

7Factor Customer Case Study: Aveanna Healthcare

Microsoft SQL Server on EC2 → RDS Aurora MySQL

Challenge

Aveanna Healthcare's 30,000 home healthcare professionals provide daily critical care to pediatric and special needs patients. Operating in a highly regulated industry that includes HIPAA protections and electronic reporting requirements for Medicaid reimbursement, Aveanna relies on dozens of cloud-based apps and web services to manage the complex logistics of their company.

However, an existing IT infrastructure built on bare metal EC2 and Microsoft SQL Server required laborious manual intervention by a dedicated team to maintain and scale, and frequently resulted in query timeouts, poor response time on APIs, volumes filling up, and problems with logs. Aveanna's infrastructure was unable to support the company's rapid growth and aggressive plans for digital transformation, including new electronic reporting requirements from the Centers for Medicare and Medicaid Services.

Solution

7Factor recommended migrating Aveanna's infrastructure to AWS auto-scaling clusters with cloud-based container orchestration, including ECS clusters for compute services and an Aurora MySQL cluster managed by RDS for database services. With a limited six-hour window of planned downtime for the migration, 7Factor's engineers used AWS Schema Conversion Tool to plan the migration, then AWS Database Migration Service to execute it.

Several Aveanna mobile apps relied on the database and would cease to function if not reconfigured to use the new Aurora database cluster once the database migration was complete. But because mobile app updates couldn't be pushed out during the six-hour window of planned downtime, 7Factor's engineers deployed a clever API toggle feature, rolling out the update in advance of the database migration. Once the migration was complete, a simple update to the old API's configuration signaled the mobile apps to switch to the new API.

Results & Benefits

7Factor's migration of Aveanna's IT infrastructure fully leverages the rich landscape of AWS services, offering several benefits over dedicated VMs with minimal maintenance effort required. These benefits include automatic SOC 2 compliance, HIPAA-required separation of concerns, and other mandated practices for handling protected personal information. AWS's auto-scaling clusters with cloud-based container orchestration also accelerated Aveanna's web apps, allowed effortless scaling, and greatly enhanced stability and reliability.

Aveanna's new IT infrastructure now supports the company's rapid growth and ongoing digital transformation, providing a solid foundation on which to innovate and accelerate as they provide their critical home care services to tens of thousands of homes.