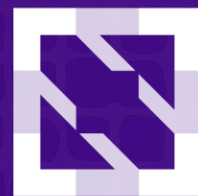




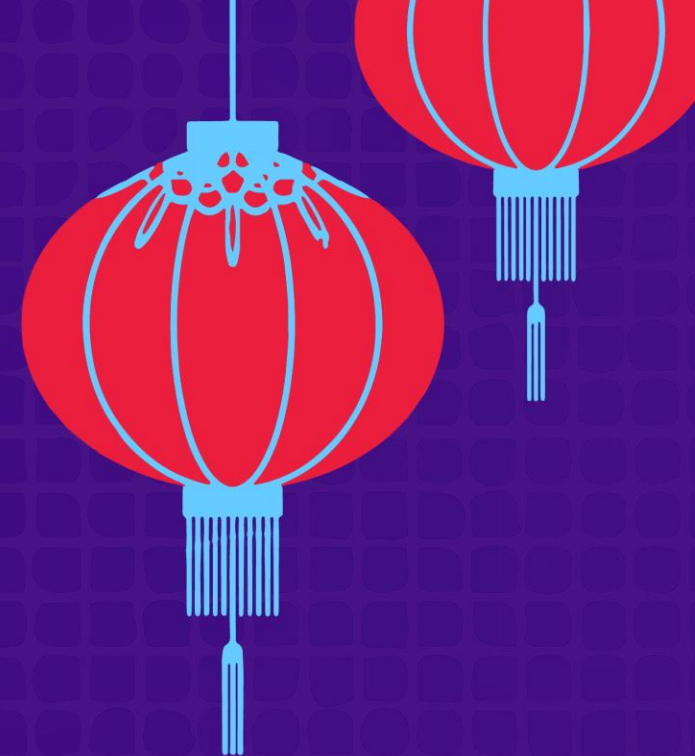
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Intro + Deep Dive: SIG Azure


Pengfei Li, Microsoft GH: @feiskyer TW & SL: @feisky

Craig Peters, Microsoft GH & SL: @craiglpeters TW: @peterscraig







Feisky
中国



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craig peters



Scan the QR code to add me on WeChat

How many of you?



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Participate in SIG Azure meetings?

Run your clusters on Azure?

Use aks-engine?

Use AKS?

Came here wanting to help?

Came here with questions you want answered?

Who is SIG Azure?



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A Special Interest Group for building, deploying, maintaining, supporting, and using Kubernetes on Azure.

Chairs:

- Craig Peters, Microsoft
- Stephen Augustus, VMware

Technical Leads:

- Pengfei Li, Microsoft
- Kal Khendiak, Microsoft

Ref: <https://github.com/kubernetes/community/tree/master/sig-azure>

Why does this SIG exist?



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Implement and maintain Azure APIs in the Kubernetes Cloud Controller Manager

Why do the cloud specific SIGs exist?

- All the cloud providers are moving to subprojects of SIG Cloud Provider, with subprojects moving to appropriate other sigs:
 - Cloud Provider Azure -> SIG Cloud Provider
 - Cluster API Provider Azure -> SIG Cluster Lifecycle
 - CSI Drivers Azure -> SIG Storage

Refs: <https://github.com/kubernetes/community/tree/master/sig-cloud-provider> and <https://docs.google.com/document/d/1qXeSP5v-4OaS-2LA789kTwAT3Xn9c528FLIsWp6GaVw/edit?usp=sharing>

Recent Accomplishments



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- Out-of-tree Cloud Provider: alpha of Azure cloud-controller-manager
<https://github.com/kubernetes/cloud-provider-azure>
- Cluster-api-provider-azure <https://github.com/kubernetes-sigs/cluster-api-provider-azure>
- E2e testing of cloud-provider-azure (using aks-engine)
- Managed Service Identity support
- Azure Disk: alpha of azure disk and azure file CSI drivers with support for Ultra SSD, Standard SSD, and Premium Azure Files
- Azure Load Balancer configuration
- Autoscaling, Virtual Machine Scale Sets, Availability Zones and cross resource group nodes were moved from Alpha to Beta

Ref: <https://kubernetes.io/docs/setup/release/notes/#azure>

Plans



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Cluster API Provider Azure (out of tree)

Secrets-store-csi-driver

AAD Pod Identity

Kubernetes on CosmosDB

IP v4/v6 Dual Stack

cluster-api-provider-azure (v0.2.1)



The Cluster API brings declarative, Kubernetes-style APIs to cluster creation, configuration and management.

- <https://github.com/kubernetes-sigs/cluster-api-provider-azure/blob/master/docs/getting-started.md>
- Finish moving everything out-of-tree
<https://github.com/kubernetes/enhancements/issues/667>
- Finish documenting the out-of-tree Azure cloud provider

Secrets Store CSI driver (preview)



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Integrates secrets stores with Kubernetes via a CSI volume

- Mounts secrets/keys/certs to pod using a CSI volume
- Supports CSI Inline volume (Kubernetes version v1.15+)
- Supports mounting multiple secrets store objects as a single volume
- Supports pod identity to restrict access with specific identities (WIP)
- Supports multiple secrets stores as providers:
 - Azure Keyvault
 - Hashicorp Vault
- <https://github.com/deislabs/secrets-store-csi-driver>

AAD Pod Identity (preview)



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Enables applications running in pods on Azure to securely access cloud resources by leveraging Azure Active Directory(AAD).

- Configure identities and bindings, to match pods with identities
- Pods will have discrete identity from the node
- <https://github.com/Azure/aad-pod-identity>
- Try it out!

Kubernetes on CosmosDB (preview)



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- Cosmos DB supports the etcd API (<https://docs.microsoft.com/en-us/azure/cosmos-db/etcd-api-introduction>)
- Allows you to use Azure Cosmos as the backing store for Kubernetes
- Implements the wire level protocol of etcd
- API servers use Cosmos just like it would for a locally installed etcd
- <https://github.com/Azure/aks-engine/blob/master/examples/cosmos-etcd/readme.md>
- Try it out!

IPv4/IPv6 Dual-stack Kubernetes



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- Work in Progress towards alpha
- Enabled multi-address family multi-interface pods
- Multi-release change
- First changes scheduled to land in 1.16
- <https://github.com/kubernetes/enhancements/blob/master/keps/sig-network/20180612-ipv4-ipv6-dual-stack.md>
- <https://github.com/kubernetes/kubernetes/pull/73977>
- Looking for PR reviews

How can I help?



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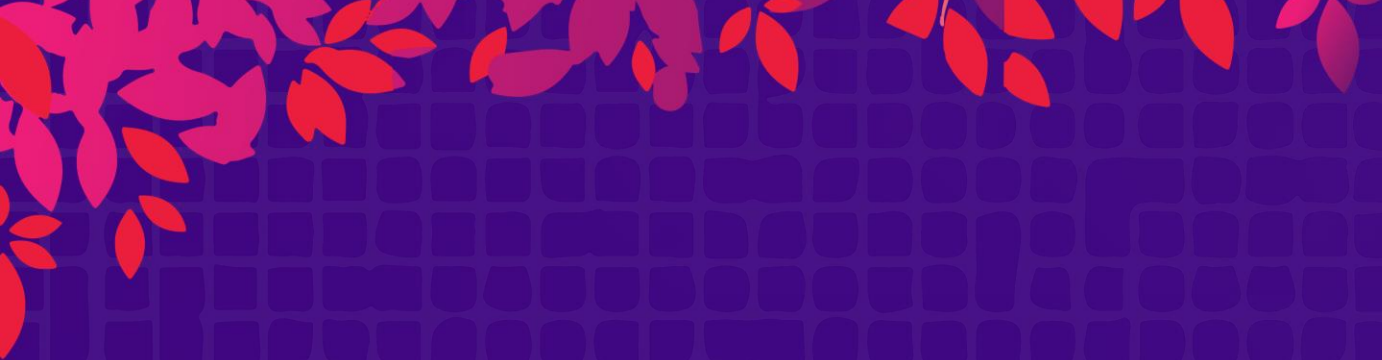
Join the mailing list and slack channel

Participate in SIG meetings: Wednesdays 16:00 UTC (change coming)

Review PRs

Pick up items on from the project board:

<https://github.com/orgs/kubernetes/projects/12>



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Questions?

