

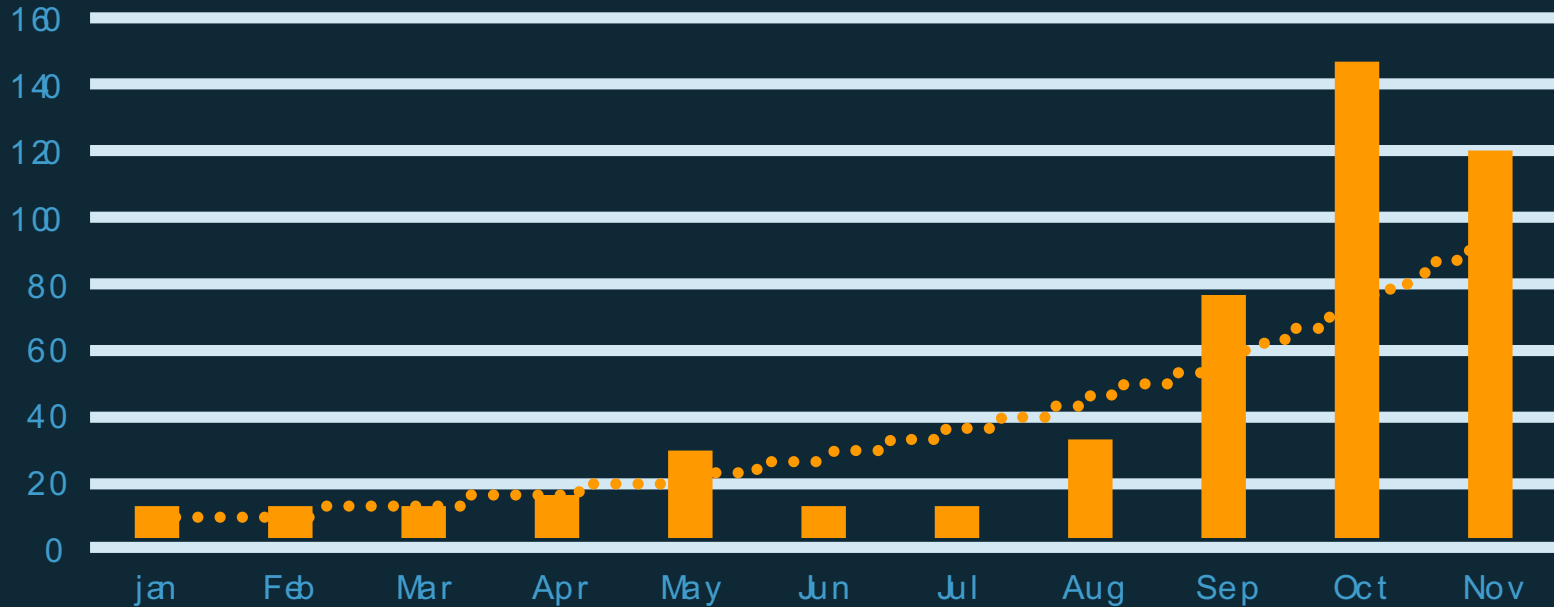


Building Modern Applications using Open Source

and running existing ones

Arun Gupta, @arungupta

AWS Contributions to Kubernetes in 2018



kubernetes-sigs/aws-alb-ingress-controller

kubernetes-sigs/aws-ebs-csi-driver

kubernetes-sigs/cluster-api-provider-aws

kubernetes-sigs/aws-iam-authenticator

kubernetes-sigs/cluster-api

kubernetes-sigs/controller-runtime

kubernetes-sigs/aws-encryption-provider



Alpha in v1.13

In the Community ...

Current

- **Etcd contribution to CNCF**
- Eksctl (Weaveworks)
- Mu (Stelligent)
- AWS Operator
- Alpha features in 1.13
- SIG-AWS participation

Planned

- Upstream testing
 - Conformance
 - Scalability
 - Windows worker nodes
 - ARM support
- We're hiring!



Consistent
communications
management



Complete visibility



Failure isolation
and protection



Fine-grained deployment
controls

Observability using service mesh proxy



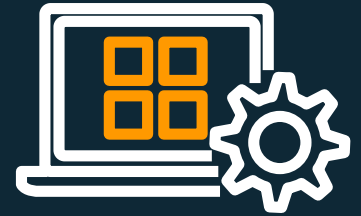
Reduce work required
by developers



Follow best practices



Use any language
or platform



Simplify visibility,
troubleshooting, and
deployments

Overall—migrate to microservices safer and faster



Works across clusters,
container service & VMs



Scale and stability



Partner integrations



Upstream compatibility



firecracker-microvm.io

Accelerating Containers with Firecracker



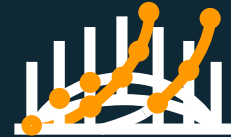
Security from
the ground up

KVM-based virtualization



Speed by design

<125ms to launch
150 microVMs per second/host



Scale and efficiency

<5MB memory footprint per microVM

Containers

Microservices

Virtualization

firecracker-microvm / firecracker

Watch 192 Star 6,012 Fork 278

Code Issues 96 Pull requests 17 Projects Insights Settings

Secure and fast microVMs for serverless computing. <http://firecracker-microvm.io>

virtual-machine sandbox virtualization rust containers cloud-native minimalist open-source serverless

Manage topics

980 commits 1 branch 13 releases 34 contributors

firecracker

Secure and fast microVMs for serverless computing.

rust open-source serverless containers virtual-machine

rust 6,012 278 Apache 2.0 Updated 12 minutes ago

firecracker-go-sdk

Go Firecracker SDK

Go 80 13 Updated 16 hours ago

firecracker-containerd

firecracker-containerd enables containerd to manage containers as Firecracker microVMs

rust containers virtualization sdk containerd

Go 278 12 Apache 2.0 Updated 4 days ago

firecracker-demo

A demo running 4000 Firecracker microVMs.

Shell 16 3 Apache 2.0 Updated 5 days ago

firecracker-ci Private

Python 6 Updated 5 days ago

firectl Private

firectl is a command-line tool to run Firecracker microVMs

Apache 2.0 Updated 6 days ago

A large rocket is being transported on a mobile launcher platform (MLP) by a crawler-transporter. The MLP is a large, rectangular structure that supports the rocket and its external tank and boosters. The crawler-transporter is a massive vehicle with multiple sets of continuous tracks, designed to move heavy loads across the launch complex. The background shows a clear sky and some support structures.

Fully upstreamed Kubernetes at scale ...

Envoy-based service mesh control plane ...

MicroVMs for serverless computing ...

Ramping up contributions!