

Calico Installation

Best Practices



TIGERA

Your Speaker Today:

- Reza Ramezanpour – Developer Advocate @ Tigera (Project Calico)
- I do computer stuff!
- I'm always learning. Let's connect!



Agenda



- Project Calico Overview
- Kubernetes Networking
- DEMO
- Tigera Operator (**free/open source**)
- DEMO

01

Project Calico Overview



PROJECT CALICO

<https://projectcalico.org>

 [@projectcalico](https://twitter.com/projectcalico)

 <https://github.com/projectcalico/community>

 <https://slack.projectcalico.org>

 <https://discuss.projectcalico.org>

8000+

Slack channel members

320+

Contributors

2,000,000+

Nodes powered by Calico every day



eBPF iptables

PROJECT **CALICO**



HNS



CALICO
C L O U D



CALICO
E N T E R P R I S E



Host Network Service



02

Kubernetes Networking

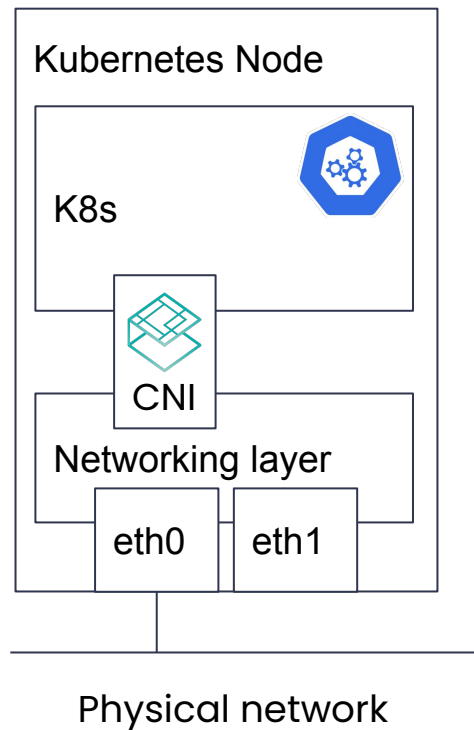
Container Networking Interface Basics

Version 1.23.x and lower

- Kubelet (`--config-cni-dir,--config-cni-bin`)

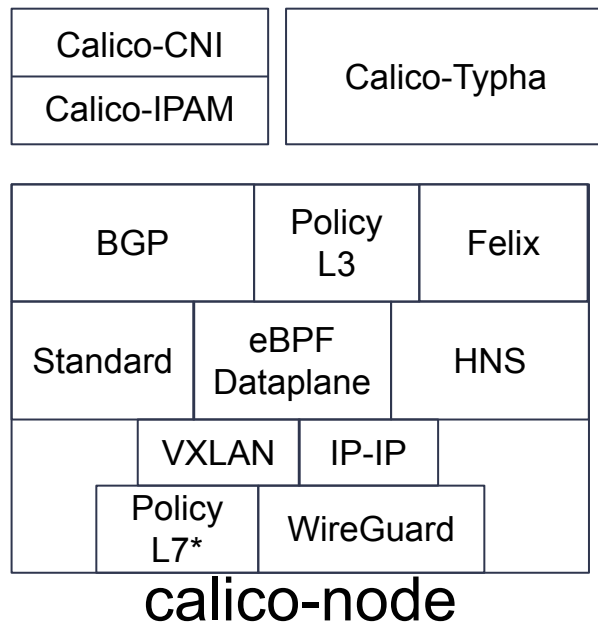
Version 1.24.x

- Container Runtime Interface



Calico Features

- IP Address Management (IPAM)
- Routing (BIRD)
 - BGP
- Policy
 - Kubernetes Policy
 - Calico Security Policy
- Dataplane
 - Standard IPTables
 - Calico's eBPF dataplane
 - Host Network Service Windows
- Networking Overlay
- Application Security (Istio)
- Traffic encryption
 - WireGuard



03

Demo

04

Tigera Operator



Google Cloud



Microsoft Azure



Bare Metal

2,000,000+

Nodes powered by Calico every day



The Operator Framework

- Install
- Configure
- Maintain
- Upgrade



Tigera Operator

- Easy deployment
- Unified way to maintain Calico components
- Self-healing
- Troubleshooting
- Free and Open Source

```
kubectl create -f https://projectcalico.docs.tigera.io/manifests/tigera-operator.yaml
```



05

Demo

Do-It-Yourself Resources

Stuff used for the demos:

<https://github.com/frozenprocess/Tigera-Presentations/2022-07-13.Calico-installation>

When things are not working:

Github: <https://github.com/frozenprocess>

Twitter: <https://twitter.com/fr0zenprocess>

Linkedin: <https://www.linkedin.com/in/rramezanpour/>



Thank you!

Questions



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