

## About Kattera

Kattera is a technology-driven offsite construction company. It was founded in 2015 by Michael Marks, former CEO of Flextronics and former Tesla interim CEO, along with Fritz Wolff, the executive chairman of The Wolff Co. Kattera was listed on LinkedIn's "Top Startup Companies" to work for in 2017. The company manufactures large building components off-site, particularly for multi-family housing. In many of its projects, the company serves as an off-site manufacturer, architect, and on-site contractor. Located in the US, Kattera innovates in all aspects of technology, architecture, and construction, including design, building, renewable energy, and supply chain. Kattera is the world's first vertically integrated construction services company.

## Problem Statement

As a part of Kattera's end-to-end building services, they offer direct material customers unprecedented time and cost savings by leveraging the reach of their global supply chain and aggregating material demand across multiple projects to lower pricing. Kattera's team develops and delivers custom packages of materials, finishes, and fixtures for clients across a wide variety of markets and clients. As a part of this operation, they wanted to achieve a variety of the following Business and Technical objectives.

1. Achieve Low Total Cost of Ownership for SAP Hybris Landscape.
2. Provide Agile, Transparent and High Available Infrastructure for SAP Hybris Landscape Upgrade.
3. SAP Hybris Landscape should comprise of 3 environments (DEV, UAT, PRD) in separate VPC networks to avoid security breaches due to different security levels in each environment.
4. All VPCs to be connected to enable cross communication using VPC Peering.
5. SAP landscape deployment includes SAP Hybris Commerce Platform B2B with SAP S4 Integration deployment on AWS.
6. Build an eCommerce website based on Hybris which was secured, scalable, performant, cost effective, and with high availability.
7. Mactores had setup the initial containerized Hybris environment version 6.4 on AWS in the year 2017 which they wanted to upgrade to the latest version 1905. Customer required parallel environments for the live Hhybris 6.4 setup and the upgraded Hyhybris 1905 setup and during the cutover phase, make the upgraded Hhybris 1905 setup live.

## Proposed Solution

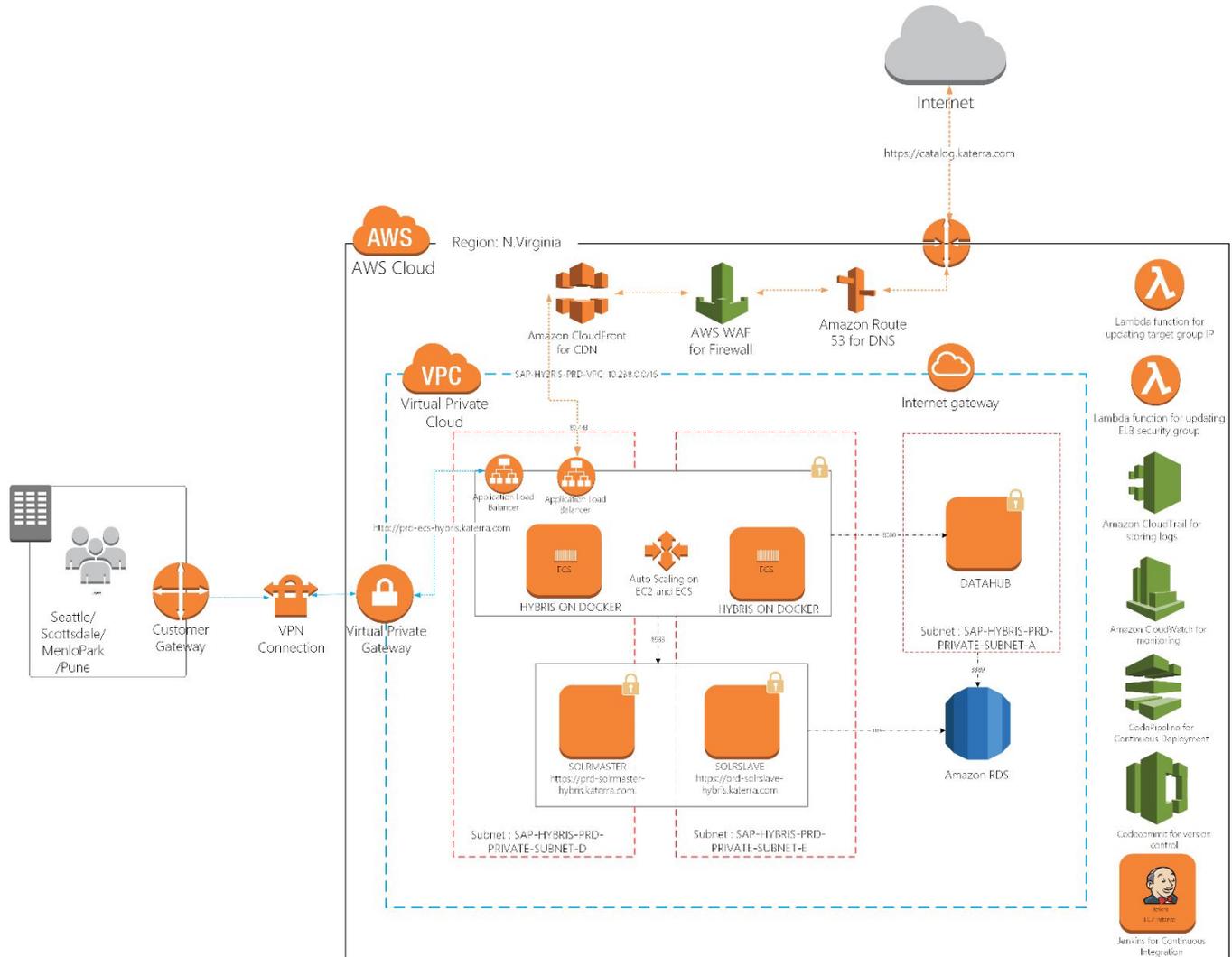
Mactores deployed Hybris systems on AWS ECS Infrastructure within agreed timelines. Hybris storefront and other cockpits were deployed in the AWS Infrastructure. Kattera's public facing URL was hosted using Route53 and CloudFront was used to improve the content delivery. AWS WAF was deployed to protect applications from common web exploits that could affect application availability, compromise security, or consume excessive resources. Hybris containers were launched behind the Application Load Balancer. Both EC2 and containers were launched across multiple availability zones. Amazon Aurora MySQL Database was used to host the backend and S3 bucket to store media images. CI pipeline was deployed using AWS Code Commit, AWS CodePipeline and Jenkins server.

Hybris deployment was performed by Mactores across 3 VPCs, to support Software development lifecycle. AWS Code Commit was used as a code repository, Jenkins and AWS Code Pipeline were used to build and deploy code across the entire Hybris landscape. Thus, code was stored in encrypted format redundantly, across multiple facilities. This architecture increased the availability and durability of Kattera's code

# Case study – Configuration Management and Continuous Deployment on AWS



repository data. Mactores secured the Application Server environment to ensure it can only be connected from Katerra's private network.



Picture 1 – Katerra SAP Hybris Architecture

## Third party applications or solutions used

NA

**Start Date** – June 1, 2019

**End Date** – September 30, 2019

## Outcomes & results

The solution architected and executed for the SAP Hybris led to better security scalability, and availability. Infrastructure Automation and Continuous Integration & Deployment enabled deployment of multiple environments and code deployment and testing in an efficient manner, less error-prone and reduced time consumption.

## Lessons Learned

In this project a lot of time was invested in helping customer to realize the value of using a ECS based automated deployment vs EC2 based traditional AWS Deployment. Once we conducted a daylong immersion day with the customer, customer was convinced about the DevOps approach that we are referring to.

## About Mactores Cognition Inc

Mactores quickly solves core business problems and drives disruptive change by applying the latest automation technologies in Data Analytics, AI/ML and DevOps. We design, deploy, integrate and manage rapid migration and transformation solutions to accelerate enterprise data platform migrations using automation developed over dozens of successful use cases.