges as the company began to grow:

- They needed to regulate who or what could view or use resources in AWS.
- All their services were on a public subnet.
- Their infrastructure could not auto-scale in response to customer demands.

### Industry

Education technology, learning games

### Location

United States

### Challenge

Building reliable, scalable infrastructure in the cloud with zero latency.

### Featured Services

DevOps, cloud infrastructure, security, 24x7 support, change management



nClouds has been an invaluable collaborator as the team brought the right skills to design and then help us transition to a new, more secure and scalable AWS infrastructure. They introduced nOps, giving instant visibility into changes in our AWS infrastructure, identified issues that we needed to address as we prepared for millions of more users, and is now integrated into our workflows. And now the nClouds team supports our infrastructure 24/7."

**Director of Engineering,  
"Game Developer"**

To address these issues, the company started looking for a solution that would enable better access control to critical resources in their environment, and allow them to scale their infrastructure up and down based on usage. As an education technology company, they considered it crucial to have strong private information protections and achieve zero latency with the new solution for a positive user experience.

## Why AWS and nClouds

The company began collaborating with nClouds, a Premier Consulting Partner in the AWS Partner Network (APN), to address their challenges. The technical team at the company was already using Amazon RDS as their relational database on AWS. However, they needed a robust infrastructure that would enable secure testing, continuous delivery of new features, and auto-scaling for performance optimization. They also needed better visibility into changes made to their AWS infrastructure.

The nClouds team provided technical guidance, management, and execution as the gaming company's business continued to grow, as well as 24x7 365-day support for their infrastructure. Plus, the company's team uses nOps cloud management for AWS, a SaaS tool, to support change authorizations, compliance, and cost management for their AWS environment.



## The company's new infrastructure leverages the following AWS services:

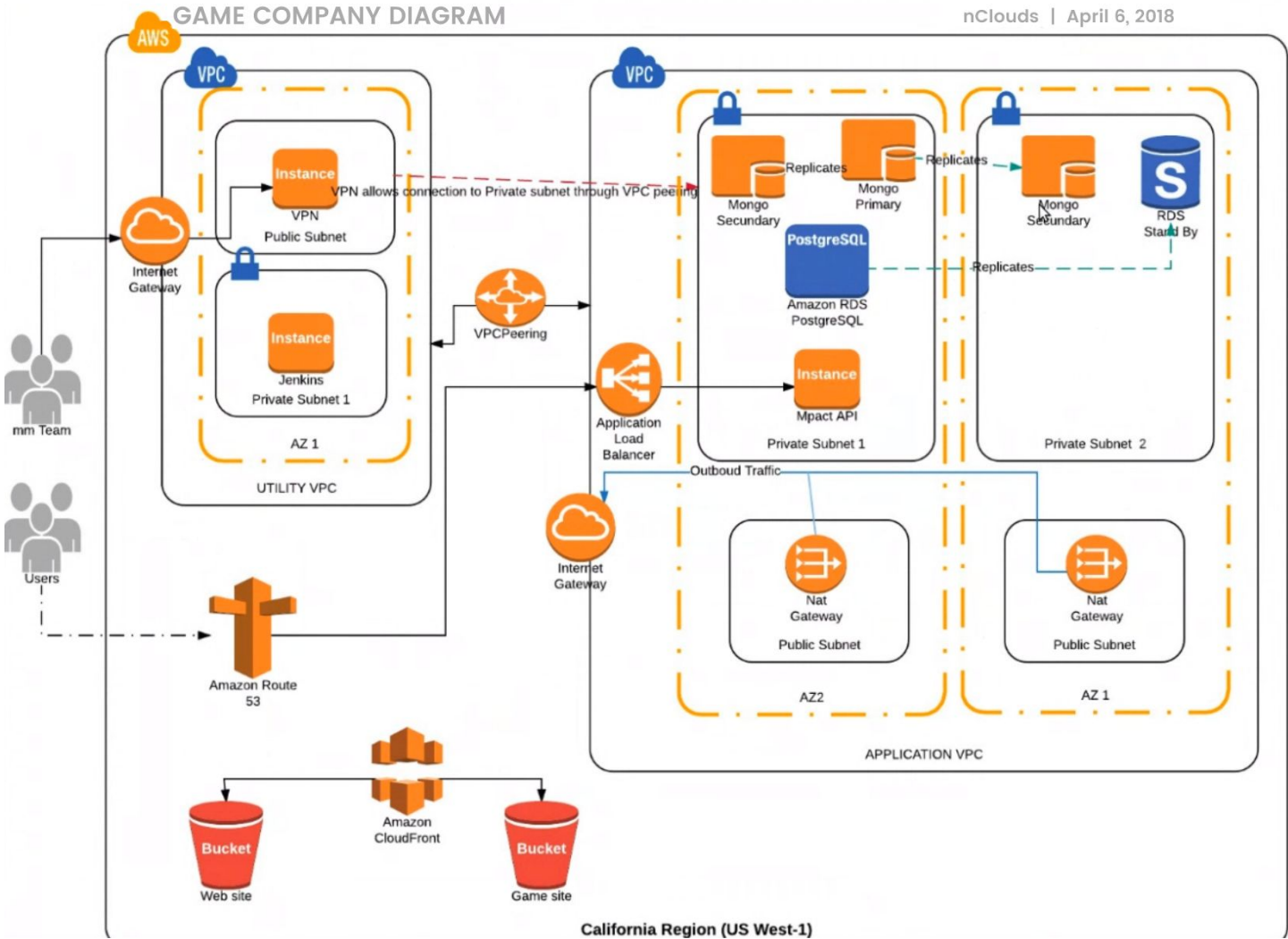
- **Amazon RDS** - Used to automate time-consuming administration tasks such as hardware provisioning, database setup, patching, and backups.
- **Route53** - A web service for managing IP addresses.
- **Amazon EC2** - A web service providing secure, resizable compute capacity for the company's cloud environment.
- **Amazon S3** - An object storage that enables the company's technical team to collect, store, and analyze their data at a massive scale.
- **Amazon CloudFormation** - Allows the company to create and provision AWS infrastructure deployments predictably and repeatedly.
- **Amazon CloudFront** - A web service enabling the company to speed up distribution of static and dynamic web content.
- **Elastic Load Balancing** - Used to distribute the company's incoming application traffic across Amazon EC2 instances, containers, and IP addresses.
- **Amazon Virtual Private Cloud** - Launches Amazon Web Services (AWS) resources into the company's virtual network.
- **Amazon OpsWorks** - Provides managed instances of Chef and Puppet to automate the configurations of the company's servers.

## The solution stack includes additional essential tools and services:

- **Jenkins** - An open-source automation server for facilitating continuous integration.
- **Datadog** - A SaaS data analytics platform providing detailed monitoring into the company's application stack.
- **nOps Change Management** - A SaaS change management solution providing the company with visibility to changes as well as cost optimization for their AWS infrastructure.

# nClouds Solution Architecture for the Game Developer

The new environment contains a Utility VPC and Application VPC, in addition to two private subnets for improved access control. The solution helps the company scale their infrastructure up and down based on needs, and perform tests without exposing sensitive customer information to public subnets.



## The Benefits

Teaming with nClouds, the company moved to a highly secure, scalable, and effective infrastructure in the cloud. The project has yielded several benefits:



### **Better security.**

The company can now control who can access their cloud resources by leveraging private subnets, VPCs, and VPNs.



### **Better scalability.**

Auto-scaling capabilities enable the company to scale their infrastructure within minutes.



### **Improved customer experience.**

The company now has a zero-latency infrastructure that offers a consistently better user experience to customers.



### **Better visibility.**

They now have better visibility into all changes taking place within their environment.

## About nClouds

nClouds is a certified, award-winning provider of AWS and DevOps consulting and implementation services. We partner with our customers, as extensions of their teams, to build and manage modern infrastructure solutions that deliver innovation faster. We leap beyond the status quo.

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