



ClearScale Delivers Seamless Post-Merger Transition to AWS for ServSuite, a ServiceTitan Company



Industry: Software and Internet
Tags: AWS, Migration

Challenge: FieldRoutes, a ServiceTitan Company, wanted to move one of its platforms, ServSuite, from an on-premises hosted data center model to the AWS cloud.

Solution: ClearScale architected and assisted in the migration of the platform to AWS, and provided automation solutions around consistent and repeatable processes for future service deployments within the platform.

Benefits: The company now has a faster, more elastic, and less expensive infrastructure based in the AWS service cloud that can take advantage of automated CI/CD pipelines for a faster application lifecycle and overall better application performance and ultimately functionality.

AWS Services: Amazon Route 53, Amazon S3, AWS CodeDeploy, Amazon RDS, AWS Organizations, and AWS FSx.

Executive Summary

[FieldRoutes](#) is a cloud-based and mobile SaaS provider for field service businesses. The platform automates all aspects of field service operations for enterprise and small business customers to accelerate growth, streamline operations, increase customer retention, and maximize revenue.

FieldRoutes was searching for a solution to move a software solution that had recently come under its control from a data center to an AWS environment. Despite a tight window for completing the project, ClearScale successfully handled the migration and improved the architecture, automation, and security of the application.

“Our collaboration with ClearScale was the right decision. Having successfully worked with ClearScale on prior projects, we understood the value that ClearScale could bring to this new opportunity. Navigating the complexities of this migration from the data center to AWS was daunting, especially given our tight window, but ClearScale was able to skillfully manage and enhance the entire process, ensuring not just a seamless migration but also providing significant improvements to the platform architecture, automation, and overall security of the migrated platform. We now have a more agile, cost-efficient, and well-secured infrastructure, which is instrumental in driving our vision of continuous growth and innovation.”

Mykola Machnowsky, VP of Infrastructure and Security, FieldRoutes

The Challenge

When companies undergo mergers or acquisitions, efficiencies and opportunities often arise while sorting out both organizations' information technology. That was the case when ServiceTitan, a leading software provider for the trades, acquired both FieldRoutes and ServicePro, SaaS providers for field service businesses. FieldRoutes was then given the opportunity to take over control and management of ServicePro, a software solution for the pest, lawn, and arbor industries.

FieldRoutes wanted to move the ServicePro application, from the on-premises data center where it had been based, to AWS, so that it could leverage the same benefits and consistent management as its own SaaS solution, which is also based in AWS. But doing so presented several challenges:

- **A volatile, changing landscape** - Initially, ServicePRO had over 60 SQL servers (2019 Standard and Enterprise edition) in its data center with approximately 3,000 databases. The company started consolidating the servers so that by the time of the actual migration, there would be 27 SQL servers, including 4 multi-AZ, 3 Enterprise, and four SQL-Server Reporting Services (SSRS) servers.
- **A complex tech stack** - ServicePRO needed approximately 20 standalone instances of EC2 on AWS, 7 GPS EC2s with Elastic IP addresses, autoscaling groups (ASG), and custom server images built with Packer. It also required AWS FSx file systems with self-managed Active Directory, IIS Web servers (Internet Information Services for Windows®), and disaster recovery.

Technologies and tools involved in the project included RDS, ElastiCache-Redis, S3, CloudWatch, Terraform/Terragrunt, CI/CD, CodeDeploy, Packer, SQL Server, SQL Server Reporting Services (SSRS), FSx, and ManagedAD.

- **Tight migration window** - Finally, the migration of all tenant services to AWS had to happen in multiple batches during pre-defined, agreed-upon downtime on off hour periods to minimize any impact to clients and their customers. To complete the migration and configuration on AWS in a short timeframe, ServicePRO needed automated pipelines to build and configure the target environment and fast upload speeds to copy and restore the multi-GB databases from the data center to AWS.



The ClearScale Solution

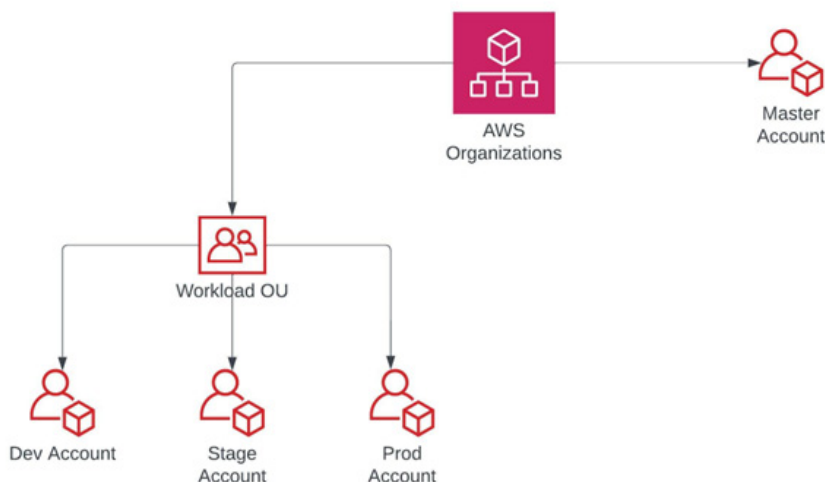
ClearScale kicked off the migration process by creating a blueprint of the AWS target configurations, services, and networking setup with clear definitions (e.g., EC2 instance types, SQL-Server sizes, and versions) for the development, staging, and production accounts. Infrastructure as Code (IaC) was used to set up each environment, create the networking and infrastructure components, and deploy the target accounts.

ClearScale also worked with the customer to identify migration options for the short weekend timeouts. Among the solutions: ServicePro could secure larger network bandwidth to enable fast backup-and-restore to the databases being migrated.

During the project, however, additional challenges arose. ServicePro delayed signing the contract for the [AWS Migration Acceleration Program \(MAP\)](#). The program changed after ClearScale had already implemented MAP tags. This required ClearScale to work with AWS to apply the correct Migration Program Engagement Number (MPE) tags to the migrated resources and make sure the MAP program discounts to the customer were applied with the correct resource tags.

Because the FieldRoutes team handled most of the database backup from the datacenter and restore into AWS, ClearScale was able to shift the database budget and deliver extra scope that added significant value to the overall solution. This extra scope included SSRS, ManagedAD, Backup Transfer using SFTP, six SQL agent jobs, pipeline trigger improvements, UAT environment, and the deployment pipeline using AMI.

ClearScale wrapped up the project by delivering detailed diagrams of architectural design, documentation for all Terraform code, runbooks for the IaC pipelines, and detailed environment setup instructions. The customer was able to disconnect the ServicePro app from the data center and cutover to the new AWS environment on time.



The Benefits

At the end of the project, ClearScale identified unused budget hours that could be applied to cover out-of-scope, value-added services. The additional services included backup transfer using SFTP, 6 SQL agent jobs, pipeline trigger improvements, and an AWS User Acceptance Testing (UAT) account to be used for testing applications and environmental changes before deploying them on production.

With the migration to AWS completed, the customer now has faster, more elastic, and less expensive cloud infrastructure. The automated CI/CD pipelines enable faster application lifecycle and better operability of the application and the infrastructure.

About ClearScale

ClearScale is a cloud-native systems integration, strategic consulting, and application development company founded in 2011. The company has successfully delivered more than 1,000 innovative cloud projects for clients ranging from startups to large enterprises across all major industries. ClearScale's cloud experts design, implement, optimize, and manage customized cloud solutions that help customers achieve their business transformation initiatives.

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