SUMMARY

The client had hundreds of web applications running in an on-prem data center, deployed to Java application servers running on traditional VM-based infrastructure. Some of these applications had been around for over 20 years, and supported critical business functionality. Their architecture needed to be modernized and migrated to the cloud, however, due to the age and deep integration within the organization, many applications shared interconnected components, including mainframes, databases, queues, NFS shares, and various networking appliances. "Lift-and-Shift" would be a difficult task, and the client didn't want to move costs to a cloud provider without being able to take advantage of the elasticity and global availability of the cloud.

SOLUTION

A Kubernetes cluster was created spanning their data center, using the pre-existing infrastructure environment. Applications were "Mavenized then Containerized", allowing them to run on Kubernetes. The cluster ran in the same on-prem environment as the other components, so applications could connect to their dependencies without big changes. All major cloud providers have a managed Kubernetes offering, and it behaves the same on-prem as it does with these managed offerings. Minimal effort was needed to move applications to the cloud; essentially, the deployment pipeline was updated to point to a different Kubernetes cluster, and the client's team was able to upskill without throwing out their knowledge of the on-prem environment.

Our team's expertise in Kubernetes helped create, configure, upgrade and maintain the on-prem cluster, along with establishing patterns for future cluster deployments. The data center will remain a part of the client's infrastructure for the foreseeable future, and Kubernetes brought consistency between the on-prem environment and the cloud.

RESULTS

100% fully eliminated dedicated IBM application servers	**>85%** Of migrated legacy applications moved to Kubernetes