



APPLICATION MODERNIZATION WITH KUBERNETES ON AZURE - 4 WEEK POC

PoC implementation and migration to Microsoft Azure



Need help migrating your applications to Azure?

Modernize your applications to cloud architecture using Open Source technologies.

Re-Host --> Re-Factor --> Re-Architect --> Re-Build

Application modernization is a journey. With containers and Kubernetes, it doesn't have to be a risky "rip out and replace" endeavour to migrate your existing applications to Azure. You can immediately benefit through containerizing your application and Re-Hosting your application on Kubernetes.

Then, according to your priorities, you can go further through Re-Factoring, Re-Architecting and Re-Building your application. In this four week POC, our application, and platform engineers will work with your team to Re-Host one of your existing applications to Kubernetes on Azure.

The cost of this 4 week POC is \$50,000. Ask us about Azure credit of up to \$25,000.

Are Containers and Kubernetes Complex?

Dynamic architectures where services are scaled, deployed, and modified independently of each other are indeed complex. In fact, until recently the ability to do all this was not practical for

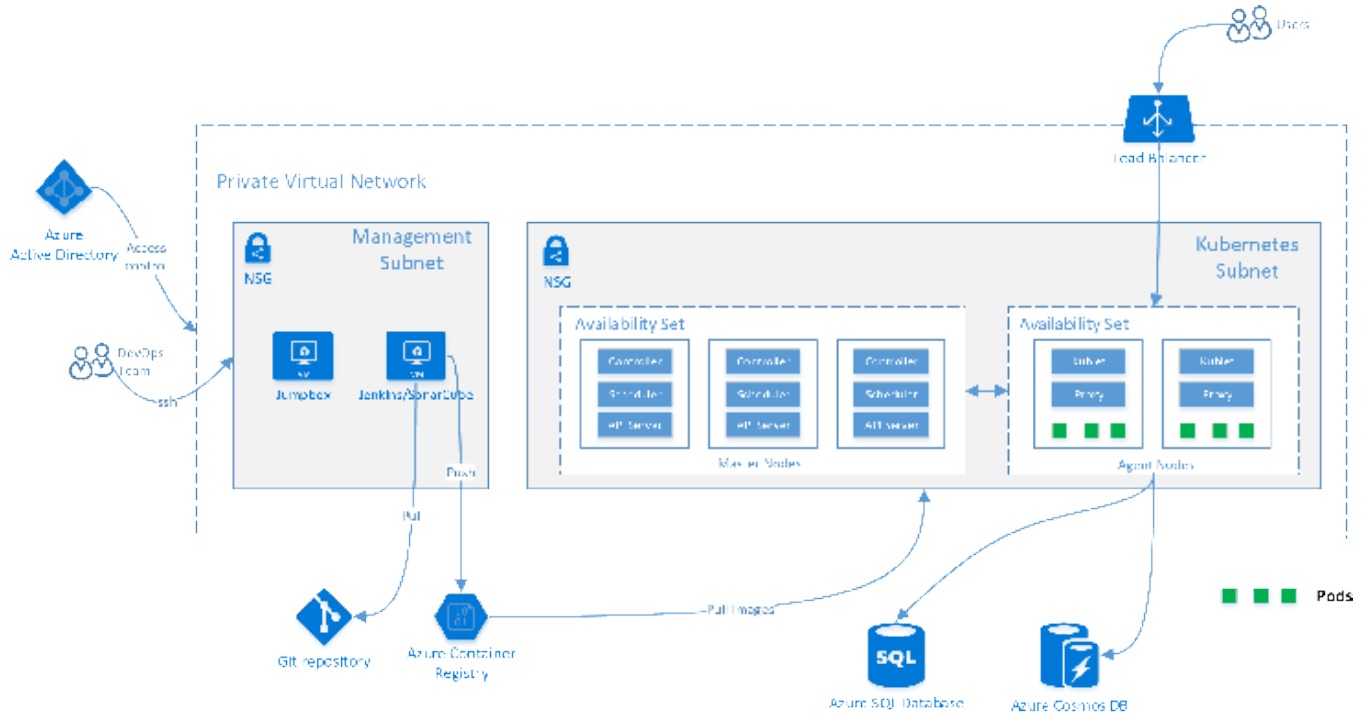
all but the most advanced engineering organizations. However, with Azure Kubernetes Service (AKS), the management, deployment and operation of Kubernetes is vastly simplified.



What Does a Typical Container-Based architecture Look Like?

Below is a typical Kubernetes deployment on Azure. The Kubernetes cluster would be deployed using the Azure Container Service, which provides the tooling to configure and deploy the cluster in an automated manner. For high availability, the multiple master nodes (either 3 or 5) will be deployed into its own availability set, and required number of agent nodes (also known as the worker nodes) into a separate availability set. The candidate application to be migrated would be decomposed of “Pods”, which is Kubernetes’ unit

of deployment and is comprised of one or more containers. Because containers are technology agnostic, you will be able to implement your application in the technology that best meets the needs of your organization and team. A Jenkins server with SonarQube static analysis would be deployed to a separate “Management” subnet and would be responsible for automated testing, building and verifying the container images, and publishing the image to a Container Registry. A separate Jenkins pipeline would deploy the new containers to Kubernetes.



How Does It Work?

To help you modernize and Re-Host one of your existing solutions to a container-based architecture using Kubernetes on Azure, Architech offers a simple engagement with a three-step approach. To help you modernize your existing solutions to container-based architectures, Architech offers a simple engagement approach:

1. Assess candidate solutions for migration. These solutions are scored based on the following criteria for prioritization:
 - Value of the system to the business.
 - Would the system benefit from migration to a container-based architecture? Not all systems will benefit from dynamic scaling, rapid change, and other considerations of such a modern architecture.
 - Complexity and level of effort for migration.
2. Participate in a “Kubernetes on Azure Bootcamp” tailored for your development and operations teams using our Azure reference architecture as an example. Your team will learn about core Kubernetes concepts such as deployments, services, statefulsets, daemonsets, autoscaling, the key tools such as kubectl and helm, and monitoring and logging fundamentals, as well as container best-practices, continuous integration for containers, and more.
3. Architech’s Platform and Application engineers will then work side-by-side with your development and operations teams to plan, prioritize and migrate your systems to a container-based architecture. The outcome will be your systems will be migrated and your development and operations teams will “learn by doing” – setting them up to successfully take ownership of the systems and the new deployment processes.

Benefits

- Increased Developer and Operations productivity by ensuring consistency from developer machine to production.
- Cost savings through more efficient utilization of infrastructure capacity from intelligent scheduling of workloads.
- Faster time to market for new features from automation and incremental deployment of features (vs the high risk, big bang approach)
- Greater resilience and reduced MTTR (mean time to repair) by leveraging Kubernetes capabilities such as deployments, replicasets, auto-scaling, cross cluster monitoring, and logging.
- Hire and retain the best software engineering talent. Leveraging best in-class open source technologies and engineering practices are proven to be key factors in attracting great talent.
- Use the migration as an opportunity to address any backlog of unmet changes needed, including improving the user experience, extending the feature set, driving operational efficiencies, and addressing legacy quality issues.
- Peace of mind using a experienced migration team to help with your modernization efforts.

A Typical Architech Team

Architech will provide a professional modernization team to rapidly optimize and re-deploy your application to the new architecture. Depending on the number of applications and complexities of each, this can include a mix of Solution Architects, Technical Leads, DevOps Platform Engineers, Application Engineers, Project Managers, Business Analysts and Designers as appropriate.

Why Architech

Architech is a digital product studio and System Integrator. We design and deliver user-centered, cloud-native solutions, up to 87% faster. Using design thinking and agile engineering, we solve complex problems for our clients.

Since 2004, we've been designing and engineering resilient software. We've worked with hundreds of clients to drive digital transformation across diverse industries, and have built a range of highly available systems, processed millions of transactions, and given users a voice.

Architech is a Microsoft Gold Partner.



Ask us how we can migrate and architect you applications for the cloud.

Contact Us | kubernetes@architech.ca