

# Modernize Applications with Microservices Architecture using Amazon Elastic Kubernetes Service (Amazon EKS)

Integrate Amazon EKS with VMware Cloud on AWS and use AWS DevOps tools to accelerate application modernization

## Integrate Amazon EKS with VMware Cloud on AWS

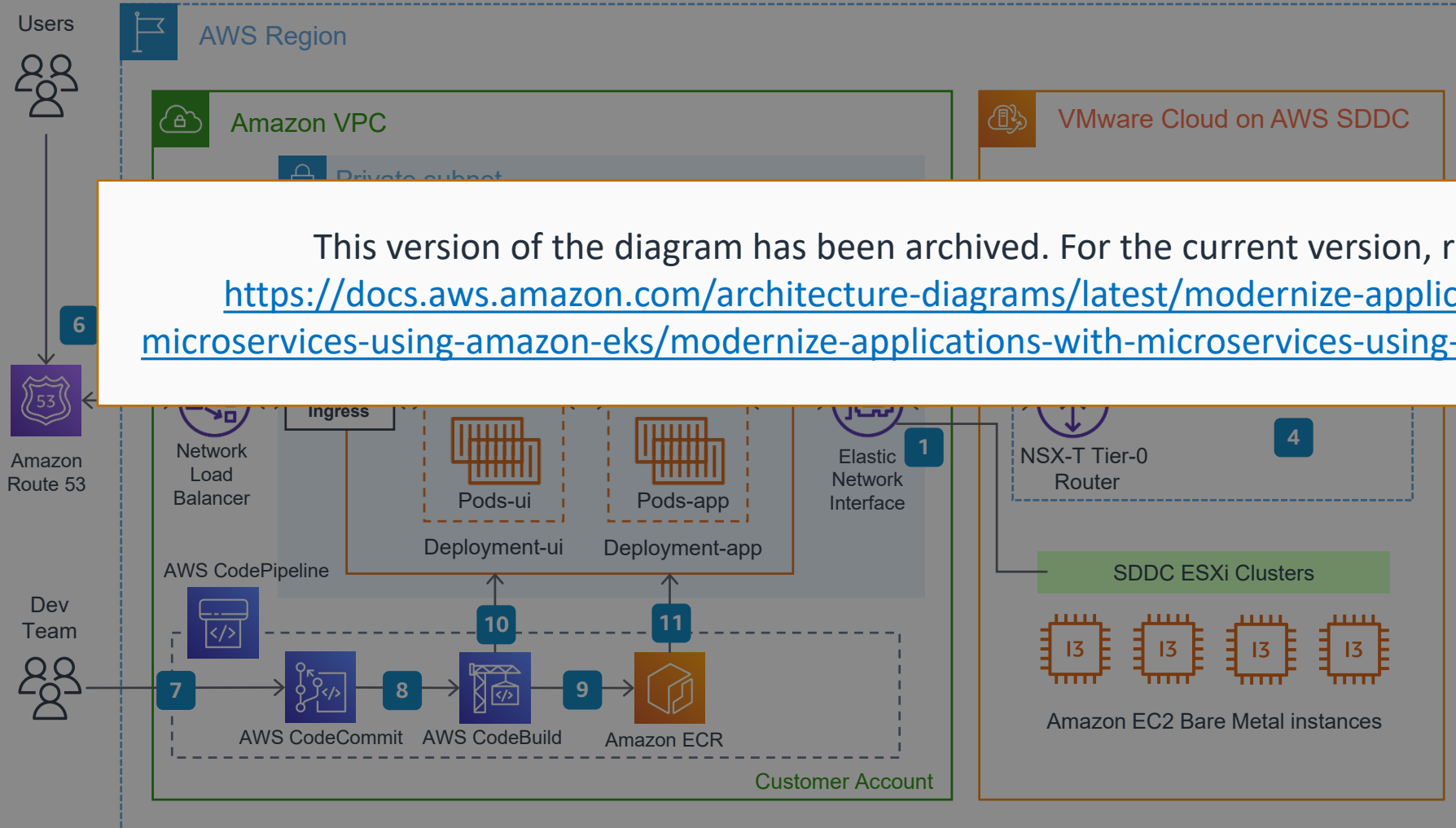
- 1 The Elastic Network Interface is automatically attached to the EC2 bare metal (ESXi) hosts in **VMware Cloud on AWS** during the software-defined data center (SDDC) provisioning.
- 2 Provision fully managed **Amazon EKS** clusters for different environments (dev/test/production).
- 3 Use tools such as **AWS App2Container (A2C)** to accelerate refactoring/rearchitecting applications into containerized microservices, and use **Amazon EKS** to manage and automate the testing and deployment of container workloads.

ize legacy systems to minimum disruptions, database tier running on to avoid the complexity migrations.  
tegrates with Kubernetes ng a secure and exposing applications.

- 6 **Amazon Route 53** resolves incoming requests to the Network Load Balancer in the primary AWS Region.

## Use AWS DevOps tools with Amazon EKS

- 7 Dev team commits code to an **AWS CodeCommit** repository, which triggers **AWS CodePipeline** to start processing the code changes through the pipeline.
- 8 **AWS CodeBuild** packages the code changes and dependencies and builds a Docker image.
- 9 The new Docker image is pushed to **Amazon Elastic Container Registry (Amazon ECR)**.
- 10 **AWS CodeBuild** uses *Kubectl* command line tool to invoke Kubernetes API and update the image tag for the microservice deployment.
- 11 Kubernetes performs a rolling update of the pods in the application deployment as per the new docker image specified in **Amazon ECR**.



This version of the diagram has been archived. For the current version, refer to <https://docs.aws.amazon.com/architecture-diagrams/latest/modernize-applications-with-microservices-using-amazon-eks/modernize-applications-with-microservices-using-amazon-eks.html>



Reviewed for technical accuracy April 12, 2021

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**AWS Reference Architecture**