



nClouds | AWS Case Studies

OTtera

nClouds helped OTtera modernize on AWS to improve scalability, achieve fine-grained control of custom application architectures, and accelerate the delivery of new features.

Benefits Summary



End customers can scale faster to support more media and more meetings with high-quality streams.



Developers build faster with modern, containerized infrastructure.



Fine-grained control of application infrastructure improves scaling, capacity, scheduling, and security.

About OTtera

OTtera is a professional white-label service that allows companies to quickly launch highly customized, affordable OTT (over-the-top) services—media services offered directly to viewers via the internet. Typically, for a company to build a solution from the ground up—something that rivals the functionality and scalability of today’s most popular services—would take several years and millions of dollars. By utilizing OTtera’s services, companies can launch at a fraction of the cost in just weeks. Building on 10 years of professional OTT experience servicing nearly 100 million users, OTtera’s end-to-end solutions are highly adaptable to any form of content. Learn more at ottera.tv.

Industry

Digital Media, Software, Video Advertising, Video Streaming

Location

Los Angeles, California

Featured Services

Application Modernization (Containers, Serverless), Managed DevOps Services, Cloud Migration Services

CHALLENGE

To improve application scalability and operational excellence, achieve increased control of application architectures, and accelerate delivery of new features



We value nClouds' expertise in helping us build and modernize our IT infrastructure—from migrating workloads to automating deployments. Plus, nClouds' Managed DevOps services relieve our team from the ongoing management of our AWS infrastructure so our engineers are focused on creating innovative new features.”

— Craig McEldowney, CTO and Cofounder, OTTera

OTTera Leverages Several Amazon Web Services

- **Amazon CloudWatch** – Monitors applications, responds to system-wide performance changes, optimizes resource utilization, and provides unified control
- **Amazon API Gateway (API Gateway)** – Makes it easy for OTTera's developers to create, publish, maintain, monitor, and secure APIs at any scale
- **Amazon CloudFront (CloudFront)** – A large-scale, global, and feature-rich content-delivery network (CDN) that provides OTTera with secure, scalable, and intelligently integrated application delivery
- **Amazon CloudWatch (CloudWatch)** – Monitors applications, responds to system-wide performance changes, optimizes resource utilization, and provides a unified view of operational health
- **Amazon Elastic Compute Cloud (Amazon EC2)** – A web service designed to make web-scale cloud computing easier for developers, running on Amazon's proven computing environment and providing secure, resizable compute capacity in the cloud as well as complete control of computing resources
- **Amazon Elastic Container Service (Amazon ECS)** – A highly scalable, high-performance container orchestration service that supports Docker containers and enables OTTera to run and scale containerized applications on AWS easily
- **AWS Fargate** – Enables OTTera to run containers without having to manage servers or clusters
- **Amazon Relational Database Service (RDS)** – A managed SQL database service provided by Amazon Web Services (AWS) that supports an array of database engines to store and organize data and helps with relational database management tasks—such as data migration, backup, recovery, and patching
- **Amazon Simple Storage Service (Amazon S3)** – An object storage service providing OTTera with industry-leading scalability, cost optimization, performance, data availability, security, and compliance
- **AWS Application Load Balancer (AWS ALB)** – To support content-based routing and applications that run in containers
- **AWS CodeCommit** – A fully-managed source control service that hosts secure Git-based repositories, making it easy for teams to collaborate on code in a secure and highly scalable ecosystem and eliminating the need for OTTera to operate its source control system or worry about scaling its infrastructure
- **AWS Elemental MediaLive** – A cloud-based, broadcast-grade video processing service with the power to deploy live channels within minutes and encode video in real time, compressing live sources into high-quality streams
- **AWS Secrets Manager** – Enables OTTera to protect secrets needed to access its applications, services, and IT resources
- **AWS Systems Manager (formerly known as SSM)** – An AWS service to view and control your infrastructure on AWS

SOLUTIONS

nClouds' Solution Architecture for OTTera

nClouds migrated OTTera's Elastic Beanstalk workloads (API) to AWS Fargate to improve and provide accelerated container management. Fargate is built into Amazon ECS, which automates server management, capacity planning, and isolation of container workloads for security.

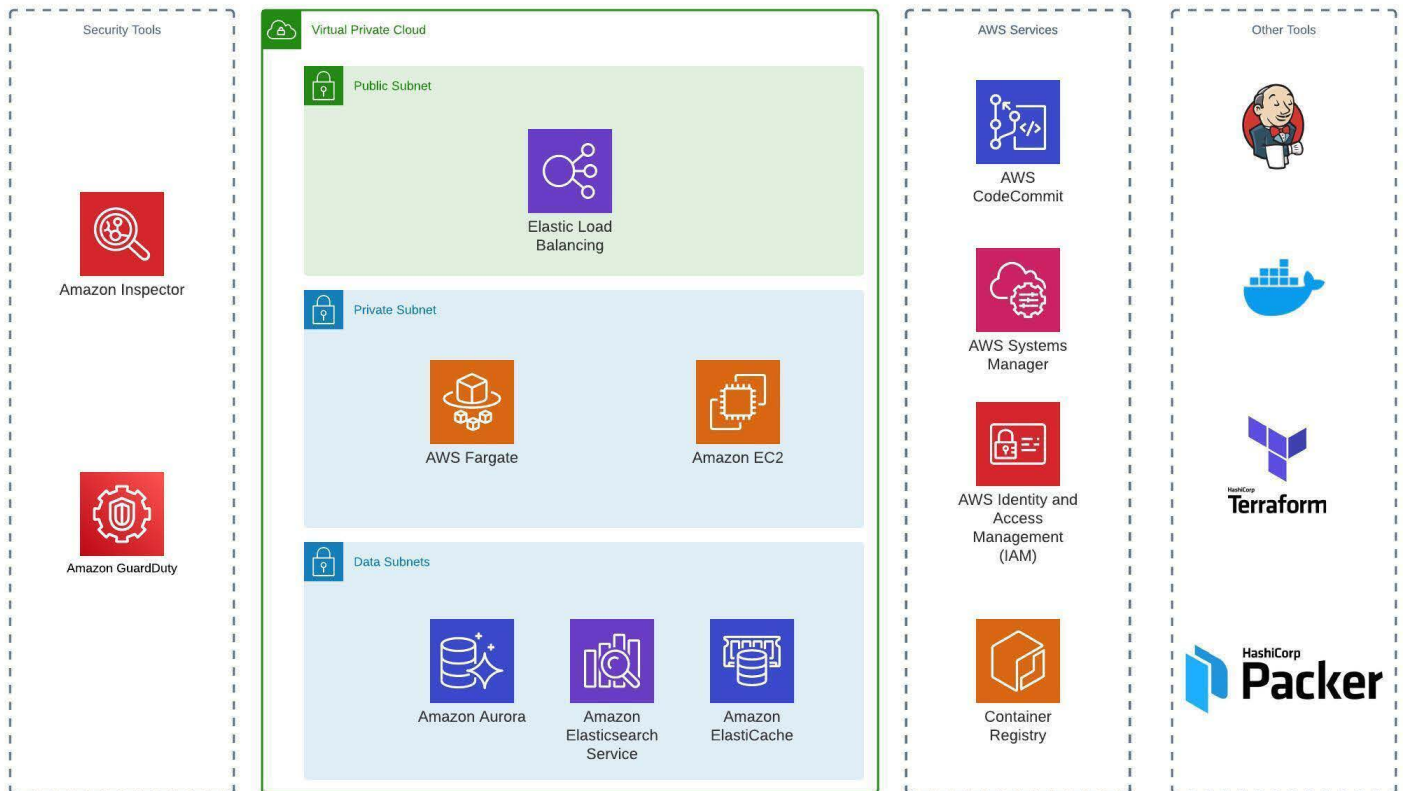
Jenkins server was implemented to manage deployments to Amazon ECS. This server is maintained using Groovy scripts and a configuration-as-code (CasC) plugin. The CasC plugin is an opinionated way to configure Jenkins based on human-readable declarative configuration files. The Jenkins server works as a master wherein all jobs are defined and uses

Amazon EC2 agents to run jobs that deploy/build Docker images.

nClouds provided a new production environment to support OTTera's CMS and API stack, using Terraform to enable provisioning. Key services include the following:

- Amazon VPC
- Storage resources (Amazon RDS, Amazon S3, Redis)
- Amazon ECS clusters
- Amazon CloudWatch alarms
- Amazon CloudFront distributions
- Amazon EC2 Gnome Boxes

High-Level Architecture Diagram



Interested in an AWS Well-Architected Framework Review?

Schedule a [free AWS Well-Architected Framework Review with nClouds](#) to see how you can apply architectural best practices to drive better business outcomes.

nClouds' activities have evolved from building a production environment on AWS to Managed DevOps services.



Why AWS and nClouds

OTTer first engaged nClouds in 2020. Together, OTTer and nClouds have focused on the ongoing cloud journey rather than a one-and-done event. nClouds' activities have evolved from building a production environment on AWS to managed DevOps services, including managing deployments and modernization initiatives designed to achieve greater operational efficiency and enable faster innovation:

- Migrating AWS OpsWorks workloads to Amazon ECS
- Migrating Elastic Beanstalk workloads (API) to AWS Fargate to automate the sizing, scaling, patching, and updating of its Amazon EC2 fleet or container runtime
- Improving deployment automation using Jenkins
- Managing and maintaining infrastructure using infrastructure as code (IaC)—in this case, using Terraform



As an AWS Premier Tier Services Partner, nClouds has extensive experience and expertise in building and managing complex cloud environments on AWS.

OTTer's Solution Stack Included Additional, Essential Third-Party Tools

- **Jenkins** – An open-source automation server written in Java to support CI/CD
- **HashiCorp Packer** – An open-source tool that enables OTTer to create identical machine images for multiple platforms from a single-source configuration
- **HashiCorp Terraform** – An infrastructure-as-code (IaC) tool that allows OTTer to create, update, and version its AWS infrastructure



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.



BENEFITS

Increased Business Efficiency

Teaming with nClouds, OTTera has a production environment to support its content management system (CMS) and application programming interface (API) stack. The ongoing work has provided numerous benefits.



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A new production environment to support OTTera's CMS and API stack delivers improved operational efficiency. Powered by a new containerized environment, the environment can scale to match and deliver the customer needs and scale down when traffic is low to save costs. Further, the implementation of AWS Elemental MediaLive provides a live video processing service that makes delivering 24/7 linear channels and live meeting events at scale easier and more reliable. Plus, MediaLive supports the recording and transcribing of meetings at scale.



Developers build faster with modern, containerized infrastructure.

The API stack enables OTTera's developers to build more and faster. Automation of OTTera's Bootstrap CMS sites expedites the creation of initial resources for a CMS, including the generation of PHP code based on templates and the creation of initial resources and the CMS CodeCommit repository.



Fine-grained control of application infrastructure improves scaling, capacity, scheduling, and security.

Migrating from AWS Elastic Beanstalk to an Amazon ECS environment with AWS Fargate provided fine-grained control for Ottera's custom application architectures. AWS Fargate deploys and manages containers and eliminates the need to provision servers.

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