Linux and Kubernetes References

Table of Contents

[1 Overview 5](#_Toc57801680)

[1.1 Introduction 5](#_Toc57801681)

[1.2 Assumptions 5](#_Toc57801682)

[1.2.1 General Remark 5](#_Toc57801683)

[1.3 Prepare OS Boot-Stick 5](#_Toc57801684)

[2 Handling of and Working with IPTABLES 6](#_Toc57801685)

[2.1 First Section 6](#_Toc57801686)

[2.2 Using Legacy IPTABLES 7](#_Toc57801687)

[2.3 Examine IPTABLES 7](#_Toc57801688)

[3 DHCP Re-Installation 8](#_Toc57801689)

[3.1.1 Saving Existing DHCP Data-Base 8](#_Toc57801690)

[3.1.2 Verify Availability of DHCP on Debian Target Host 9](#_Toc57801691)

[3.1.3 Configure DHCP Data-Base 9](#_Toc57801692)

[3.1.4 Verify DHCP Server Running 9](#_Toc57801693)

[3.1.5 Configure Debian DHCP Clients 9](#_Toc57801694)

[3.1.6 Configure Windows DHCP Clients 10](#_Toc57801695)

[3.2 NFS Server and Client Installation 10](#_Toc57801696)

[3.2.1 NFS Server Set-Up and Configuration 10](#_Toc57801697)

[3.2.2 NFS Client Configuration 10](#_Toc57801698)

[3.3 SW Installation 10](#_Toc57801699)

[3.3.1 Docker 11](#_Toc57801700)

[3.3.2 Kubernetes 11](#_Toc57801701)

[3.3.3 NGINX 11](#_Toc57801702)

[3.3.4 Helm 11](#_Toc57801703)

[3.3.5 Prometheus 11](#_Toc57801704)

[3.3.6 Elastic Search 11](#_Toc57801705)

[3.3.7 Grafana 11](#_Toc57801706)

[4 Kubernetes Cluster 12](#_Toc57801707)

[4.1 Prepare for K8s Cluster Set-Up 12](#_Toc57801708)

[4.1.1 Check Open Ports 12](#_Toc57801709)

[4.1.2 Disable Swapping 12](#_Toc57801710)

[4.1.3 Configure Network Manager 12](#_Toc57801711)

[4.1.4 ?? Configure UFW Firewall ?? 12](#_Toc57801712)

[4.1.5 Pre-Configure IPTABLES 13](#_Toc57801713)

[4.2 Set-Up of Cluster Master Node 13](#_Toc57801714)

[4.2.1 Regular / Normal Procedure 13](#_Toc57801715)

[4.2.2 Procedure for Re-Trying ‘*kubeadm init*’ Command on K8s Master Node 14](#_Toc57801716)

[4.3 Cluster Networking 14](#_Toc57801717)

[4.3.1 Internal Cluster Networking Using Calico CNI 14](#_Toc57801718)

[4.3.2 Connect from External Nodes to K8s Cluster 15](#_Toc57801719)

[4.4 Set-Up of Worker Nodes 15](#_Toc57801720)

[4.5 Cluster Storage Hierarchy 15](#_Toc57801721)

[4.6 Cluster Monitoring 16](#_Toc57801722)

[4.7 Complete Kubernetes Deinstallation 16](#_Toc57801723)

[4.7.1 Procedure Proven Working for Debian Linux Bare-Metal Installations 16](#_Toc57801724)

[4.7.2 If All Else Fails 16](#_Toc57801725)

[4.7.3 The Ultimate Recovery Process 16](#_Toc57801726)

[5 Kubernetes Cluster Operations 17](#_Toc57801727)

[5.1 Using KUBECTL for Cluster Management 17](#_Toc57801728)

[5.2 Operations Monitoring 17](#_Toc57801729)

[5.3 Data Base and File Back-Up 17](#_Toc57801730)

[5.4 Purging of Log Files 17](#_Toc57801731)

[5.5 Cluster Power-Down 17](#_Toc57801732)

[5.6 Cluster Power-Up 17](#_Toc57801733)

[6 Kubernetes Cluster Trouble Shooting 18](#_Toc57801734)

[6.1 Installation Trouble Shooting 18](#_Toc57801735)

[6.1.1 Debugging Calico CNI Deployment 18](#_Toc57801736)

[6.2 Debugging Cluster Operations 18](#_Toc57801737)

[7 Application Pod Set-Up 19](#_Toc57801738)

[7.1 Helm Charts 19](#_Toc57801739)

[7.1.1 Introduction to Helm Charts 19](#_Toc57801740)

[7.1.2 Helm Registry 19](#_Toc57801741)

[7.1.3 Creation of Helm Charts 19](#_Toc57801742)

[7.2 Docker Images 19](#_Toc57801743)

[7.2.1 Introduction to Docker 19](#_Toc57801744)

[7.2.2 Docker Registry 19](#_Toc57801745)

[7.2.3 Creation of Docker Images 19](#_Toc57801746)

[7.3 oTree Work-Space Creation 19](#_Toc57801747)

[7.4 zTree Work-Space Creation 20](#_Toc57801748)

[8 Useful URL 21](#_Toc57801749)

[8.1 Debian Linux Helpful Hints 21](#_Toc57801750)

[8.2 Docker Installation 21](#_Toc57801751)

[8.3 Kubernetes Installation 21](#_Toc57801752)

[8.4 Calico CNI -- ‘Container Network Interface’ 21](#_Toc57801753)

[8.5 Trouble Shooting Pages 21](#_Toc57801754)

[9 Parked Text Copy 22](#_Toc57801755)

[9.1 Reminders / Check-Lists 22](#_Toc57801756)

[9.1.1 List One 22](#_Toc57801757)

[9.1.2 List Two 22](#_Toc57801758)

[9.2 To Be Checked / Verified 22](#_Toc57801759)

[9.3 Texts for Inclusion 22](#_Toc57801760)

[9.4 URL Pointers 22](#_Toc57801761)

# Overview

## Introduction

This document contains references to Linux applications and commands, good information for which is hard to come by and requires extensive searches on the Internet.

In this context it is a companion document to both the *Kubernetes Step-by-Step* and *Kubernetes Operations* document.

## Assumptions

text:

* bullet 1,
* bullet 2.

### General Remark

These instructions are applicable to Debian and Ubuntu.

There may be slight modifications of the command required if CentOS or Linux are used. It is left to the reader to figure out which changes need to be made.

## Prepare OS Boot-Stick

UNetbootin <http://unetbootin.github.io/#install> is an easy to use app for creating boot-media like ‘boot stick’.

The program can be used to download the appropriate (Debian / Ubuntu) ISO image. Alternatively, UNetbootin will also read a local ISO image.

# Handling of and Working with IPTABLES

intro text.

## First Section

text:

“Make sure the host is using iptables in legacy mode".

**update-alternatives --set iptables /usr/sbin/iptables-legacy**

<https://github.com/kubernetes/kubernetes/issues/71305>

IP tables switching starting with Debian 10.x (Buster)

To use the legacy version:

# update-alternatives --set iptables /usr/sbin/iptables-legacy  
# update-alternatives --set ip6tables /usr/sbin/ip6tables-legacy  
# update-alternatives --set arptables /usr/sbin/arptables-legacy  
# update-alternatives --set ebtables /usr/sbin/ebtables-legacy

To use the new version

# update-alternatives --set iptables /usr/sbin/iptables-nft  
# update-alternatives --set ip6tables /usr/sbin/ip6tables-nft  
# update-alternatives --set arptables /usr/sbin/arptables-nft  
# update-alternatives --set ebtables /usr/sbin/ebtables-nft

(<https://wiki.debian.org/nftables#Current_status>)

Step 1 : Set accept all policy to all connections

Using the below set of commands you will set accept rule for all types of connections.

|  |
| --- |
| root@kerneltalks # iptables -P INPUT ACCEPT  root@kerneltalks # iptables -P OUTPUT ACCEPT  root@kerneltalks # iptables -P FORWARD ACCEPT |

This will confirm, iptables gonna accept all requests for all types of connections.

Step 2 : Delete all existing rules.

Using below set of commands, delete your currently configured rules from iptables.

|  |
| --- |
| root@kerneltalks # iptables -F INPUT  root@kerneltalks # iptables -F OUTPUT  root@kerneltalks # iptables -F FORWARD |

Or you can do it in single command –

|  |
| --- |
| root@kerneltalks # iptables -F |

That’s it! Your iptables are reset to default settings i.e. accept all! Now, neatly and carefully design your policies and configure them.

## Using Legacy IPTABLES

To use ‘legacy’ iptables run the following commands:

sudo update-alternatives --set iptables /usr/sbin/iptables-legacy

sudo update-alternatives --set ip6tables /usr/sbin/ip6tables-legacy

## Examine IPTABLES

Use the following to examine IPTABLES:

sudo iptables -t nat -L PREROUTING | column -t

sudo iptables -t nat -L KUBE-SERVICES -n | column -t

sudo iptables -t nat -L KUBE-NODEPORTS -n | column -t

sudo iptables -t nat -L KUBE-SVC-INSTANCE\_ID -n | column -t

sudo iptables -t nat -L CHAIN\_LIST\_ITEM -n | column -t

# DHCP Re-Installation

sudo apt-get install isc-dhcp-server

DHCP (Dynamic Host Configuration Protocol) is used to automatically configure hosts with crucial IP parameters across the network when they are booted up. This way machines on a network will have addresses drawn from a pre-defined range, will know which default router to use, and where to find the DNS servers.

In some cases DHCP is also used to configure hosts for Windows-based IP communications.

This section has been created using the [Debian DHCP Server Configuration](https://www.debianhelp.co.uk/dhcp.htm) web-page as a guide. Some details have been taken from the [Debian DHCP Server](https://wiki.debian.org/DHCP_Server) wiki-page.

For in-depth administration guidelines check out the Oracle’s [Network Address Configuration](https://docs.oracle.com/cd/E37670_01/E41138/html/ol_netaddr.html) manual.

Note:

save existing configuration depending on current implementation

<https://www.der-windows-papst.de/wp-content/uploads/2019/07/Windows-Server-2019-DHCP-Server-einrichten.pdf>

see /usr/share/doc/dhcp\*/dhcpd.conf.sample

<https://en.wikipedia.org/wiki/IP_address>

[DHCP Manual Page](https://manpages.debian.org/testing/isc-dhcp-server/dhcpd.conf.5.en.html)

[Network Diagnosis Tools](https://www.debian.org/doc/manuals/debian-handbook/sect.network-diagnosis-tools.en.html) (chapter 10.9 of the ‘*Debian Administrator Handbook*’)

DHCP configuration file ‘[/etc/dhcp/dhcpd.conf](https://www.thegeekdiary.com/dhcp-configuration-file-etcdhcpdhcpd-conf-explained/)’ explained

[Debian 9 Network Settings](https://www.serverlab.ca/tutorials/linux/administration-linux/how-to-configure-debian-9-network-settings/) covers the basic settings required on all clients and/or servers

Debian wiki [DHCP Server](https://wiki.debian.org/DHCP_Server) set-up, use the references to the ‘/etc/network/interfaces’, ‘/etc/resolv.conf’, /etc/default/isc-dhcp/server’, and ‘/etc/dhcp/dhcpd.conf’ files as additional sources of information

there is another file in /etc/ which holds information about the Ethernet boards and ports configured ‘ls /sys/class/net’, ‘/etc/iftab’,

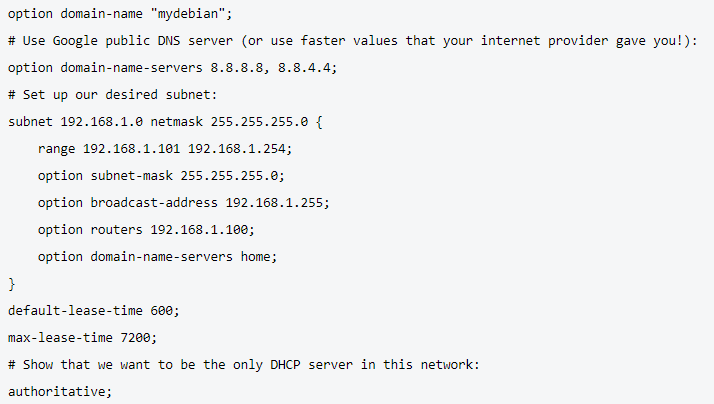
/etc/default/isc-dhcp-server for IPV4

### Saving Existing DHCP Data-Base

On Ubuntu the DHCP configuration file is at **/etc/dhcp/dhcpd.conf**.

For Windows-Server look in: **%SystemRoot%System32\DHCP\backup**

Display the file contents to make sure the contents are what you are looking for in the context of your network. You should expect data similar to this:



Transfer the DHCP content to a storage area where it will be accessible for loading into the targeted new DHCP server.

### Verify Availability of DHCP on Debian Target Host

This section has been created using the [Debian DHCP Wiki-Page](https://wiki.debian.org/DHCP_Server) web-page as a guide.

To check whether DHCP is already available run:  
**sudo service isc-dhcp-server status**

To check whether DHCP is already available run:  
**sudo service isc-dhcp-server status**

### Configure DHCP Data-Base

text

### Verify DHCP Server Running

On the server running the DHCP service confirm that the service is indeed up and running:  
**sudo service isc-dhcp-server status**

Make sure the output from the command is indicating that the service is **running** or **active**.

Next go to a workstation, which is supposed to receive its IP configuration from the DHCP server.

### Configure Debian DHCP Clients

Boot up the Debian-Client.

Open the file **/etc/network/interfaces**; and verify that its contents look like this:

**auto lo eth0**  
**auto lo inet loopback**  
**iface eth0 inet dhcp**

Instead of **eth0** physical port names like **enp0s31f6** or **enp0s25** may also be showing.

If not make the necessary changes and re-boot the machine.

Once the machine is up and running, log-in and verify its IP configuration by running: **ifconfig**

Make sure the output matches what has been configured on the DHCP server. In particular check the IP address shown for the DHCP and DNS servers as well as the default router.

### Configure Windows DHCP Clients

On a Windows client run: **ipconfig /all**

On Debian client run: **ifconfig**

Once the machine is up and running, log-in and verify its IP configuration.

On a Windows client run: **ipconfig /all**

On Debian client run: **ifconfig**

Make sure the output matches what has been configured on the DHCP server. In particular check the IP address shown for the DHCP and DNS servers as well as the default router.

## NFS Server and Client Installation

The NFS set-up is such that the hosts belonging to the Kubernetes cluster set-up all trust each other. To prevent un-authorized hacker access, all application users will be routed via Kubernetes service end-points and their access will be controlled at the service level.

text

text

### NFS Server Set-Up and Configuration

text.

### NFS Client Configuration

text.

## SW Installation

text

|  |  |  |
| --- | --- | --- |
| Packag*e* | Native | K8S |
| Docker | X |  |
| Kubernetes | X |  |
| NGINX |  | X |
| Helm | X | X |
| Grafana |  | X |
| Elastic Search |  | X |
| Prometheus |  | X |

### Docker

For *Docker* installation guidelines refer to the ***Kubernetes Step-by-Step*** document.

### Kubernetes

For details concerning the *Kubernetes* set-up refer both to the ***Kubernetes Installation and Operations*** and the ***Kubernetes Step-by-Step*** documents.

### NGINX

### Helm

### Prometheus

### Elastic Search

### Grafana

# Useful URLs

To guide through the jungle of reference and ‘how to’ pages available in the jungle of the Internet, the following lists URL which have proven to provide some usefulness.

**Note**: The span of the useful life of most Internet pages is rather short; so that the recommendations included below need to be taken with a grain of salt. In this context, be mindful of the fact that this document has been first compiled in November 2020.

## Debian Linux Helpful Hints

text

## Docker Installation

text

## Kubernetes Installation

text

* [**Setup k8s master node on Ubuntu 20.04**](https://atlex00.com/k8s/on-premise-setup/)(many screen-shots; installs ‘*dashboard*’)
* [Simple Kubernetes Cluster on Ubuntu and CentOS](https://medium.com/@dimuthudesilva24/setting-up-a-simple-kubernetes-cluster-on-ubuntu-and-centos-61d73f43f36b)   
  (synopsis)
* [Deploy a Kubernetes Cluster with Ubuntu 18.04](https://thenewstack.io/how-to-deploy-a-kubernetes-cluster-with-ubuntu-server-18-04/)  
  (encompasses a *Fannel* installation)
* [How to Install Kubernetes on Ubuntu](https://www.howtoforge.com/tutorial/how-to-install-kubernetes-on-ubuntu/)  
  (page includes a section on testing)
* [Kubernetes Installation auf Ubuntu](https://techexpert.tips/de/kubernetes-de/kubernetes-installation-auf-ubuntu-linux/)  
  (mit einleuchtenden Beispielen, um den Cluster zu testen)

text

## Calico CNI -- ‘Container Network Interface’

text

* [**Running a K8s Cluster on Ubuntu with Calico**](https://medium.com/platformer-blog/running-a-kubernetes-cluster-on-ubuntu-with-calico-9e372fb9175e)  
  (includes manifests for K8s and Calico-CNI configuration)
* [**Install Kubernetes cluster on CentOS 8 with Calico CNI**](https://upcloud.com/community/tutorials/install-kubernetes-cluster-centos-8/)(section **6** of ‘**Installing K8s on Master and Worker Nodes’**)
* [**How to Install Calico on Kubernetes of Bare-Metal**](https://www.exoscale.com/syslog/how-to-install-calico/)  
  (provides useful context and pre-requisite information for installing Calico)

text

* Follow instructions for CNI installation on  
  <https://docs.projectcalico.org/getting-started/kubernetes/hardway/install-cni-plugin>
* or alternatively:  
  <https://www.exoscale.com/syslog/how-to-install-calico/>
* and yet another alternative ‘Running a Kubernetes Cluster on Ubuntu with Calico’:  
  <https://medium.com/platformer-blog/running-a-kubernetes-cluster-on-ubuntu-with-calico-9e372fb9175e>

text

## Trouble Shooting Pages

text

* [Micro-Kubenernetes Issues](https://deref-1und1.de/mail/client/ENv1PpkCmfc/dereferrer/?redirectUrl=https%3A%2F%2Fgithub.com%2Fubuntu%2Fmicrok8s%2Fissues%2F695)  
  (Synposis)
* [Could not find a readyT iller POD](https://deref-1und1.de/mail/client/aH_aCayH35U/dereferrer/?redirectUrl=https%3A%2F%2Fserverfault.com%2Fquestions%2F958912%2Fhelm-under-microk8s-giving-error-could-not-find-a-ready-tiller-pod)  
  (this URL may be outdated)

text

## Kubernetes/Helm Learning and Tutorial Sites

text

* [Kubernetes Application Deployment with Helm -- Beginners Guide](https://deref-1und1.de/mail/client/1IQ44OytFZM/dereferrer/?redirectUrl=https%3A%2F%2Fwww.slideshare.net%2FmKrishnaKumar1%2Fkubernetes-application-deployment-with-helm-a-beginner-guide)  
  (Synposis)
* URL  
  (synopsis)
* URL  
  (synopsis)

text

Simple Kubernetes Cluster on Ubuntu and CentOS  
<https://medium.com/@dimuthudesilva24/setting-up-a-simple-kubernetes-cluster-on-ubuntu-and-centos-61d73f43f36b>

CNI Installation

Follow instructions for CNI installation on  
<https://docs.projectcalico.org/getting-started/kubernetes/hardway/install-cni-plugin>

or alternatively:  
<https://www.exoscale.com/syslog/how-to-install-calico/>

and yet another alternative ‘Running a Kubernetes Cluster on Ubuntu with Calico’:  
<https://medium.com/platformer-blog/running-a-kubernetes-cluster-on-ubuntu-with-calico-9e372fb9175e>

Deploy Kubernetes with Flannel:  
<https://thenewstack.io/how-to-deploy-a-kubernetes-cluster-with-ubuntu-server-18-04/>

How to Install Kubernetes on Ubuntu:  
<https://www.howtoforge.com/tutorial/how-to-install-kubernetes-on-ubuntu/>  
page includes a section on testing

Kubernetes Installation auf Ubuntu:  
<https://techexpert.tips/de/kubernetes-de/kubernetes-installation-auf-ubuntu-linux/>  
mit einleuchtenden Beispielen, um den Cluster zu testen

sudo iptables -nvL

Chain INPUT (policy ACCEPT 636K packets, 113M bytes)

pkts bytes target prot opt in out source destination

36M 6445M cali-INPUT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Cz\_u1IQiXIMmKD4c \*/

602K 39M KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/

602K 39M KUBE-EXTERNAL-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes externally-visible service portals \*/ 39M 6951M KUBE-FIREWALL all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)

pkts bytes target prot opt in out source destination

536K 24M cali-FORWARD all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wUHhoiAYhphO9Mso \*/

0 0 KUBE-FORWARD all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding rules \*/

0 0 KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/

0 0 DOCKER-USER all -- \* \* 0.0.0.0/0 0.0.0.0/0

0 0 DOCKER-ISOLATION-STAGE-1 all -- \* \* 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- \* docker0 0.0.0.0/0 0.0.0.0/0 ctstate RELATED,ESTABLISHED

0 0 DOCKER all -- \* docker0 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- docker0 !docker0 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- docker0 docker0 0.0.0.0/0 0.0.0.0/0

Chain OUTPUT (policy ACCEPT 646K packets, 125M bytes)

pkts bytes target prot opt in out source destination

36M 6971M cali-OUTPUT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:tVnHkvAo15HuiPy0 \*/

420K 25M KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/ 39M 7570M KUBE-FIREWALL all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER (1 references)

pkts bytes target prot opt in out source destination

Chain DOCKER-ISOLATION-STAGE-1 (1 references)

pkts bytes target prot opt in out source destination

0 0 DOCKER-ISOLATION-STAGE-2 all -- docker0 !docker0 0.0.0.0/0 0.0.0.0/0

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER-ISOLATION-STAGE-2 (1 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* docker0 0.0.0.0/0 0.0.0.0/0

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER-USER (1 references)

pkts bytes target prot opt in out source destination

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain KUBE-EXTERNAL-SERVICES (1 references)

pkts bytes target prot opt in out source destination

Chain KUBE-FIREWALL (2 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes firewall for dropping marked packets \*/ mark match 0x8000/0x8000

0 0 DROP all -- \* \* !127.0.0.0/8 127.0.0.0/8 /\* block incoming localnet connections \*/ ! ctstate RELATED,ESTABLISHED,DNAT

Chain KUBE-FORWARD (1 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate INVALID

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding rules \*/ mark match 0x4000/0x4000

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding conntrack pod source rule \*/ ctstate RELATED,ESTABLISHED

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding conntrack pod destination rule \*/ ctstate RELATED,ESTABLISHED

Chain KUBE-KUBELET-CANARY (0 references)

pkts bytes target prot opt in out source destination

Chain KUBE-PROXY-CANARY (0 references)

pkts bytes target prot opt in out source destination

Chain KUBE-SERVICES (3 references)

pkts bytes target prot opt in out source destination

Chain cali-FORWARD (1 references)

pkts bytes target prot opt in out source destination

536K 24M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:vjrMJCRpqwy5oRoX \*/ MARK and 0xfff1ffff

536K 24M cali-from-hep-forward all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:A\_sPAO0mcxbT9mOV \*/ mark match 0x0/0x10000

536K 24M cali-from-wl-dispatch all -- cali+ \* 0.0.0.0/0 0.0.0.0/0 /\* cali:8ZoYfO5HKXWbB3pk \*/

0 0 cali-to-wl-dispatch all -- \* cali+ 0.0.0.0/0 0.0.0.0/0 /\* cali:jdEuaPBe14V2hutn \*/

536K 24M cali-to-hep-forward all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:12bc6HljsMKsmfr- \*/

536K 24M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:MH9kMp5aNICL-Olv \*/ /\* Policy explicitly accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-INPUT (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:PajejrV4aFdkZojI \*/ /\* Allow IPIP packets from Calico hosts \*/ match-set cali40all-hosts-net src ADDRTYPE match dst-type LOCAL

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:\_wjq-Yrma8Ly1Svo \*/ /\* Drop IPIP packets from non-Calico hosts \*/

912K 63M cali-wl-to-host all -- cali+ \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:8TZGxLWh\_Eiz66wc \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:6McIeIDvPdL6PE1T \*/ mark match 0x10000/0x10000

35M 6382M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:YGPbrUms7NId8xVa \*/ MARK and 0xfff0ffff

35M 6382M cali-from-host-endpoint all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:2gmY7Bg2i0i84Wk\_ \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:q-Vz2ZT9iGE331LL \*/ /\* Host endpoint policy accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-OUTPUT (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Mq1\_rAdXXH3YkrzW \*/ mark match 0x10000/0x10000

965K 327M RETURN all -- \* cali+ 0.0.0.0/0 0.0.0.0/0 /\* cali:69FkRTJDvD5Vu6Vl \*/

0 0 ACCEPT 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:AnEsmO6bDZbQntWW \*/ /\* Allow IPIP packets to other Calico hosts \*/ match-set cali40all-hosts-net dst ADDRTYPE match src-type LOCAL

35M 6644M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9e9Uf3GU5tX--Lxy \*/ MARK and 0xfff0ffff

35M 6644M cali-to-host-endpoint all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:OB2pzPrvQn6PC89t \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:tvSSMDBWrme3CUqM \*/ /\* Host endpoint policy accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-failsafe-in (0 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wWFQM43tJU7wwnFZ \*/ multiport dports 22

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:LwNV--R8MjeUYacw \*/ multiport dports 68

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:QOO5NUOqOSS1\_Iw0 \*/ multiport dports 179

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cwZWoBSwVeIAZmVN \*/ multiport dports 2379

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:7FbNXT91kugE\_upR \*/ multiport dports 2380

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ywE9WYUBEpve70WT \*/ multiport dports 6666

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:l-WQSVBf\_lygPR0J \*/ multiport dports 6667

Chain cali-failsafe-out (0 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:82hjfji-wChFhAqL \*/ multiport dports 53

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:TNM3RfEjbNr72hgH \*/ multiport dports 67

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ycxKitIl4u3dK0HR \*/ multiport dports 179

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:hxjEWyxdkXXkdvut \*/ multiport dports 2379

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cA\_GLtruuvG88KiO \*/ multiport dports 2380

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Sb1hkLYFMrKS6r01 \*/ multiport dports 6666

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:UwLSebGONJUG4yG- \*/ multiport dports 6667

Chain cali-from-hep-forward (1 references)

pkts bytes target prot opt in out source destination

Chain cali-from-host-endpoint (1 references)

pkts bytes target prot opt in out source destination

Chain cali-from-wl-dispatch (2 references)

pkts bytes target prot opt in out source destination

88421 6785K cali-fw-cali2945007a631 all -- cali2945007a631 \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:KuirFIScMtu09cPt \*/

1360K 80M cali-from-wl-dispatch-e all -- calie+ \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:XceSbgj8k8uv\_aO3 \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:nS44nY-BOjx4MVy6 \*/ /\* Unknown interface \*/

Chain cali-from-wl-dispatch-e (1 references)

pkts bytes target prot opt in out source destination

679K 40M cali-fw-calie1b6c7aa3c4 all -- calie1b6c7aa3c4 \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:7f5dtTalJpOxgEJS \*/

681K 40M cali-fw-calie6b42742d9d all -- calie6b42742d9d \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:bHtPrTPzLvU8kBUQ \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Y5ux4eCJ3eQQj4po \*/ /\* Unknown interface \*/

Chain cali-fw-cali2945007a631 (1 references)

pkts bytes target prot opt in out source destination

88420 6785K ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wANHgVKlHMg99ESY \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:M7KE7Xh1\_1oGJZ2z \*/ ctstate INVALID

1 60 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:7h4HmeySw1WuJmux \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:RdfdZy4rIBwL-y5W \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9oJLXvXgQleNBCoi \*/ /\* Drop IPinIP encapped packets originating in pods \*/

1 60 cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:onJBBtUQbbXpmyYp \*/

1 60 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:V809ZIvFak4irImu \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_PTRGc0U-L5Kz7V6ERW all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:GK8WGlfOUwVd9BaV \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:lsI0J4n-JFDG4-f\_ \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:AlXzG4BOPHWg4Z5k \*/ /\* Drop if no profiles matched \*/

Chain cali-fw-calie1b6c7aa3c4 (1 references)

pkts bytes target prot opt in out source destination

411K 28M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:QK-OVK6hf96fV5Co \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ijtzYplE-uJgorhD \*/ ctstate INVALID

268K 12M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:vREWytupn-9lYTGu \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:oNvp820PNBiCrWH1 \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:HC6nByeZkqf4AqVq \*/ /\* Drop IPinIP encapped packets originating in pods \*/

268K 12M cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fYFPVutHDAn7XhJb \*/

268K 12M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:LNXtgvXWrw2RosqB \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:omJT43s\_IhT9Ko24 \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:jPiT1EFNP8jTFMP\_ \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:n7OS2fAasgugFMEx \*/ /\* Drop if no profiles matched \*/

Chain cali-fw-calie6b42742d9d (1 references)

pkts bytes target prot opt in out source destination

413K 28M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:w7JGboXvt7nM6mmb \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:gRy87HMEGk\_8xhlO \*/ ctstate INVALID

268K 12M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:YABNlJtBZ4\_2Y-e4 \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:89jot2fO8\_1WdEKG \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sw7K-Tl3QJ2gbSmp \*/ /\* Drop IPinIP encapped packets originating in pods \*/

268K 12M cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sZQfNbwGMP7UNpio \*/

268K 12M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Zm54KsvGqATOwGMy \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:53-I8xQWz0\_j7jJM \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:VBCyTTpVrUyvPeFN \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cnril7iFT2tiqzhf \*/ /\* Drop if no profiles matched \*/

Chain cali-pri-\_PTRGc0U-L5Kz7V6ERW (1 references)

pkts bytes target prot opt in out source destination

Chain cali-pri-\_u2Tn2rSoAPffvE7JO6 (2 references)

pkts bytes target prot opt in out source destination

Chain cali-pri-kns.kube-system (3 references)

pkts bytes target prot opt in out source destination

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:zoH5gU6U55FKZxEo \*/ MARK or 0x10000

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:bcGRIJcyOS9dgBiB \*/ mark match 0x10000/0x10000

Chain cali-pro-\_PTRGc0U-L5Kz7V6ERW (1 references)

pkts bytes target prot opt in out source destination

Chain cali-pro-\_u2Tn2rSoAPffvE7JO6 (2 references)

pkts bytes target prot opt in out source destination

Chain cali-pro-kns.kube-system (3 references)

pkts bytes target prot opt in out source destination

536K 24M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:-50oJuMfLVO3LkBk \*/ MARK or 0x10000

536K 24M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ztVPKv1UYejNzm1g \*/ mark match 0x10000/0x10000

Chain cali-to-hep-forward (1 references)

pkts bytes target prot opt in out source destination

Chain cali-to-host-endpoint (1 references)

pkts bytes target prot opt in out source destination

Chain cali-to-wl-dispatch (1 references)

pkts bytes target prot opt in out source destination

0 0 cali-tw-cali2945007a631 all -- \* cali2945007a631 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:NmWaA1LiH1bTFzun \*/

0 0 cali-to-wl-dispatch-e all -- \* calie+ 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:apFXk6Efp4BDSRu4 \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:CjEEpfZyvHvBYC7e \*/ /\* Unknown interface \*/

Chain cali-to-wl-dispatch-e (1 references)

pkts bytes target prot opt in out source destination

0 0 cali-tw-calie1b6c7aa3c4 all -- \* calie1b6c7aa3c4 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:AKww7sBX7HfVu3V8 \*/

0 0 cali-tw-calie6b42742d9d all -- \* calie6b42742d9d 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:1MBm-80Dv0bcl0DJ \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Fqk22s6TQDjv6yWL \*/ /\* Unknown interface \*/

Chain cali-tw-cali2945007a631 (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:S7RVGyrwPd2XlhKA \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:8dbfdm0DqMyHiPMT \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fbFE3gGLH\_egnOAo \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:WfXElAfavmump6L0 \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:a8WhgfX2t2MzmOfa \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_PTRGc0U-L5Kz7V6ERW all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:OG-Bi9Td1wnNcn8V \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:TeVwq3rdsvx7jNnS \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:NCwgf8O5rtb22AaD \*/ /\* Drop if no profiles matched \*/

Chain cali-tw-calie1b6c7aa3c4 (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ugyOuBrCQDNBonXq \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:XH5FOfM71ItSepk6 \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sjr\_oRlZAkwBMp4E \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:XOe7KJXK7Mg-hWdG \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:4L9kJ6si3PsE7PMR \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wBSeuoHkEao8iIBy \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:jYJPc4tM1aedyKzv \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:\_2ue96zcQ49BRsFi \*/ /\* Drop if no profiles matched \*/

Chain cali-tw-calie6b42742d9d (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:yPc\_zFfv-WkDuDwT \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ChymMh3vX\_Tij0h8 \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:f3mYOg2wknZgkZX9 \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:y88Eab8vh1AJZfOO \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:FiyqBViUuSluRofl \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9dXEQLPWqHETn5dM \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fvI-uYS5OLv9JYBI \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:iFoiha4TvaP\_8Zk2 \*/ /\* Drop if no profiles matched \*/

Chain cali-wl-to-host (1 references)

pkts bytes target prot opt in out source destination

912K 63M cali-from-wl-dispatch all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Ee9Sbo10IpVujdIY \*/

7 420 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:nSZbcOoG1xPONxb8 \*/ /\* Configured DefaultEndpointToHostAction \*/

sudo iptables -nvL

Chain INPUT (policy ACCEPT 636K packets, 113M bytes)

pkts bytes target prot opt in out source destination

36M 6445M cali-INPUT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Cz\_u1IQiXIMmKD4c \*/

602K 39M KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/

602K 39M KUBE-EXTERNAL-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes externally-visible service portals \*/ 39M 6951M KUBE-FIREWALL all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)

pkts bytes target prot opt in out source destination

536K 24M cali-FORWARD all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wUHhoiAYhphO9Mso \*/

0 0 KUBE-FORWARD all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding rules \*/

0 0 KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/

0 0 DOCKER-USER all -- \* \* 0.0.0.0/0 0.0.0.0/0

0 0 DOCKER-ISOLATION-STAGE-1 all -- \* \* 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- \* docker0 0.0.0.0/0 0.0.0.0/0 ctstate RELATED,ESTABLISHED

0 0 DOCKER all -- \* docker0 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- docker0 !docker0 0.0.0.0/0 0.0.0.0/0

0 0 ACCEPT all -- docker0 docker0 0.0.0.0/0 0.0.0.0/0

Chain OUTPUT (policy ACCEPT 646K packets, 125M bytes)

pkts bytes target prot opt in out source destination

36M 6971M cali-OUTPUT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:tVnHkvAo15HuiPy0 \*/

420K 25M KUBE-SERVICES all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate NEW /\* kubernetes service portals \*/ 39M 7570M KUBE-FIREWALL all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER (1 references)

pkts bytes target prot opt in out source destination

Chain DOCKER-ISOLATION-STAGE-1 (1 references)

pkts bytes target prot opt in out source destination

0 0 DOCKER-ISOLATION-STAGE-2 all -- docker0 !docker0 0.0.0.0/0 0.0.0.0/0

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER-ISOLATION-STAGE-2 (1 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* docker0 0.0.0.0/0 0.0.0.0/0

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain DOCKER-USER (1 references)

pkts bytes target prot opt in out source destination

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0

Chain KUBE-EXTERNAL-SERVICES (1 references)

pkts bytes target prot opt in out source destination

Chain KUBE-FIREWALL (2 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes firewall for dropping marked packets \*/ mark match 0x8000/0x8000

0 0 DROP all -- \* \* !127.0.0.0/8 127.0.0.0/8 /\* block incoming localnet connections \*/ ! ctstate RELATED,ESTABLISHED,DNAT

Chain KUBE-FORWARD (1 references)

pkts bytes target prot opt in out source destination

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 ctstate INVALID

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding rules \*/ mark match 0x4000/0x4000

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding conntrack pod source rule \*/ ctstate RELATED,ESTABLISHED

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* kubernetes forwarding conntrack pod destination rule \*/ ctstate RELATED,ESTABLISHED

Chain KUBE-KUBELET-CANARY (0 references)

pkts bytes target prot opt in out source destination

Chain KUBE-PROXY-CANARY (0 references)

pkts bytes target prot opt in out source destination

Chain KUBE-SERVICES (3 references)

pkts bytes target prot opt in out source destination

Chain cali-FORWARD (1 references)

pkts bytes target prot opt in out source destination

536K 24M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:vjrMJCRpqwy5oRoX \*/ MARK and 0xfff1ffff

536K 24M cali-from-hep-forward all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:A\_sPAO0mcxbT9mOV \*/ mark match 0x0/0x10000

536K 24M cali-from-wl-dispatch all -- cali+ \* 0.0.0.0/0 0.0.0.0/0 /\* cali:8ZoYfO5HKXWbB3pk \*/

0 0 cali-to-wl-dispatch all -- \* cali+ 0.0.0.0/0 0.0.0.0/0 /\* cali:jdEuaPBe14V2hutn \*/

536K 24M cali-to-hep-forward all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:12bc6HljsMKsmfr- \*/

536K 24M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:MH9kMp5aNICL-Olv \*/ /\* Policy explicitly accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-INPUT (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:PajejrV4aFdkZojI \*/ /\* Allow IPIP packets from Calico hosts \*/ match-set cali40all-hosts-net src ADDRTYPE match dst-type LOCAL

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:\_wjq-Yrma8Ly1Svo \*/ /\* Drop IPIP packets from non-Calico hosts \*/

912K 63M cali-wl-to-host all -- cali+ \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:8TZGxLWh\_Eiz66wc \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:6McIeIDvPdL6PE1T \*/ mark match 0x10000/0x10000

35M 6382M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:YGPbrUms7NId8xVa \*/ MARK and 0xfff0ffff

35M 6382M cali-from-host-endpoint all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:2gmY7Bg2i0i84Wk\_ \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:q-Vz2ZT9iGE331LL \*/ /\* Host endpoint policy accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-OUTPUT (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Mq1\_rAdXXH3YkrzW \*/ mark match 0x10000/0x10000

965K 327M RETURN all -- \* cali+ 0.0.0.0/0 0.0.0.0/0 /\* cali:69FkRTJDvD5Vu6Vl \*/

0 0 ACCEPT 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:AnEsmO6bDZbQntWW \*/ /\* Allow IPIP packets to other Calico hosts \*/ match-set cali40all-hosts-net dst ADDRTYPE match src-type LOCAL

35M 6644M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9e9Uf3GU5tX--Lxy \*/ MARK and 0xfff0ffff

35M 6644M cali-to-host-endpoint all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:OB2pzPrvQn6PC89t \*/

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:tvSSMDBWrme3CUqM \*/ /\* Host endpoint policy accepted packet. \*/ mark match 0x10000/0x10000

Chain cali-failsafe-in (0 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wWFQM43tJU7wwnFZ \*/ multiport dports 22

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:LwNV--R8MjeUYacw \*/ multiport dports 68

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:QOO5NUOqOSS1\_Iw0 \*/ multiport dports 179

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cwZWoBSwVeIAZmVN \*/ multiport dports 2379

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:7FbNXT91kugE\_upR \*/ multiport dports 2380

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ywE9WYUBEpve70WT \*/ multiport dports 6666

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:l-WQSVBf\_lygPR0J \*/ multiport dports 6667

Chain cali-failsafe-out (0 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:82hjfji-wChFhAqL \*/ multiport dports 53

0 0 ACCEPT udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:TNM3RfEjbNr72hgH \*/ multiport dports 67

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ycxKitIl4u3dK0HR \*/ multiport dports 179

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:hxjEWyxdkXXkdvut \*/ multiport dports 2379

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cA\_GLtruuvG88KiO \*/ multiport dports 2380

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Sb1hkLYFMrKS6r01 \*/ multiport dports 6666

0 0 ACCEPT tcp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:UwLSebGONJUG4yG- \*/ multiport dports 6667

Chain cali-from-hep-forward (1 references)

pkts bytes target prot opt in out source destination

Chain cali-from-host-endpoint (1 references)

pkts bytes target prot opt in out source destination

Chain cali-from-wl-dispatch (2 references)

pkts bytes target prot opt in out source destination

88421 6785K cali-fw-cali2945007a631 all -- cali2945007a631 \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:KuirFIScMtu09cPt \*/

1360K 80M cali-from-wl-dispatch-e all -- calie+ \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:XceSbgj8k8uv\_aO3 \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:nS44nY-BOjx4MVy6 \*/ /\* Unknown interface \*/

Chain cali-from-wl-dispatch-e (1 references)

pkts bytes target prot opt in out source destination

679K 40M cali-fw-calie1b6c7aa3c4 all -- calie1b6c7aa3c4 \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:7f5dtTalJpOxgEJS \*/

681K 40M cali-fw-calie6b42742d9d all -- calie6b42742d9d \* 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:bHtPrTPzLvU8kBUQ \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Y5ux4eCJ3eQQj4po \*/ /\* Unknown interface \*/

Chain cali-fw-cali2945007a631 (1 references)

pkts bytes target prot opt in out source destination

88420 6785K ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wANHgVKlHMg99ESY \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:M7KE7Xh1\_1oGJZ2z \*/ ctstate INVALID

1 60 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:7h4HmeySw1WuJmux \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:RdfdZy4rIBwL-y5W \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9oJLXvXgQleNBCoi \*/ /\* Drop IPinIP encapped packets originating in pods \*/

1 60 cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:onJBBtUQbbXpmyYp \*/

1 60 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:V809ZIvFak4irImu \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_PTRGc0U-L5Kz7V6ERW all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:GK8WGlfOUwVd9BaV \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:lsI0J4n-JFDG4-f\_ \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:AlXzG4BOPHWg4Z5k \*/ /\* Drop if no profiles matched \*/

Chain cali-fw-calie1b6c7aa3c4 (1 references)

pkts bytes target prot opt in out source destination

411K 28M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:QK-OVK6hf96fV5Co \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ijtzYplE-uJgorhD \*/ ctstate INVALID

268K 12M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:vREWytupn-9lYTGu \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:oNvp820PNBiCrWH1 \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:HC6nByeZkqf4AqVq \*/ /\* Drop IPinIP encapped packets originating in pods \*/

268K 12M cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fYFPVutHDAn7XhJb \*/

268K 12M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:LNXtgvXWrw2RosqB \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:omJT43s\_IhT9Ko24 \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:jPiT1EFNP8jTFMP\_ \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:n7OS2fAasgugFMEx \*/ /\* Drop if no profiles matched \*/

Chain cali-fw-calie6b42742d9d (1 references)

pkts bytes target prot opt in out source destination

413K 28M ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:w7JGboXvt7nM6mmb \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:gRy87HMEGk\_8xhlO \*/ ctstate INVALID

268K 12M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:YABNlJtBZ4\_2Y-e4 \*/ MARK and 0xfffeffff

0 0 DROP udp -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:89jot2fO8\_1WdEKG \*/ /\* Drop VXLAN encapped packets originating in pods \*/ multiport dports 4789

0 0 DROP 4 -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sw7K-Tl3QJ2gbSmp \*/ /\* Drop IPinIP encapped packets originating in pods \*/

268K 12M cali-pro-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sZQfNbwGMP7UNpio \*/

268K 12M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Zm54KsvGqATOwGMy \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pro-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:53-I8xQWz0\_j7jJM \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:VBCyTTpVrUyvPeFN \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:cnril7iFT2tiqzhf \*/ /\* Drop if no profiles matched \*/

Chain cali-pri-\_PTRGc0U-L5Kz7V6ERW (1 references)

pkts bytes target prot opt in out source destination

Chain cali-pri-\_u2Tn2rSoAPffvE7JO6 (2 references)

pkts bytes target prot opt in out source destination

Chain cali-pri-kns.kube-system (3 references)

pkts bytes target prot opt in out source destination

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:zoH5gU6U55FKZxEo \*/ MARK or 0x10000

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:bcGRIJcyOS9dgBiB \*/ mark match 0x10000/0x10000

Chain cali-pro-\_PTRGc0U-L5Kz7V6ERW (1 references)

pkts bytes target prot opt in out source destination

Chain cali-pro-\_u2Tn2rSoAPffvE7JO6 (2 references)

pkts bytes target prot opt in out source destination

Chain cali-pro-kns.kube-system (3 references)

pkts bytes target prot opt in out source destination

536K 24M MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:-50oJuMfLVO3LkBk \*/ MARK or 0x10000

536K 24M RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ztVPKv1UYejNzm1g \*/ mark match 0x10000/0x10000

Chain cali-to-hep-forward (1 references)

pkts bytes target prot opt in out source destination

Chain cali-to-host-endpoint (1 references)

pkts bytes target prot opt in out source destination

Chain cali-to-wl-dispatch (1 references)

pkts bytes target prot opt in out source destination

0 0 cali-tw-cali2945007a631 all -- \* cali2945007a631 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:NmWaA1LiH1bTFzun \*/

0 0 cali-to-wl-dispatch-e all -- \* calie+ 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:apFXk6Efp4BDSRu4 \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:CjEEpfZyvHvBYC7e \*/ /\* Unknown interface \*/

Chain cali-to-wl-dispatch-e (1 references)

pkts bytes target prot opt in out source destination

0 0 cali-tw-calie1b6c7aa3c4 all -- \* calie1b6c7aa3c4 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:AKww7sBX7HfVu3V8 \*/

0 0 cali-tw-calie6b42742d9d all -- \* calie6b42742d9d 0.0.0.0/0 0.0.0.0/0 [goto] /\* cali:1MBm-80Dv0bcl0DJ \*/

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Fqk22s6TQDjv6yWL \*/ /\* Unknown interface \*/

Chain cali-tw-cali2945007a631 (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:S7RVGyrwPd2XlhKA \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:8dbfdm0DqMyHiPMT \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fbFE3gGLH\_egnOAo \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:WfXElAfavmump6L0 \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:a8WhgfX2t2MzmOfa \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_PTRGc0U-L5Kz7V6ERW all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:OG-Bi9Td1wnNcn8V \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:TeVwq3rdsvx7jNnS \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:NCwgf8O5rtb22AaD \*/ /\* Drop if no profiles matched \*/

Chain cali-tw-calie1b6c7aa3c4 (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ugyOuBrCQDNBonXq \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:XH5FOfM71ItSepk6 \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:sjr\_oRlZAkwBMp4E \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:XOe7KJXK7Mg-hWdG \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:4L9kJ6si3PsE7PMR \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:wBSeuoHkEao8iIBy \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:jYJPc4tM1aedyKzv \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:\_2ue96zcQ49BRsFi \*/ /\* Drop if no profiles matched \*/

Chain cali-tw-calie6b42742d9d (1 references)

pkts bytes target prot opt in out source destination

0 0 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:yPc\_zFfv-WkDuDwT \*/ ctstate RELATED,ESTABLISHED

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:ChymMh3vX\_Tij0h8 \*/ ctstate INVALID

0 0 MARK all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:f3mYOg2wknZgkZX9 \*/ MARK and 0xfffeffff

0 0 cali-pri-kns.kube-system all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:y88Eab8vh1AJZfOO \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:FiyqBViUuSluRofl \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 cali-pri-\_u2Tn2rSoAPffvE7JO6 all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:9dXEQLPWqHETn5dM \*/

0 0 RETURN all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:fvI-uYS5OLv9JYBI \*/ /\* Return if profile accepted \*/ mark match 0x10000/0x10000

0 0 DROP all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:iFoiha4TvaP\_8Zk2 \*/ /\* Drop if no profiles matched \*/

Chain cali-wl-to-host (1 references)

pkts bytes target prot opt in out source destination

912K 63M cali-from-wl-dispatch all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:Ee9Sbo10IpVujdIY \*/

7 420 ACCEPT all -- \* \* 0.0.0.0/0 0.0.0.0/0 /\* cali:nSZbcOoG1xPONxb8 \*/ /\* Configured DefaultEndpointToHostAction \*/

**sudo iptables -t nat -L PREROUTING | column -t**

[sudo] password for admin:

Chain PREROUTING (policy ACCEPT)

target prot opt source destination

cali-PREROUTING all -- anywhere anywhere /\* cali:6gwbT8clXdHdC1b1 \*/

KUBE-SERVICES all -- anywhere anywhere /\* kubernetes service portals \*/

DOCKER all -- anywhere anywhere ADDRTYPE match dst-type LOCAL

**sudo iptables -t nat -L KUBE-SERVICES -n | column -t**

Chain KUBE-SERVICES (2 references)

target prot opt source destination

KUBE-MARK-MASQ udp -- !192.168.0.0/16 10.96.0.10 /\* kube-system/kube-dns:dns cluster IP \*/ udp dpt:53

KUBE-SVC-TCOU7JCQXEZGVUNU udp -- 0.0.0.0/0 10.96.0.10 /\* kube-system/kube-dns:dns cluster IP \*/ udp dpt:53

KUBE-MARK-MASQ tcp -- !192.168.0.0/16 10.96.0.10 /\* kube-system/kube-dns:dns-tcp cluster IP \*/ tcp dpt:53

KUBE-SVC-ERIFXISQEP7F7OF4 tcp -- 0.0.0.0/0 10.96.0.10 /\* kube-system/kube-dns:dns-tcp cluster IP \*/ tcp dpt:53

KUBE-MARK-MASQ tcp -- !192.168.0.0/16 10.96.0.10 /\* kube-system/kube-dns:metrics cluster IP \*/ tcp dpt:9153

KUBE-SVC-JD5MR3NA4I4DYORP tcp -- 0.0.0.0/0 10.96.0.10 /\* kube-system/kube-dns:metrics cluster IP \*/ tcp dpt:9153

KUBE-MARK-MASQ tcp -- !192.168.0.0/16 10.96.0.1 /\* default/kubernetes:https cluster IP \*/ tcp dpt:443

KUBE-SVC-NPX46M4PTMTKRN6Y tcp -- 0.0.0.0/0 10.96.0.1 /\* default/kubernetes:https cluster IP \*/ tcp dpt:443

KUBE-NODEPORTS all -- 0.0.0.0/0 0.0.0.0/0 /\* kubernetes service nodeports; NOTE: this must be the last rule in this chain \*/ ADDRTYPE match dst-type LOCAL

**sudo iptables -t nat -L KUBE-MARK-MASQ -n | column -t**

Chain KUBE-MARK-MASQ (11 references)

target prot opt source destination

MARK all -- 0.0.0.0/0 0.0.0.0/0 MARK or 0x4000

**sudo iptables -t nat -L KUBE-SVC-TCOU7JCQXEZGVUNU -n | column -t**

Chain KUBE-SVC-TCOU7JCQXEZGVUNU (1 references)

target prot opt source destination

KUBE-SEP-Y6RY5CVAJZT72U4F all -- 0.0.0.0/0 0.0.0.0/0 /\* kube-system/kube-dns:dns \*/ statistic mode random probability 0.50000000000

KUBE-SEP-E7CIV6KH5STSKSPY all -- 0.0.0.0/0 0.0.0.0/0 /\* kube-system/kube-dns:dns \*/

**sudo iptables -t nat -L KUBE-SVC-ERIFXISQEP7F7OF4 -n | column -t**

Chain KUBE-SVC-ERIFXISQEP7F7OF4 (1 references)

target prot opt source destination

KUBE-SEP-X5KN27TZYBNJ27EZ all -- 0.0.0.0/0 0.0.0.0/0 /\* kube-system/kube-dns:dns-tcp \*/ statistic mode random probability 0.50000000000

KUBE-SEP-55VLKKPNCGDLCKAD all -- 0.0.0.0/0 0.0.0.0/0 /\* kube-system/kube-dns:dns-tcp \*/

**sudo iptables -t nat -L KUBE-SEP-X5KN27TZYBNJ27EZ -n | column -t**

Chain KUBE-SEP-X5KN27TZYBNJ27EZ (1 references)

target prot opt source destination

KUBE-MARK-MASQ all -- 192.168.27.65 0.0.0.0/0 /\* kube-system/kube-dns:dns-tcp \*/

DNAT tcp -- 0.0.0.0/0 0.0.0.0/0 /\* kube-system/kube-dns:dns-tcp \*/ tcp to:192.168.27.65:53

**sudo lsof -i -sTCP:LISTEN**

COMMAND PID USER FD TYPE DEVICE SIZE/OFF NODE NAME

sshd 693 root 3u IPv4 22839 0t0 TCP \*:ssh (LISTEN)

sshd 693 root 4u IPv6 22841 0t0 TCP \*:ssh (LISTEN)

apache2 714 root 4u IPv6 22871 0t0 TCP \*:http (LISTEN)

calico-no 19908 root 3u IPv4 80742156 0t0 TCP localhost:9099 (LISTEN)

bird 20000 root 7u IPv4 80745543 0t0 TCP \*:bgp (LISTEN)

kube-apis 22233 root 7u IPv6 80280695 0t0 TCP \*:6443 (LISTEN)

kube-cont 22283 root 7u IPv4 80278255 0t0 TCP localhost:10257 (LISTEN)

etcd 22297 root 3u IPv4 80280797 0t0 TCP C16080100.ss2k.uci.edu:2380 (LISTEN)

etcd 22297 root 5u IPv4 80280801 0t0 TCP localhost:2379 (LISTEN)

etcd 22297 root 6u IPv4 80280802 0t0 TCP C16080100.ss2k.uci.edu:2379 (LISTEN)

etcd 22297 root 10u IPv4 80280893 0t0 TCP localhost:2381 (LISTEN)

kube-sche 22337 root 7u IPv4 80279048 0t0 TCP localhost:10259 (LISTEN)

kubelet 22660 root 12u IPv4 80281077 0t0 TCP localhost:36821 (LISTEN)

kubelet 22660 root 29u IPv4 80280273 0t0 TCP localhost:10248 (LISTEN)

kubelet 22660 root 30u IPv6 80281111 0t0 TCP \*:10250 (LISTEN)

kube-prox 23017 root 13u IPv6 80280556 0t0 TCP \*:10256 (LISTEN)

kube-prox 23017 root 16u IPv4 80281273 0t0 TCP localhost:10249 (LISTEN)

apache2 28203 www-data 4u IPv6 22871 0t0 TCP \*:http (LISTEN)

apache2 28204 www-data 4u IPv6 22871 0t0 TCP \*:http (LISTEN)

apache2 28205 www-data 4u IPv6 22871 0t0 TCP \*:http (LISTEN)