

## Arizona Department of Transportation Case Study

**Project:** Mobilization of Data Center to AWS

**Company:** Arizona Department of Transportation

**Industry:** Transportation

### About:

Eplexity engaged Arizona Department of Transportation (ADOT) in August, 2019 to perform an Assessment of their current data center environment, utilizing the Migration Acceleration Program (MAP). Through the MAP Assess phase, Eplexity conducted a Migration Readiness Assessment (MRA), Application Portfolio Analysis and Migration Plan which all contributed to a detailed business case presented to key stakeholders at ADOT for migrating to AWS.



After a successful Assess phase, Eplexity began working on Mobilizing and Migrating ADOT to AWS through each of their respective MAP phases.



Conducted an MRA, application portfolio, and migration Plan.



EPLEXITY built an operational foundation for the migration, with a goal of fixing the capability gaps identified in the assessment phase.

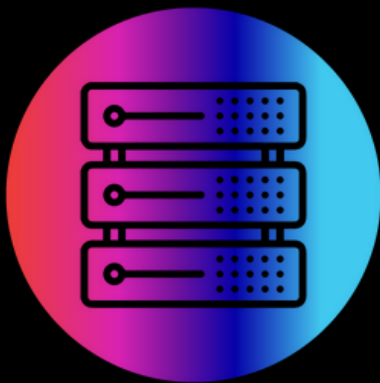


The migration plan was created to ensure that every step of the migration to AWS would be successful, efficient, and with very little downtime.

# Challenge

ADOT was a special circumstance project that covered a variety of migration efforts to accomplish a goal. First and foremost, there was a time limit to the AWS cloud migration effort, aka: the Data Center needed to be evacuated before a specific time. Additionally, a separate work stream was used for re-platforming of legacy systems and modernization.

The urgency of the data center evacuation resulted in the utilization of Cloud Endure as the primary rehosting method due to it's efficiency. However, the difficulty there was not all servers were prime candidates for a rehosting, over half of the servers were Out of Support with the vendor and would need to be upgraded to a supported OS.



Urgent need to evacuate the data center.



A separate work stream was used for re-platforming of legacy systems and modernization.



Many servers needed to be upgraded to a Supported OS.

# Solution

During the assessment phase of this project we identified over 400 servers to be moved or retired from the physical datacenter. Utilizing AWS CloudEndure, these servers would be categorized into first and last cuts with over 200 eligible for migration in the first cut, and an additional 180 in the final transition to AWS. Over a period of 8 weeks, Eplexity worked with the client to plan waves of servers to be migrated each weekend, lining up the app owners, server owners and testing procedures to assure that the server migrated matched the server source.

Throughout the migration effort, Eplexity utilized the AWS Systems Manager to ensure unsupported Operating Systems would receive the proper upgrades necessary to support successful migrations. For those few servers that failed to meet the criteria for re-hosting or re-platforming; and, for those assessed applications that could be updated, Eplexity employed a modernization effort to rearchitect the application through AWS native services, such as Code Pipeline and Code Deploy.

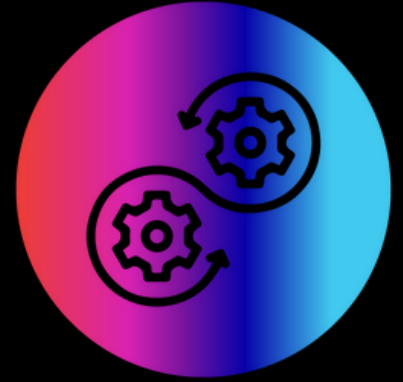
In all, over 94 Applications were rearchitected to work in this first phase App modernization design. This was the ultimately desired state of all applications for the client. To adopt a CI/CD process that became independent and adaptable, and could eventually be used in an immutable architecture as the client adopts micro-services.



CloudEndure was used to migrate servers to AWS.



AWS Systems Manager was used to upgrade unsupported servers to support the migration.



CI/CD process was adopted.

## Outcome:

Following the 6 R's of AWS migration, Eplexity rehosted, replatformed, refactored, or retired over 400 servers, with 180 servers and 94 applications ultimately making their way to AWS.

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