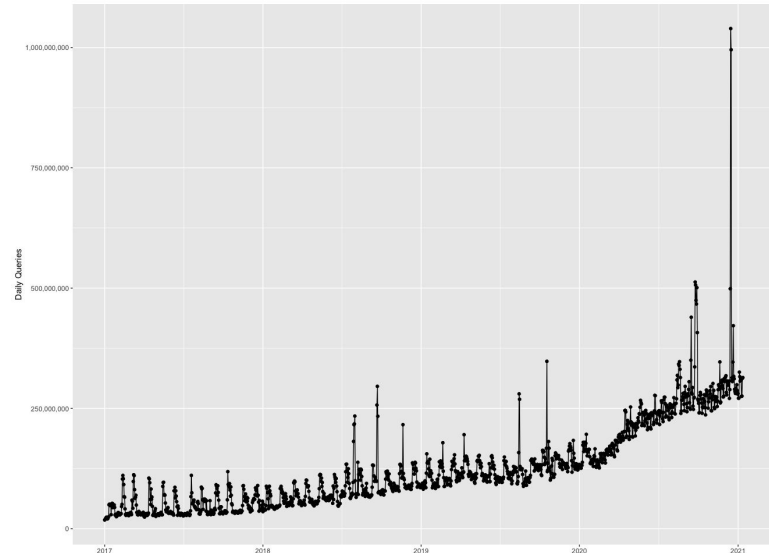# Name Collision Analysis .INTERNAL

.INTERNAL Analysis :: Daily Query Volume

.INTERNAL Queries to A and J Root Servers per Day by IP Version
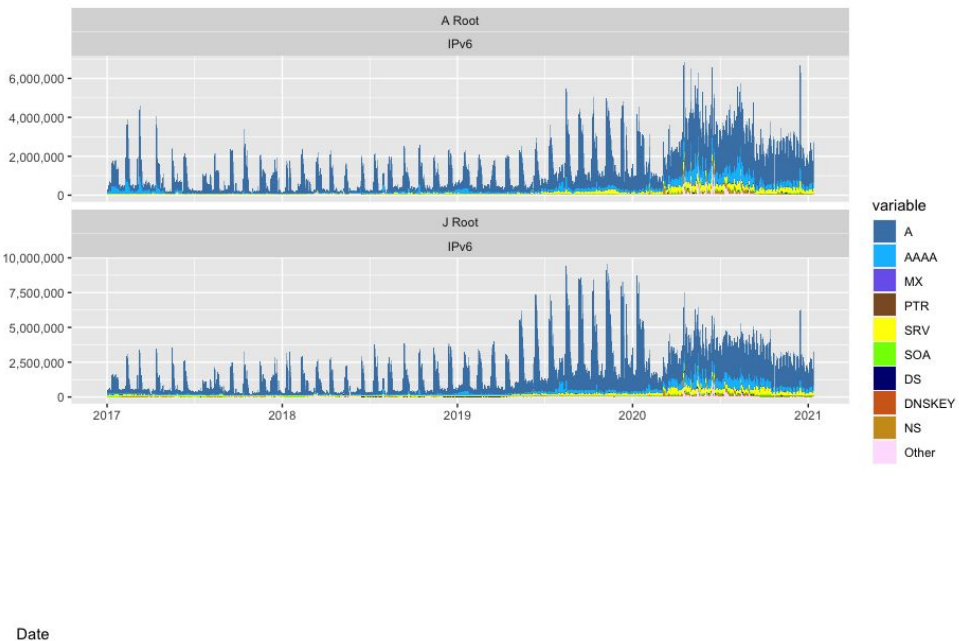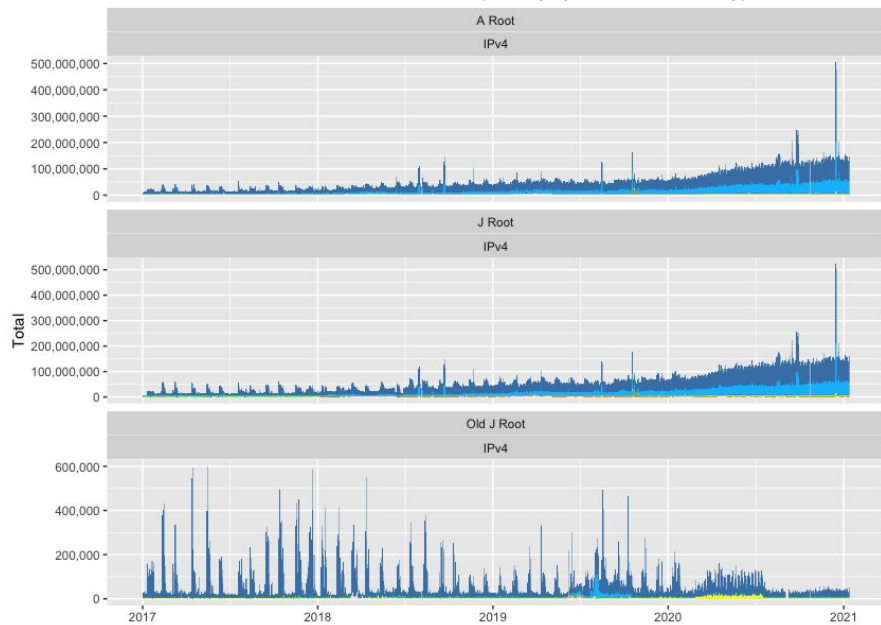
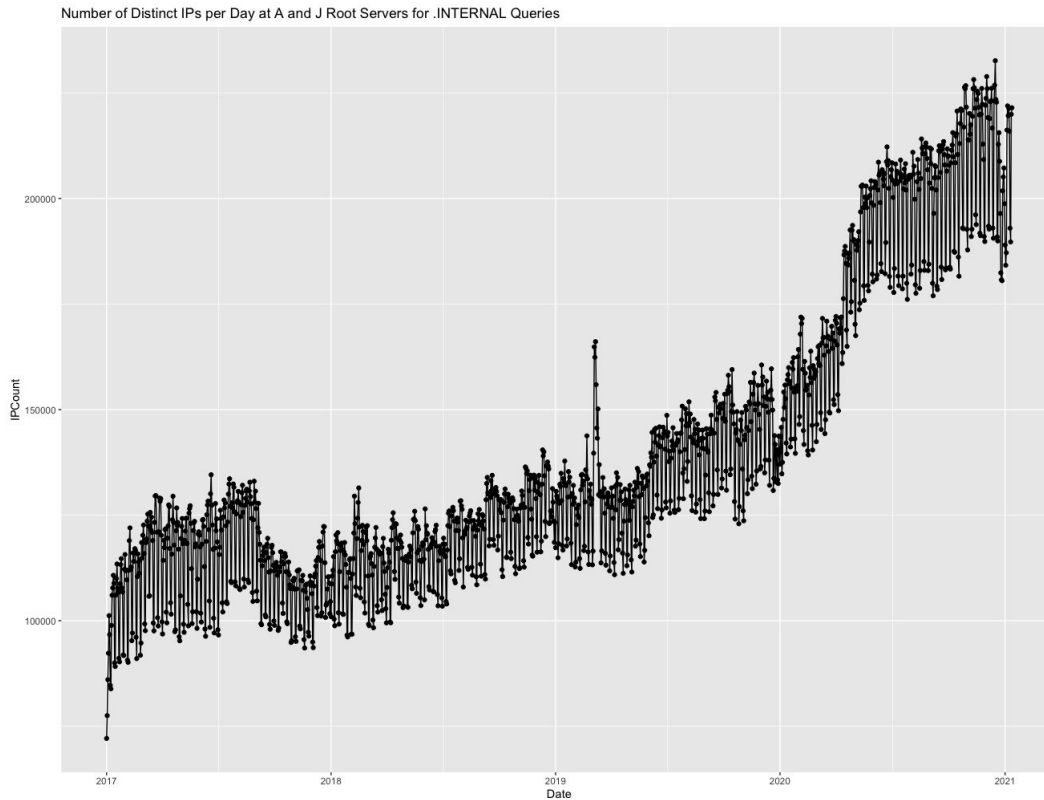Total Daily Queruies to A and J for .INTERNAL

.INTERNAL Analysis :: Qtype Distribution

.INTERNAL Queries to A and J Root Servers per Day by IP Version and QType

.INTERNAL Analysis :: Qtype Dist. of Strings

Qtype Distribution for Various Delegated and Undelegated TLDs

.INTERNAL Analysis :: Unique Daily Source IPs

Number of Distinct IPs per Day at A and J Root Servers for .INTERNAL Queries
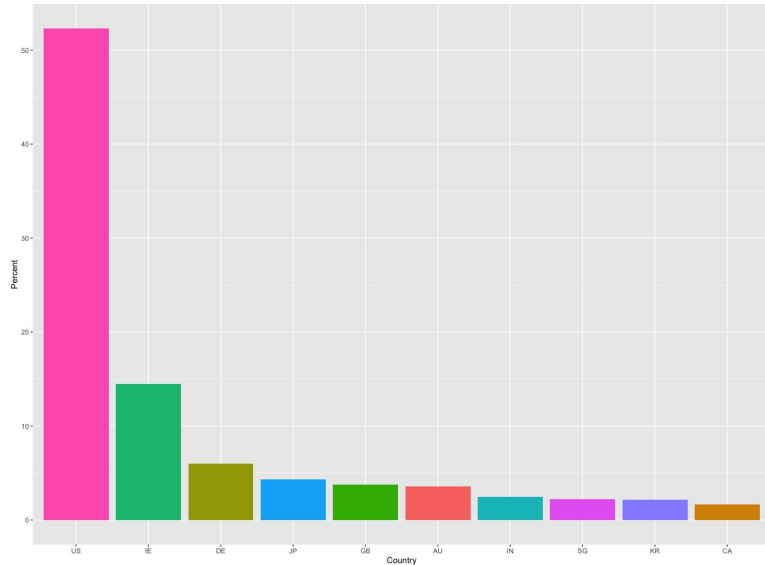
.INTERNAL Analysis :: Geographical Distribution

INTERNAL Global Distribution
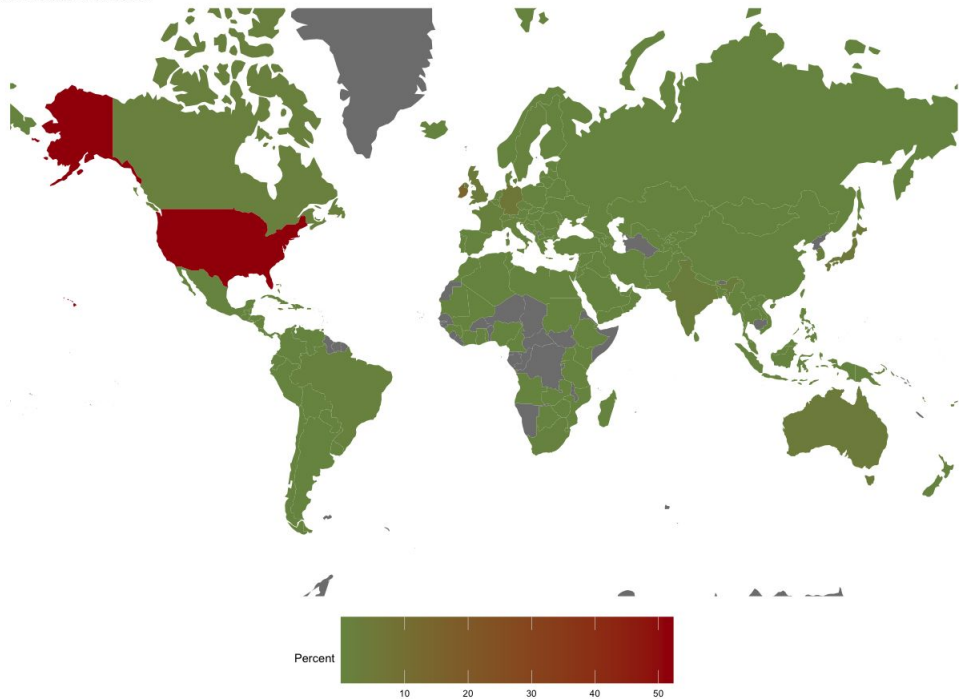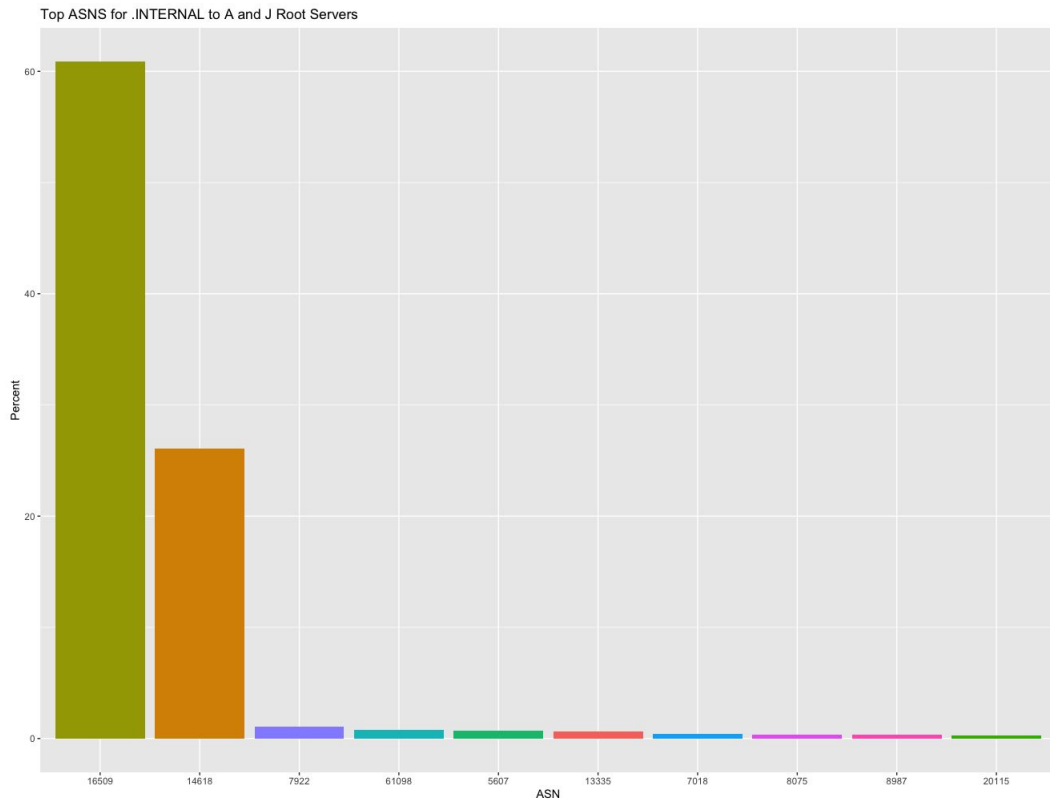

Top Countries for .INTERNAL to A and J Root Servers

.INTERNAL Analysis :: ASN Distribution

Top ASNS for .INTERNAL to A and J Root Servers

Cummulative Coverage of .INTERNAL Traffic by Rank Order ASNs
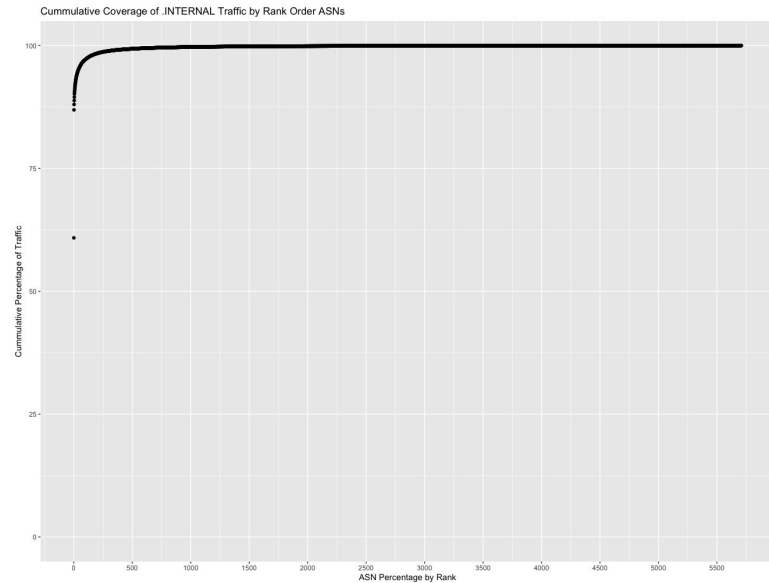
.INTERNAL Analysis :: ASN Distribution MAIL/INTERNAL

Cummulative Coverage of MAIL Traffic by Rank Order ASNs

Cummulative Coverage of .INTERNAL Traffic by Rank Order ASNs

.INTERNAL Analysis :: Label Analysis

Number of Labels Present in .INTERNAL Queries

	SLD	Percent
1:	compute	64.06637157
2:	ec2	24.25419474
3:	foundation	3.29748196
4:		1.07270648
5:	compute-1	0.87439469
6:	google	0.75785944
7:	rancher	0.71297776
8:	clustering	0.55616635
9:	hcps	0.39810000
10:	corp	0.27232804
11:	7s	0.26998527
12:	uber	0.23709058
13:	ubermaps	0.18868883
14:	dbg	0.16952733
15:	ghdnet	0.15295878
16:	domroot	0.13477335
17:	_	0.11673546
18:	wvrgroup	0.10461611
19:	westada	0.10071690
20:	avertlabs	0.09441954
21:	cmw	0.06675903
22:	aws	0.06358604
23:	uc	0.06308703
24:	ad	0.06271632
25:	maxim-ic	0.05971856
26:	efi	0.05687003
27:	fcl	0.05675254
28:	wge	0.05359981
29:	domain	0.05233912
30:	blink	0.05020264

	ThirdLabel	Percent
1:	us-west-2.compute	17.1589977
2:	us-east-2.compute	16.4330502
3:	eu-west-1.compute	12.5938315
4:	eu-central-1.compute	6.3346503
5:	ap-northeast-1.compute	5.6828674
6:	prod.foundation	4.3639820
7:	ap-southeast-2.compute	3.6556092
8:	eu-west-2.compute	2.9668113
9:	ap-southeast-1.compute	2.8879647
10:	ap-south-1.compute	2.5913326
11:	ap-northeast-2.compute	2.5346497
12:	com.ec2	2.4392407
13:	sa-east-1.compute	2.2049954
14:	internal.ec2	1.7763651
15:	us-east-1.compute	1.7595327
16:	ca-central-1.compute	1.4508265
17:	.	1.4198201
18:	us-west-1.compute	1.4166473
19:	eu-west-3.compute	1.3051468
20:	metadata.google	0.8742713
21:	eu-north-1.compute	0.8657445
22:	ap-east-1.compute	0.6080187
23:	us-gov-west-1.compute	0.4586415
24:	iocs2.rancher	0.3656085
25:	europe.7s	0.3569946
26:	net.ec2	0.3532283
27:	me-south-1.compute	0.3512589
28:	af-south-1.compute	0.3455081
29:	de.ec2	0.3376713
30:	eu-south-1.compute	0.3026175

.INTERNAL Analysis :: Label Analysis

Most popular third label for names in .INTERNAL
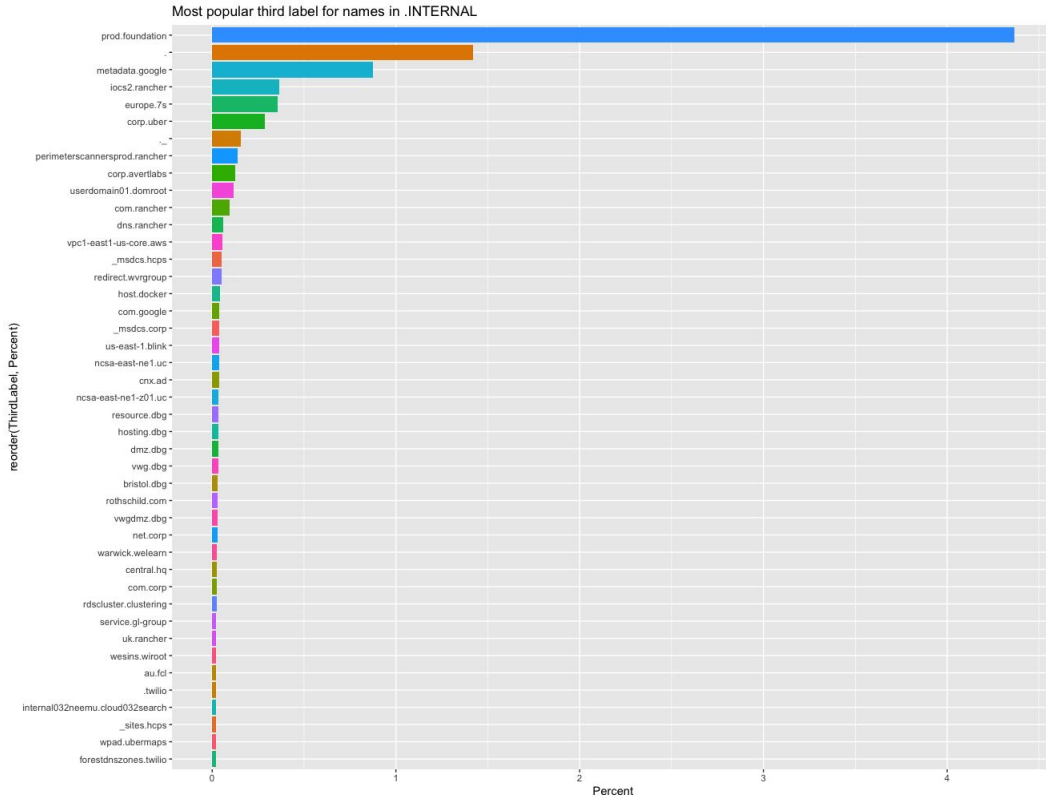
Why Rancher?

Rancher is a complete software stack for teams adopting containers. It addresses the operational and security challenges of managing multiple Kubernetes clusters across any infrastructure, while providing DevOps teams with integrated tools for running containerized workloads.

The DNS entry is added to the `resolv.conf` file but it's overridden by rancher.

```
/# cat /etc/resolv.conf
search 10.42.173.171 dns.rancher.internal busy.dns.rancher.internal rancher.internal
# nameserver 10.42.173.171
nameserver 169.254.169.250
```

https://github.com/rancher/rancher/issues/15304

.INTERNAL Analysis :: SVC and Kubernetes

A and J Root Traffic for SVC

Distinct ASNs	722	A	62,647,702
AAAA	61,642,891	MX	4,330	PTR 1,578
SRV	727,573	SOA	420	DS 11,789
DNSKEY	1	NS	7,758	Other 442,477

442,477 Other Queries
7,758 NS Queries
1 DNSKEY Queries
11,789 DS Queries
420 SOA Queries
727,573 SRV Queries
1,578 PTR Queries
4,330 MX Queries
61,642,891 AAAA Queries
62,647,702 A Queries
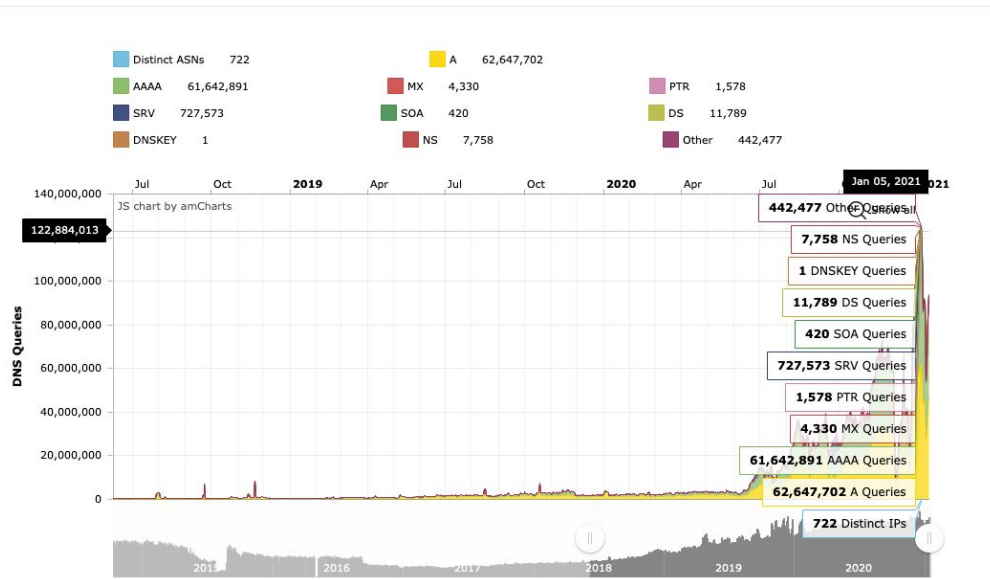722 Distinct IPs

Jan 05, 2021
122,884,013

JS chart by amCharts

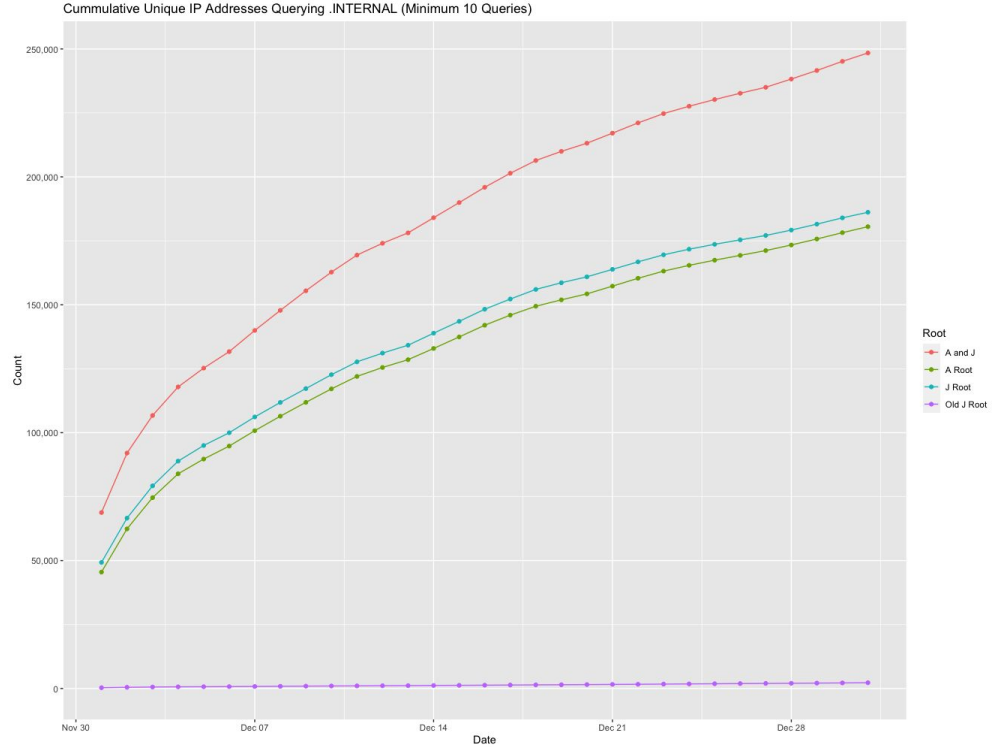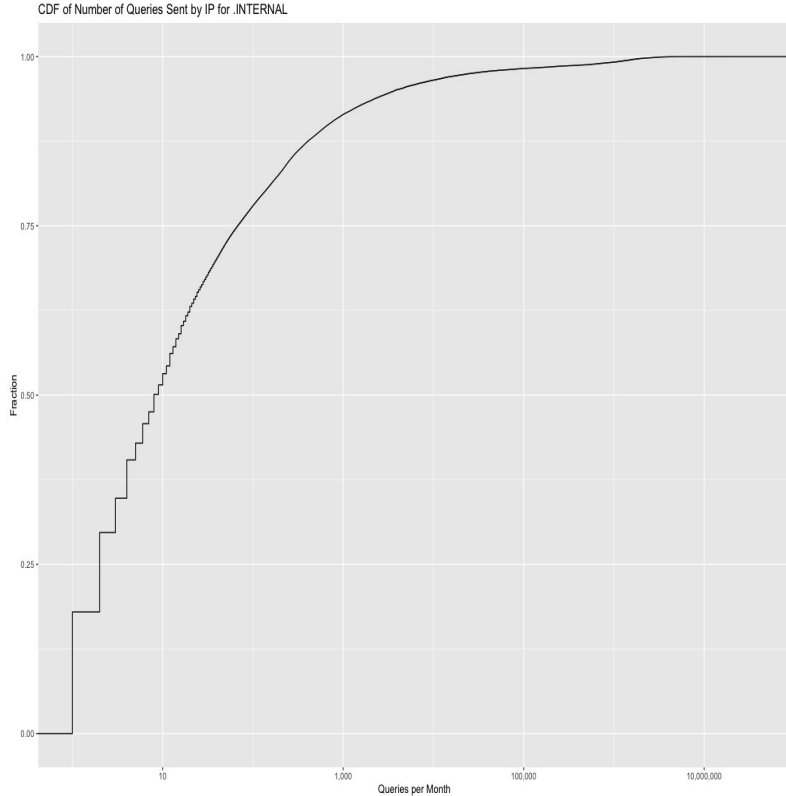*Table 6: Kubernetes References to URLs containing SVC*

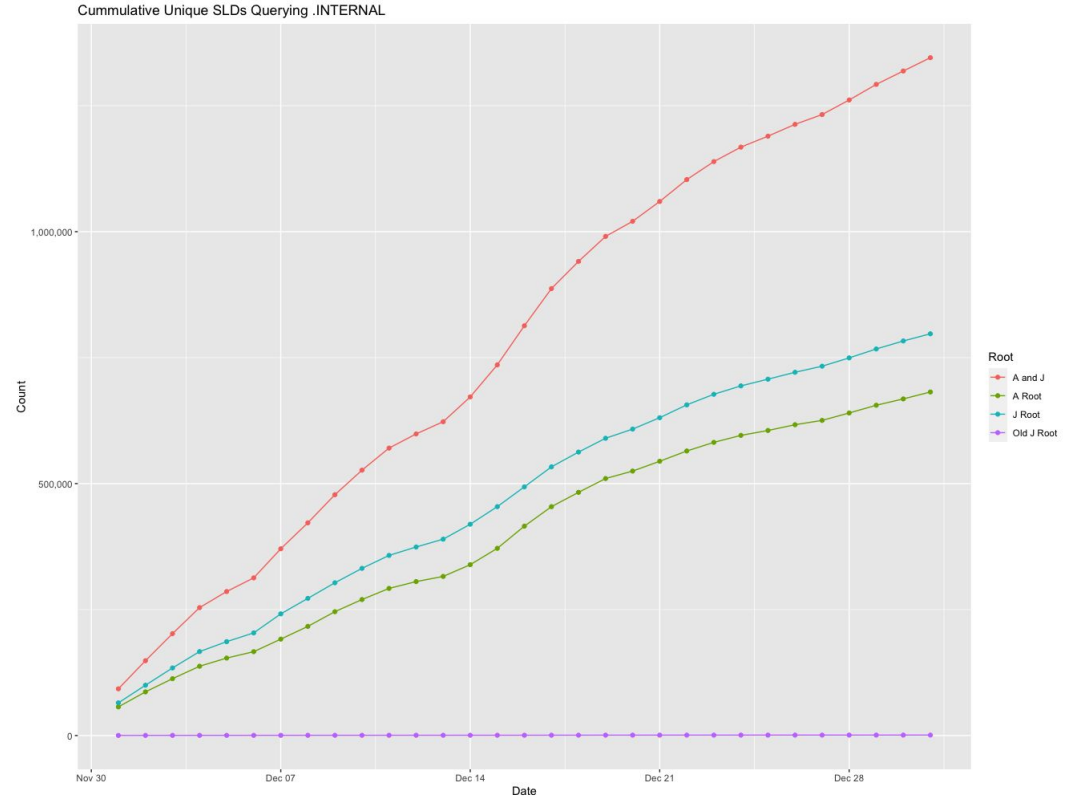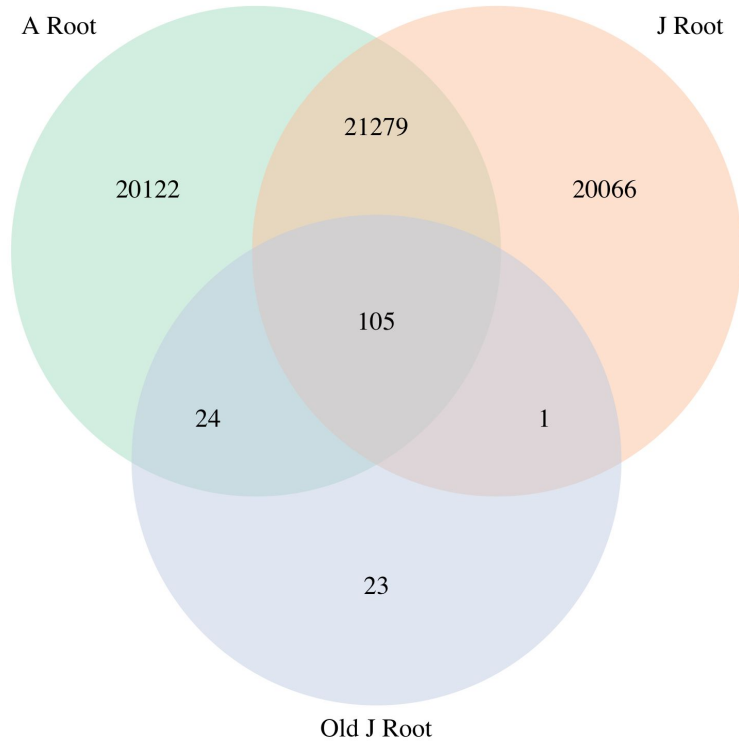| File	Line	Text
kubernetes/cmd/kubeadm/app/phases/controlplane/manifests.go	141	"service-account-issuer": fmt.Sprintf("https://kubernetes.default.svc.%s", cfg.Networking.DNSDomain),
kubernetes/staging/src/k8s.io/kube-aggregator/artifacts/self-contained/etcd-pod.yaml	22	- "--advertise-client-urls=https://etcd.kube-public.svc:4001"
kubernetes/staging/src/k8s.io/kube-aggregator/artifacts/self-contained/etcd-pod.yaml	28	- "--initial-advertise-peer-urls=https://etcd.kube-public.svc:7001"
kubernetes/staging/src/k8s.io/kube-aggregator/artifacts/self-contained/etcd-pod.yaml	33	- "--initial-cluster=default=https://etcd.kube-public.svc:7001"
kubernetes/staging/src/k8s.io/kube-aggregator/artifacts/self-contained/kubernetes-discover-pod.yaml	43	- "--etcd-servers=https://etcd.kube-public.svc:4001"

Data Sensitivity Analysis
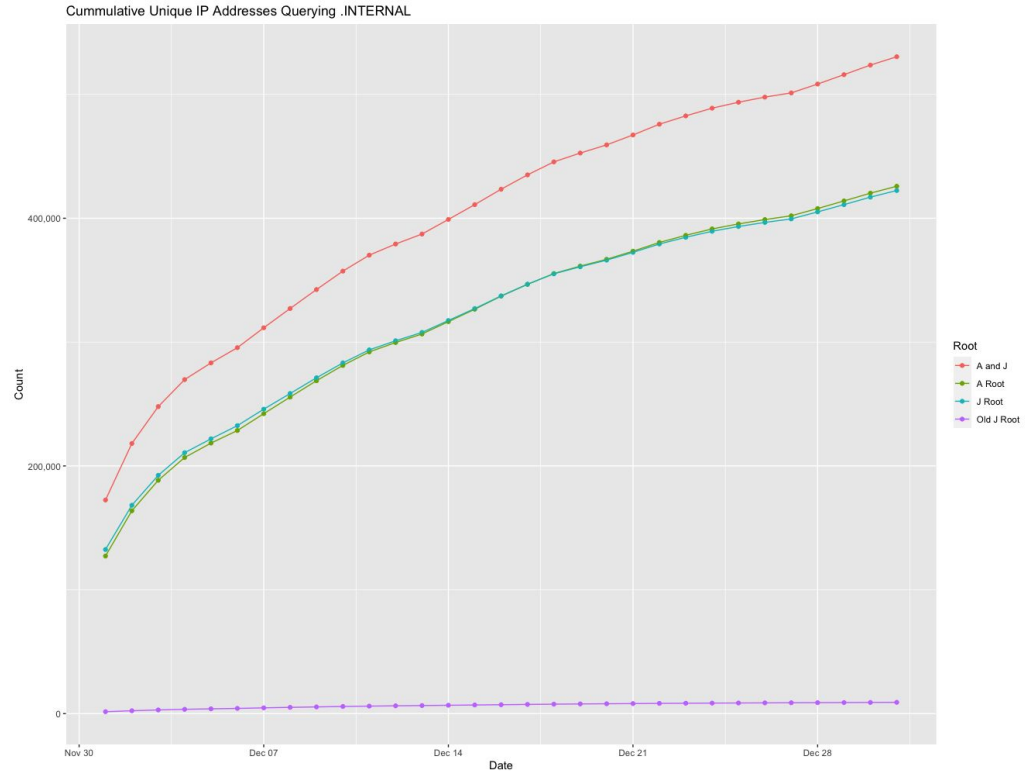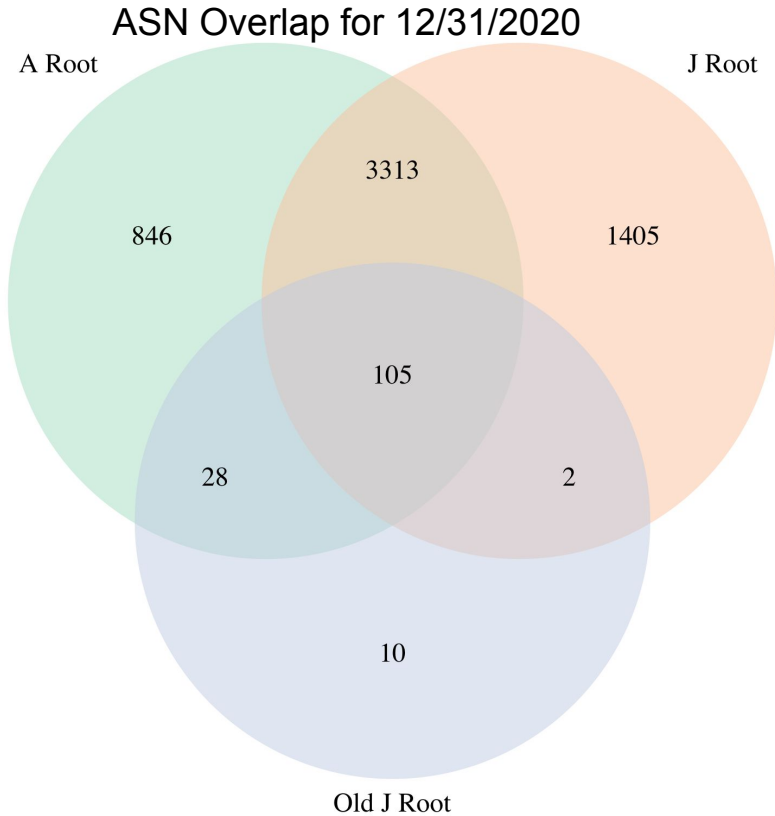
.INTERNAL Analysis :: Root ASN Overlap and IP growth

.INTERNAL Analysis :: Root ASN Overlap and IP growth

CDF of Number of Queries Sent by IP for .INTERNAL

Cummulative Unique IP Addresses Querying .INTERNAL (Minimum 10 Queries)

.INTERNAL Analysis :: SLD Overlap Analysis

.INTERNAL Analysis :: SLD Overlap Analysis

CDF of Number of Queries per SLD for .INTERNAL

Cummulative Unique SLDs for .INTERNAL (Minimum 2 Queries)