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Introduction to SIG-AWS

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Goals



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- Understand the SIG structure: why, what and where it is going?
- SIG-AWS subprojects
- SIG-AWS evolution into user group
- SIG-AWS needs you!

What is SIG-AWS?



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- SIG-AWS is responsible for AWS-specific kubernetes functionality
- Uniquely (?) a user-group: sig-aws on slack
- 3 co-chairs organize: @d-nishi, @justinsb, @kris-nova
- bi-weekly meetings (Fridays @9AM Pacific)
- Home page
- Mailing List kubernetes-sig-aws

What does SIG-AWS do?



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- Currently hosts 7 subprojects:

<https://github.com/kubernetes/community/tree/master/sig-aws#subproject-s>

1. [aws-alb-ingress-controller](#) Ingress controller for ALB
2. [aws-encryption-provider](#) Encrypt data in etcd using KMS
3. [aws-iam-authenticator](#) Use IAM for end-user authentication
4. [aws-ebs-csi-driver](#) CSI driver for EBS
5. [aws-efs-csi-driver](#) CSI driver for EFS
6. [aws-fsx-csi-driver](#) CSI driver for FSX
7. [cloud-provider-aws](#) in-tree cloud provider which is moving out-of-tree

What does SIG-AWS do?



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- k8s v1.15:
 - NLB beta release in-tree;
 - new alpha feature updates for alb-ingress-controller;
 - beta release for EBS CSI Driver;
 - alpha releases for other CSI Drivers
- Added 2 new subprojects - CSI Driver FSXi; CSI Driver EFS
- User Survey conducted with 31 responses and responses used to drive focus on subprojects for k8s 1.15:

<https://www.surveymonkey.com/results/SM-5D3Z8W9FV/>

Spotlight: AWS Ingress-controller



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What we did:

- E2E test cases and CI signal under <https://testgrid.k8s.io/>
- TLS certificate auto-discovery / multiple TLS certificate support
- Cognito/OAUTH support
- A new designed alpha version that supports
 - share ALB between different ingresses across namespaces
 - updates TargetGroup directly when pod relocated(improved responsiveness, reduced AWS API calls)

What we plan to do:

- More UT/E2E tests
- Release the new designed version.

Contact: @M00nF1sh, @d-nishi

Spotlight: AWS NLB



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What we did:

- Beta release planned for Q2 '19 (v1.15)
- TLS termination support
- Multiple bug fixes

What we plan to do:

- UDP support
- IP targeting mode support(direct route to IP instead of nodePort)
- Add e2e test cases
- Add docs about NLB configuration

Contact: @M00nF1sh, @d-nishi

Spotlight: CSI Drivers



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What we did:

- EFS / FSx CSI driver transferred to sig-aws
 - <https://github.com/aws/aws-efs-csi-driver>
 - <https://github.com/aws/aws-fsx-csi-driver>
- Upgrade to CSI 1.1.0 spec for EBS CSI driver
- More features for EBS CSI driver:
 - Add support for XFS file system
 - WIP volume resize
 - Next step: more tests and bug fixes
- CSI Migration for AWS EBS Driver in-progress
 - Add migration for block volume

Contact: @leakingtapan, @d-nishi

Cloud Provider Extraction



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- Initially just one repo, all cloudproviders were in-tree
- Rapidly exceeded the github envelope
 - New code in subprojects
 - Move existing code into subprojects (steps: 1) staging 2) ??? 3) profit)
- Most AWS-specific code is in kube-controller-manager
- Multi-year project that is at the end of the beginning
- cloud-provider-aws is where out-of-tree cloud-controller-manager will end up

SIG AWS will convert to k8s User Group



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- All the cloud SIGs will fold into SIG Cloudprovider led by @d-nishi and @andrewkim by Q3 2019
- Goal:
 - enable common behaviour across platforms
 - enable uniform test and integration cadence
 - enable uniform documentation cadence
 - enable uniform release and quality cadence
- SIG-AWS for end-users become a user-group and all subprojects move under SIG CloudProvider

How to get involved?



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Contribution takes many forms!

1. Ask questions
2. Try out things, file issues for things that are broken / unobvious
3. Join sig-meetings, ask questions, share experiences
4. Help triage / answer issues!
5. Fix some docs
6. Add some tests
7. Fix a small bug in one of the external projects
8. Help with the extraction work
9. Add a feature to one of the external projects
10. Fix a bug in the cloudprovider code / main repo

Increasingly Difficult



Tactics



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1. Make the most of your “beginner’s mind” / scratch your own itch
2. Docs and questions are just as important as code
3. Start with simpler things - everyone starts with typos or docs
4. Start in the “extremities” - newer repos that are out of tree
5. Be willing to “have a go” - go is relatively easy to pick up (the few go-tchas hit *everyone*)
6. Recognize that even if your PR isn’t merged itself, you have moved things forwards
7. If tackling something complicated, best to talk about it first: slack or github issues
8. Run multiple PRs in parallel - cattle not pets!



Q & A

Please share:

- Where do you want to get involved?
- Do you have any immediate questions or feedback?
- Are we missing a whole project?



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