
AWS
re:Invent

EMB018

Amazon EKS Anywhere: Manage your Kubernetes clusters on premises

Allan Naim

Principal Product Manager, Amazon EKS

AWS

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Kubernetes on AWS

Amazon EKS provides the best Kubernetes experience



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Amazon EKS



Amazon EKS

- AWS does not modify Kubernetes. EKS is an upstream and certified conformant version of Kubernetes (with backported security fixes).
- AWS supports 4 versions of Kubernetes. This gives customers time to test and roll out upgrades.
- EKS provides a managed Kubernetes experience for performant, reliable, and secure Kubernetes clusters.
- EKS makes Kubernetes operations, administration, and management simple and boring.

Deploy a fully managed Kubernetes control plane based on open standards

What do we have now?

On premises

AWS Cloud

	Amazon EKS + AWS Outposts	Amazon EKS + Amazon EC2	Amazon EKS + AWS Fargate
			
Control plane	aws	aws	aws
Compute	aws	aws	aws
Data plane	Customer	Customer	aws
Support	aws	aws	aws

Fully managed

Customer challenges



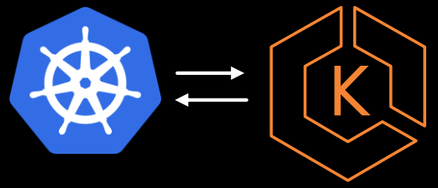
Leverage existing investments



Governance



Regulatory and data residency requirements



Complexity of operating Kubernetes across on-premises and cloud



Reduce cost



Ensuring open-source software is secure and up to date

Running Kubernetes clusters on premises



EKS Distro

Available now

EKS Distro provides customers **version, patching, and security alignment** with Amazon EKS



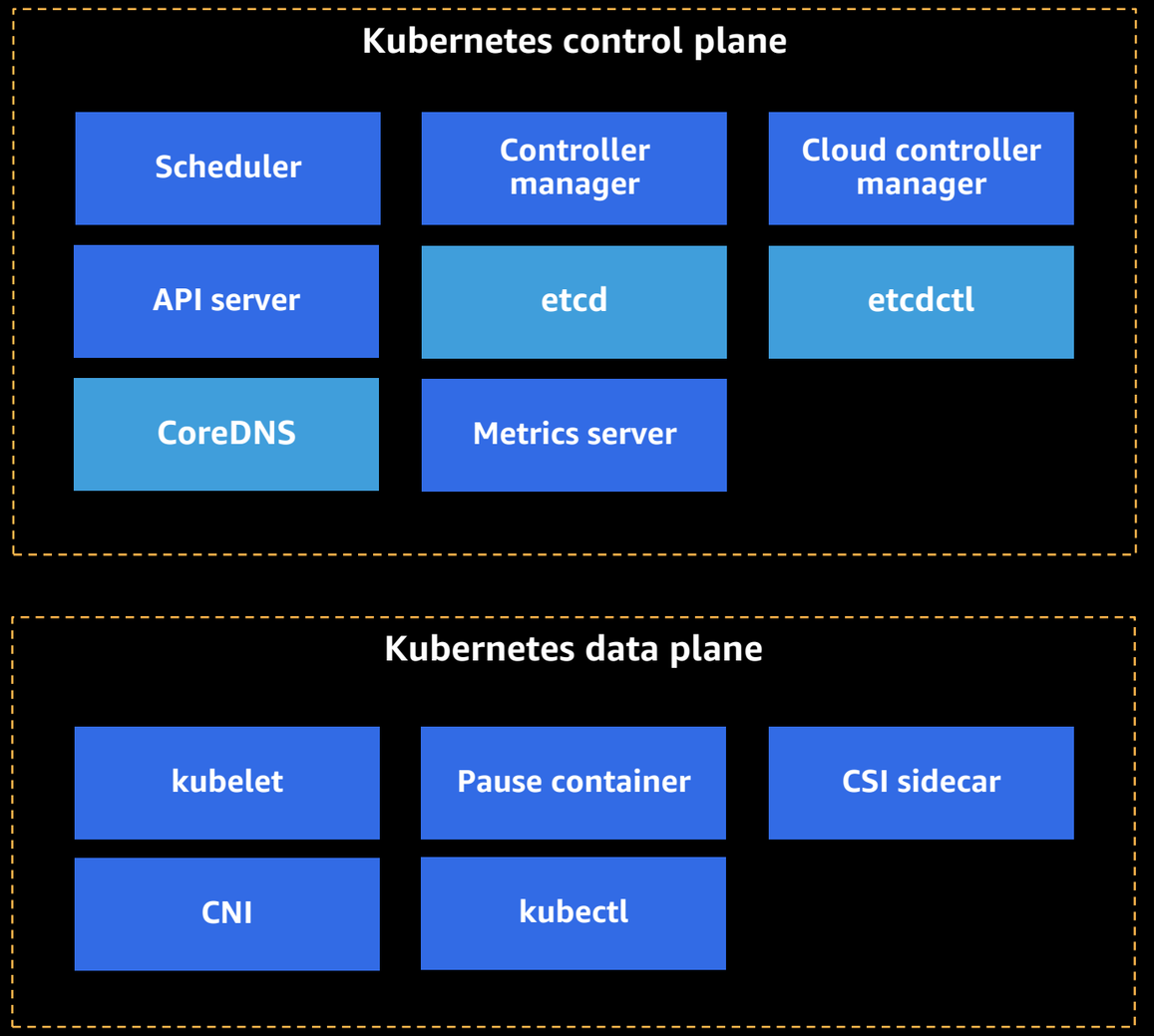
EKS Anywhere

Coming soon

EKS Anywhere provides cluster creation and **lifecycle** with a set of management tools for EKS Distro

What is Amazon EKS Distro?

- Kubernetes open-source components used by Amazon EKS and power EKS Anywhere
- Security patches, tooling, and configurations that will be adopted by upstream
- Backport fixes to versions supported by Amazon EKS
- Validated to be reliable and secure
- EKS Distro builds are reproducible using the published tools and environment variables

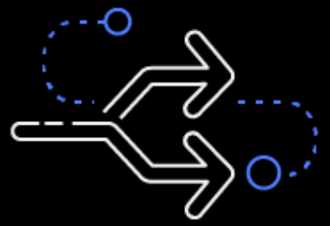


Announcing Amazon EKS Anywhere

Create and operate Kubernetes in your data center and on your existing hardware using the same consistent EKS experience



Helps you run with secure, stable, and tested components used to run Amazon EKS



Built on open-source standards cluster lifecycle management tooling



Bundled with components to accelerate readiness of production clusters



Bring your existing bare metal / self-managed compute

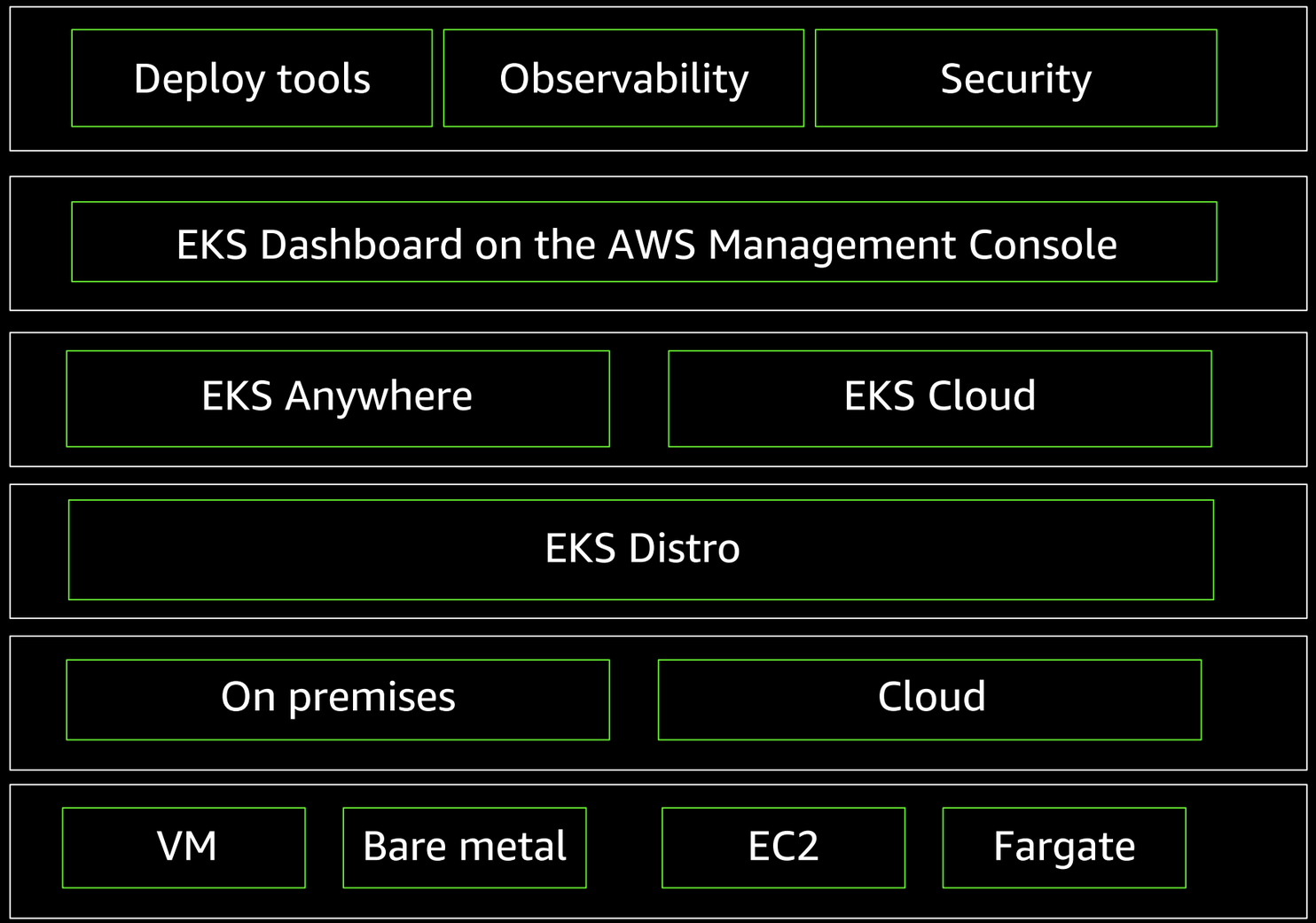
Deploy and manage the lifecycle of EKS Distro clusters on premises

Consistent tooling



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Same operational experience across on-premises and cloud



Open source



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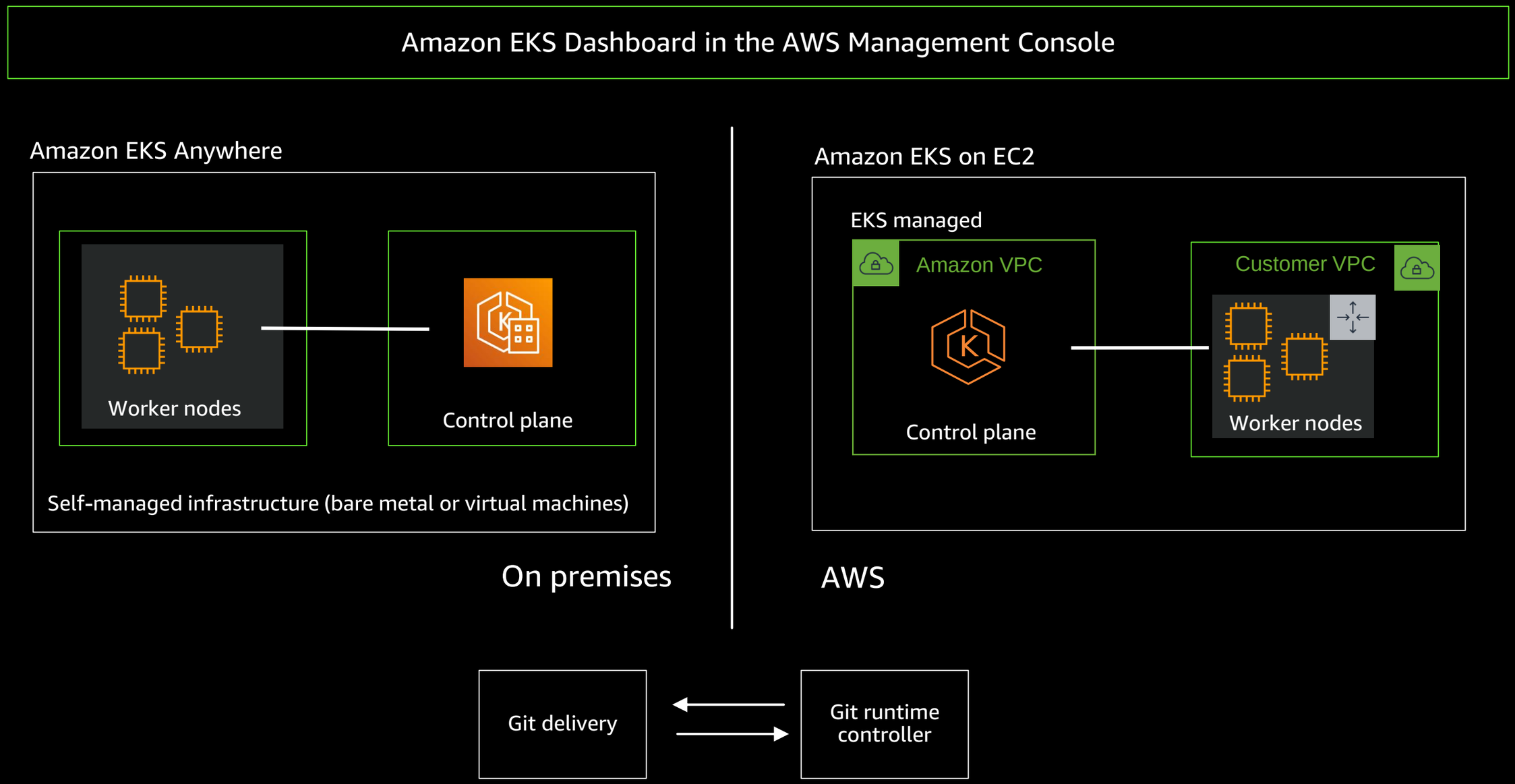
GitOps-driven



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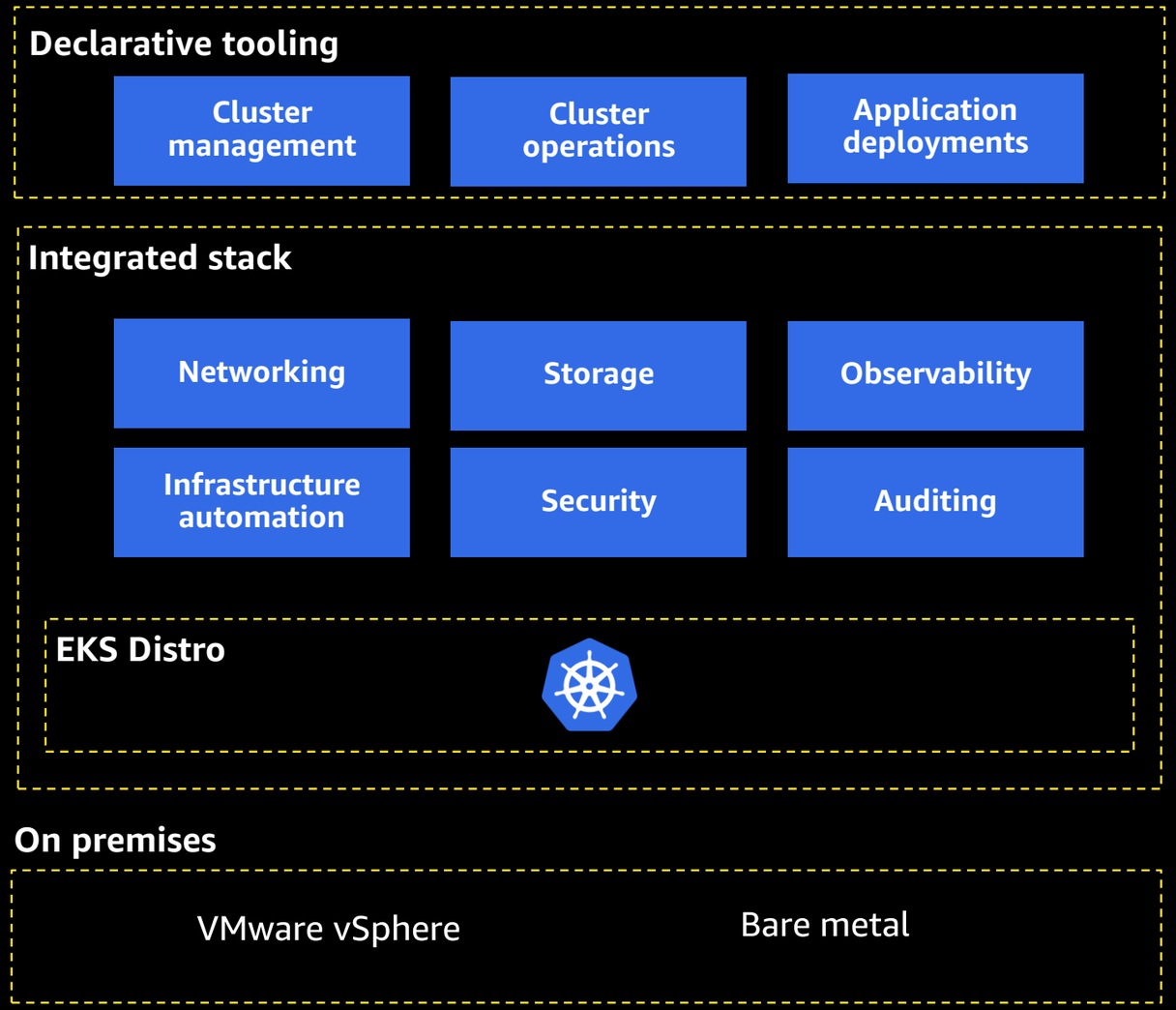
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Amazon EKS Anywhere architecture



EKS Anywhere components

- Create and operate Kubernetes clusters with consistent tooling
- Automation tooling optimized for on-premises environments
- Installation, upgrades, and ongoing operations with minimal disruption



Deploying applications with Amazon EKS Anywhere



Amazon EKS Anywhere

Manage EKS Distro Kubernetes clusters



Self-managed resources

Bare metal and virtual machines on premises and Amazon EC2 instances



Run Kubernetes applications



Amazon EKS dashboard in the AWS Management Console

View and explore running Kubernetes applications

EKS Anywhere use cases

- Train ML models once and run them anywhere
- Workload migration to AWS
- Application modernization
- Data sovereignty
- Bursting to AWS

Fully supported by AWS



24/7 support engineers work alongside your infrastructure engineers to keep your systems up and running



Well-architected reviews to ensure your environment are ready to handle your mission-critical workloads



Amazon EKS subject matter experts, support concierge, and technical account manager

Summary

On premises

AWS Cloud

	Amazon EKS Distro	Amazon EKS Anywhere	Amazon EKS + AWS Outposts	Amazon EKS + Amazon EC2	Amazon EKS + AWS Fargate
Control plane	Customer	Customer	aws	aws	aws
Compute	Customer	Customer	aws	aws	aws
Data plane	Customer	Customer	Customer	Customer	aws
Support	Community	aws	aws	aws	aws

Next steps

To learn more about EKS Anywhere, visit
aws.amazon.com/eks/eks-anywhere

To learn more about EKS Distro, visit
aws.amazon.com/eks/eks-distro

Thank you!



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