NTT

Karma Automotive | Americas | Automotive

Karma Automotive Migrates and Upgrades its SAP Environment on AWS in 90 Days

Company Overview

Southern California-based Karma is more than just a car company. Although Karma is best known as a creator of luxury electric vehicles, the company has emerged as a high-tech incubator offering innovators a perfect platform to prove their emerging technologies. Founded in 2014, Karma is reinventing the traditional retail-based automotive business model by opening its engineering, design, customization, and manufacturing resources to other companies looking to speed product development, access new technology or make their products more luxurious.

Putting Technology at the Center of Luxury Car Development Worldwide

Combining beautiful aesthetics with forward-thinking design and sustainability, Karma Automotive puts conscientious luxury at the core of its brand. Its mission is to deliver a different kind of luxury car to the market globally. Vital to Karma's ability to distinguish itself as a luxury car provider and market innovator is its proactive approach to prioritizing technology within every facet of the company.

"Technology is embedded within many areas of Karma—both as a product and as a brand," says Ketan Gohil, director of enterprise systems at Karma. "The IT team works hand-in-hand with other teams on the products we are going to put out in the market. Since 2014, we have built our enterprise systems and technology footprint on four pillars: cloud, mobile, security, and Artificial Intelligence (AI) and Machine Learning (ML)."

For three years, Karma had been using S/4HANA as its enterprise resource planning software, running in a private cloud environment. Given the company's strict focus on using technology to enable go-to-market speed and innovation, in August 2018, the executive team took a thoughtful approach to future-proof technology investments. Their attention quickly turned to how best to take advantage of SAP. "We knew SAP had built into its software all of the best practices for automotive and business processes," says Gohil. "We wanted to simplify our landscape, add high availability and disaster recovery to our footprint, upgrade our SAP database, and architect beyond SAP to include general IT and non-SAP workloads. We did a cost-benefit analysis, and we decided to migrate to AWS because of the flexibility and the cost savings we'd experience."

## Taking a Phased Approach to Efficiently Migrate SAP to AWS

Given the company's existing hosting contract was quickly coming up for renewal, Karma had a very tight timeline—90 days—to migrate its substantial SAP footprint to AWS. Furthermore, the company couldn't afford to disrupt the business with its migration. The migration needed to be a non-event for internal teams. Karma also wanted to shrink its S/4HANA database server size on AWS. To support its unique migration needs, the company turned to us.

As an AWS Partner Network (APN) Advanced Consulting Partner and an SAP Competency Partner, our mission is to help simplify complex migrations and challenges for customers seeking to take advantage of SAP on AWS. We worked closely with Karma to approach its SAP migration in two phases: Phase one focused on migrating and simplifying the SAP environment on AWS, and phase two focused on upgrading Karma from S/4HANA1503 to S/4HANA 1709 FPS02. The company took a backup and restore approach to migrate to AWS, and it met its aggressive 90-day timeframe.

Running a High Availability Architecture and Deploying S/4HANA 2.0

Karma's SAP footprint on AWS is architected for high availability and disaster recovery. NTT manages Karma's SAP systems in AWS and provides essential support for SAP. The Karma infrastructure team is responsible for the AWS environment. The company takes advantage of a combination of on-demand Amazon Elastic Compute Cloud (Amazon EC2) Instances and Reserved Instances (RIs). Karma uses AWS Direct Connect to connect to its existing data center.

Karma is using AWS technology to focus on developing its connected car capabilities. "We brought all of our APIs into the AWS Lambda environment to re-engineer our connected car capabilities," says Gohil. "So, for instance, before a check engine light goes on in a Karma car, the trouble codes are sent over the cloud environment; Lambda then creates a ticket in our SAP C/4HANA system. Our call center team will then reach out to the customer to discuss the potential issue. By hosting our SAP system on AWS, we're able to react in more real-time to take care of our customers."
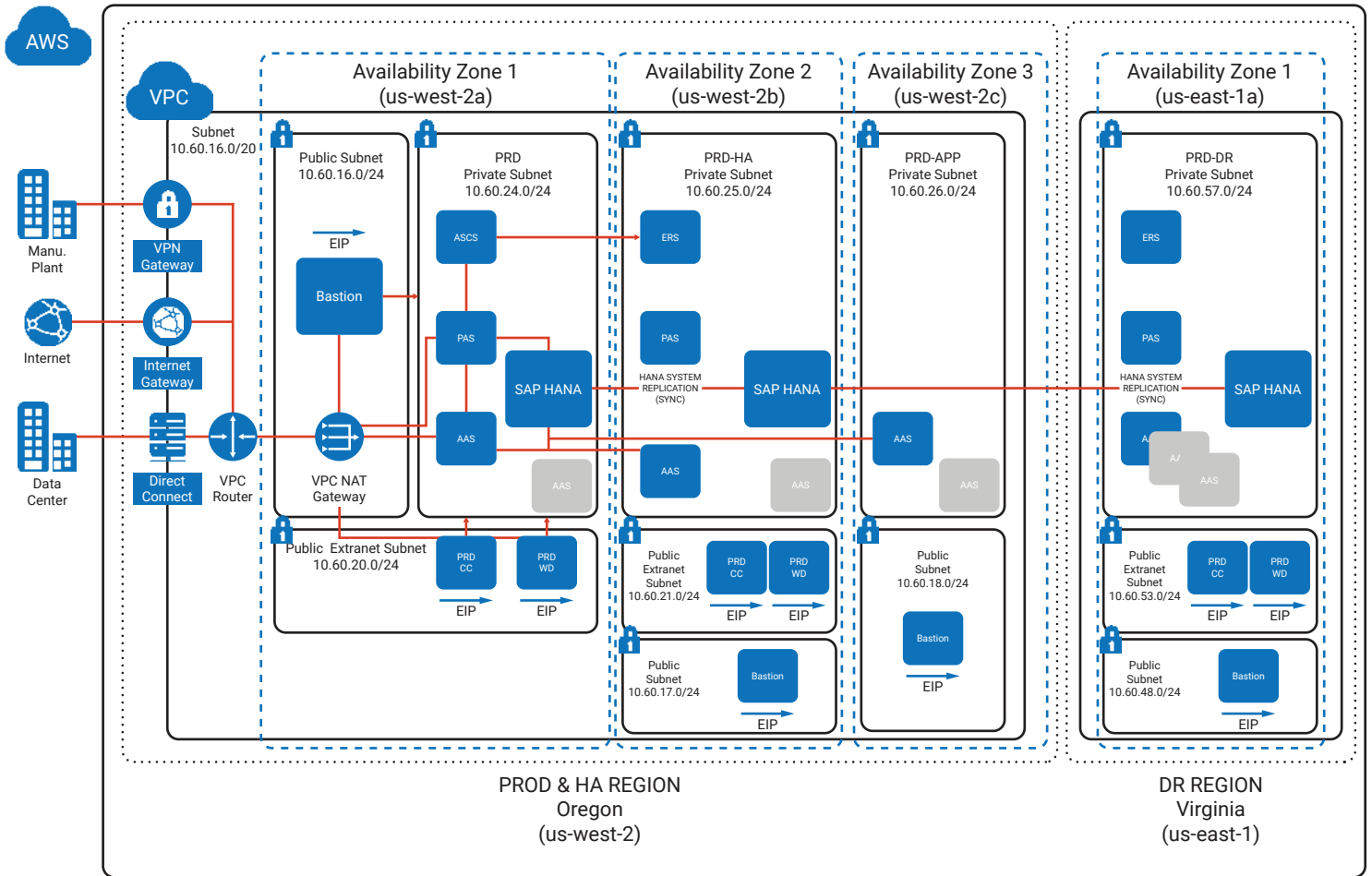
Diagram: Karma's Architecture on AWS

Increasing Production Speed and Focusing on Predictive Analytics

Since migrating to AWS and upgrading to S/4HANA 2.0, Karma has almost doubled the speed and the performance of its database. The company continues to lean on NTT for its expertise in SAP and the cloud. "We have a great relationship with NTT," says Gohil. "They were very flexible throughout our migration. We collaborated closely, and that helped us ensure the success of the project. We continue to work hand-in-hand in very flexible ways." Karma continues to expand its SAP footprint on AWS and is currently migrating its hybrid SAP commerce system into its AWS environment.

By building on AWS, Gohil and the team are empowered to continue focusing time and effort developing on its key pillars.

"Now, we are working on predictive analytics; we want to analyze our data and have the ability to proactively anticipate and address events for our customers. We want to stop trouble in its tracks. Ideally, we don't want customers to have to deal with any issues, because we've been able to anticipate and address them before they become issues," says Gohil. "We're invested in using AWS broadly and feel that building on AWS gives us a platform to bring our data together—from our AWS data lake and data from the business on manufacturing—to do more predictive analytics."

About the Managed Services division of NTT

The Managed Services division of NTT, Americas (formerly Secure-24) is an SAP-certified cloud and infrastructure, hosting, and SAP HANA operations services provider, a Microsoft Gold Partner, with an SAP on Microsoft Azure Advanced Specialization, an Amazon Web Services Consulting Partner, and an Oracle Partner managing Oracle E-Business Suite, PeopleSoft, JD Edwards and Hyperion applications across all industries for businesses of every size.

For more information, contact us at:

✉ info@secure-24.com

🌐 www.secure-24.com | hello.global.ntt

☎ 800.332.0076