



# Canary deployments are a myth

True progressive delivery occurs via OpenFeature

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**Bob Walker**

Field CTO

Octonaut since 2018

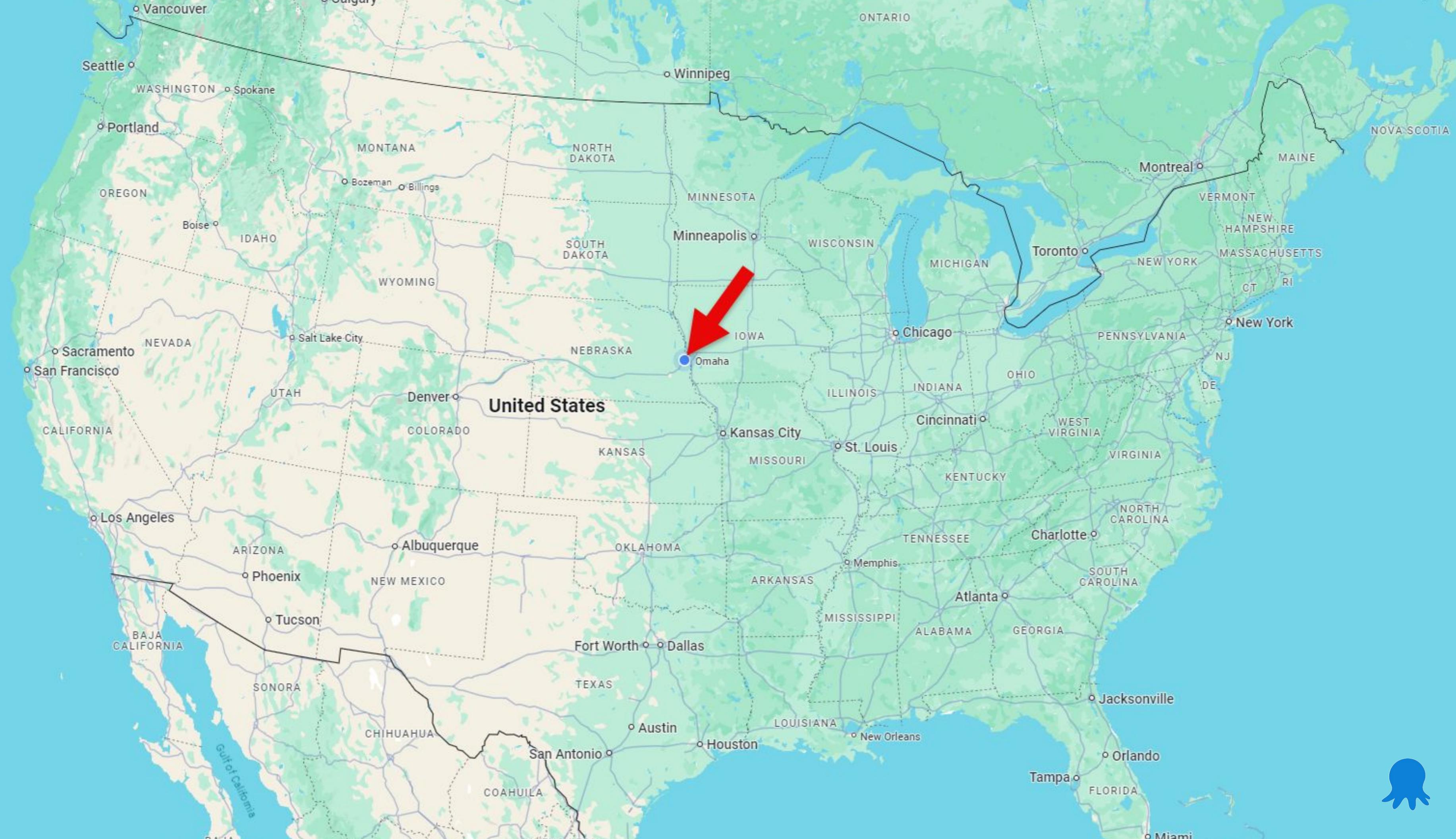
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 bobjwalker.octopus.app







Farm Credit Services  
of America



Sandhills Global.



Octopus Deploy



**Myth: A widely held but  
false belief or idea**



**Myth: Implementing Canary Deployments will solve all your deployment problems**



# Agenda

1

The myth of canary deployments

2

Appropriate canary use cases

3

OpenFeature and Progressive Delivery

4

Challenges



# The myth of canary deployments



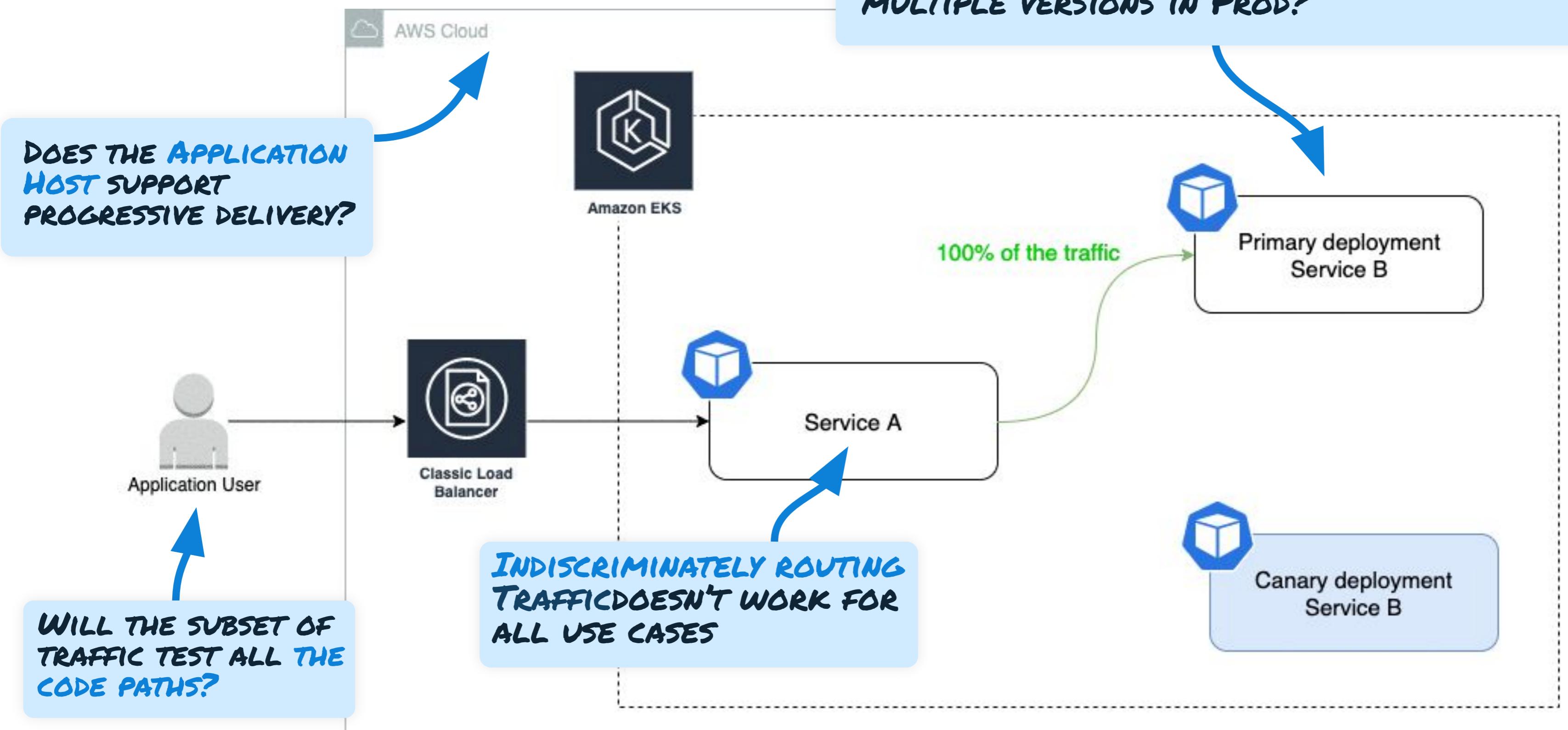
MAGIC WAND DEPLOY AND REVERT  
IF SOMETHING GOES WRONG

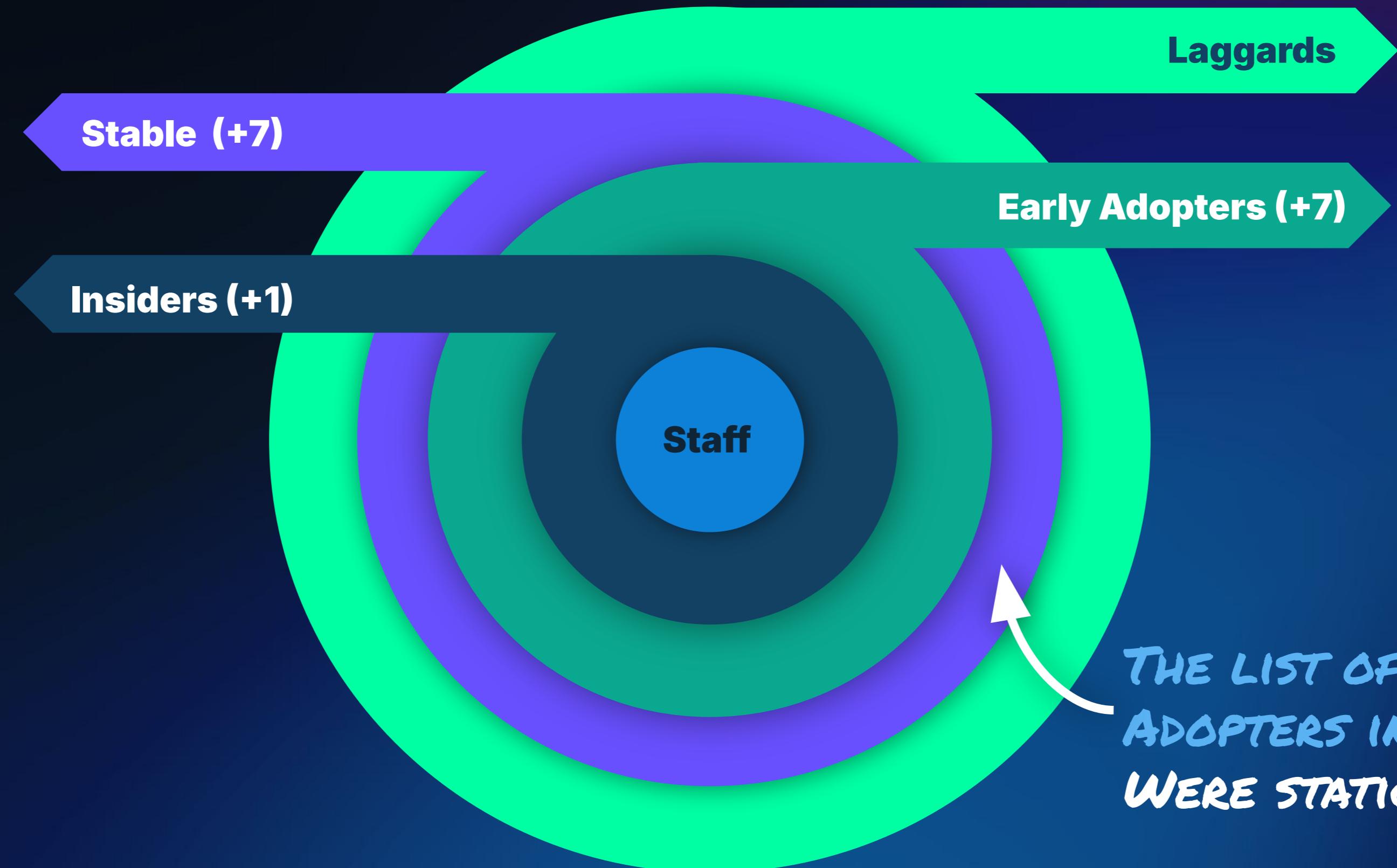


PREFERABLY MINIMIZING  
USER IMPACT



## CAN THE APPLICATION ARCHITECTURE SUPPORT MULTIPLE VERSIONS IN PROD?

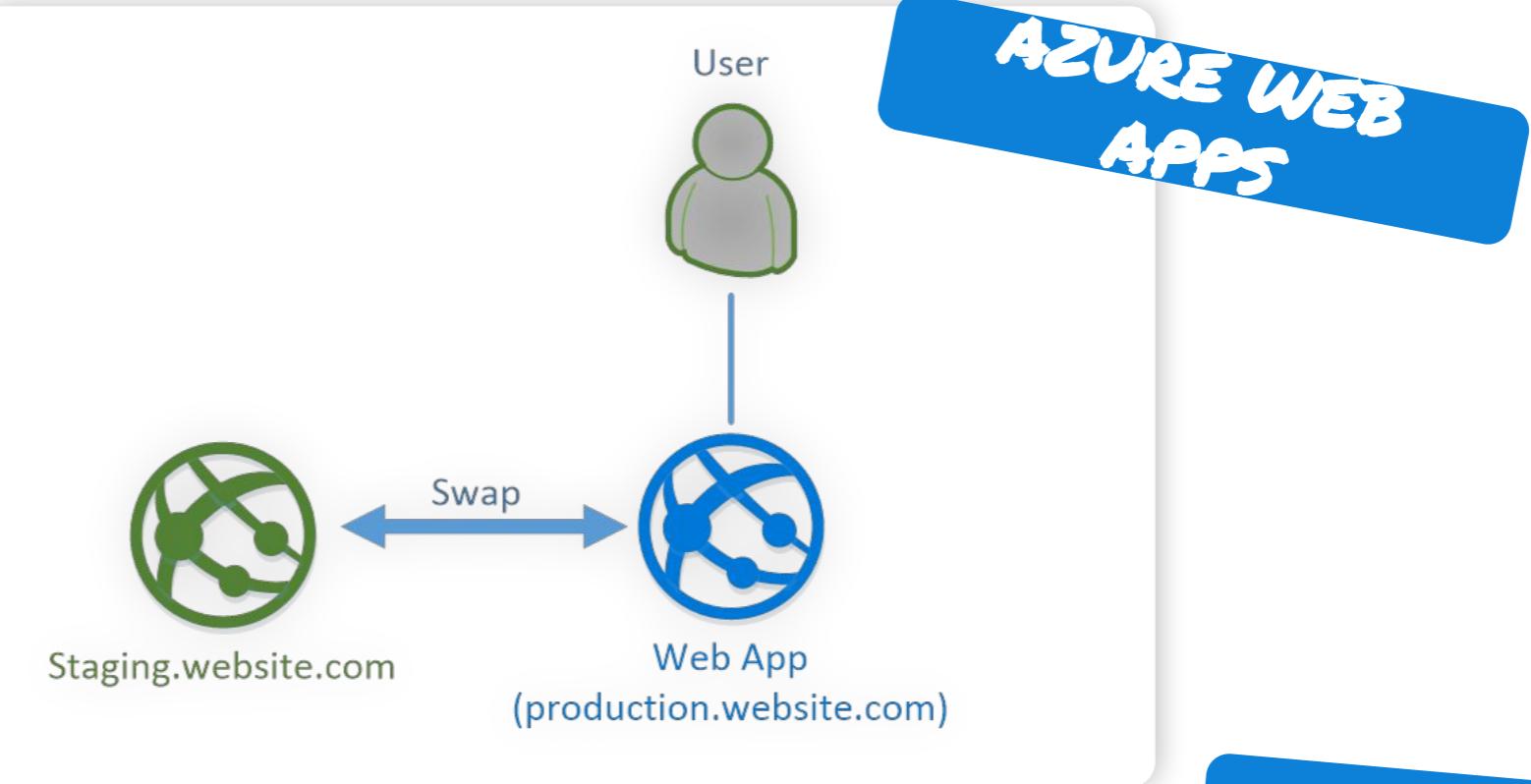
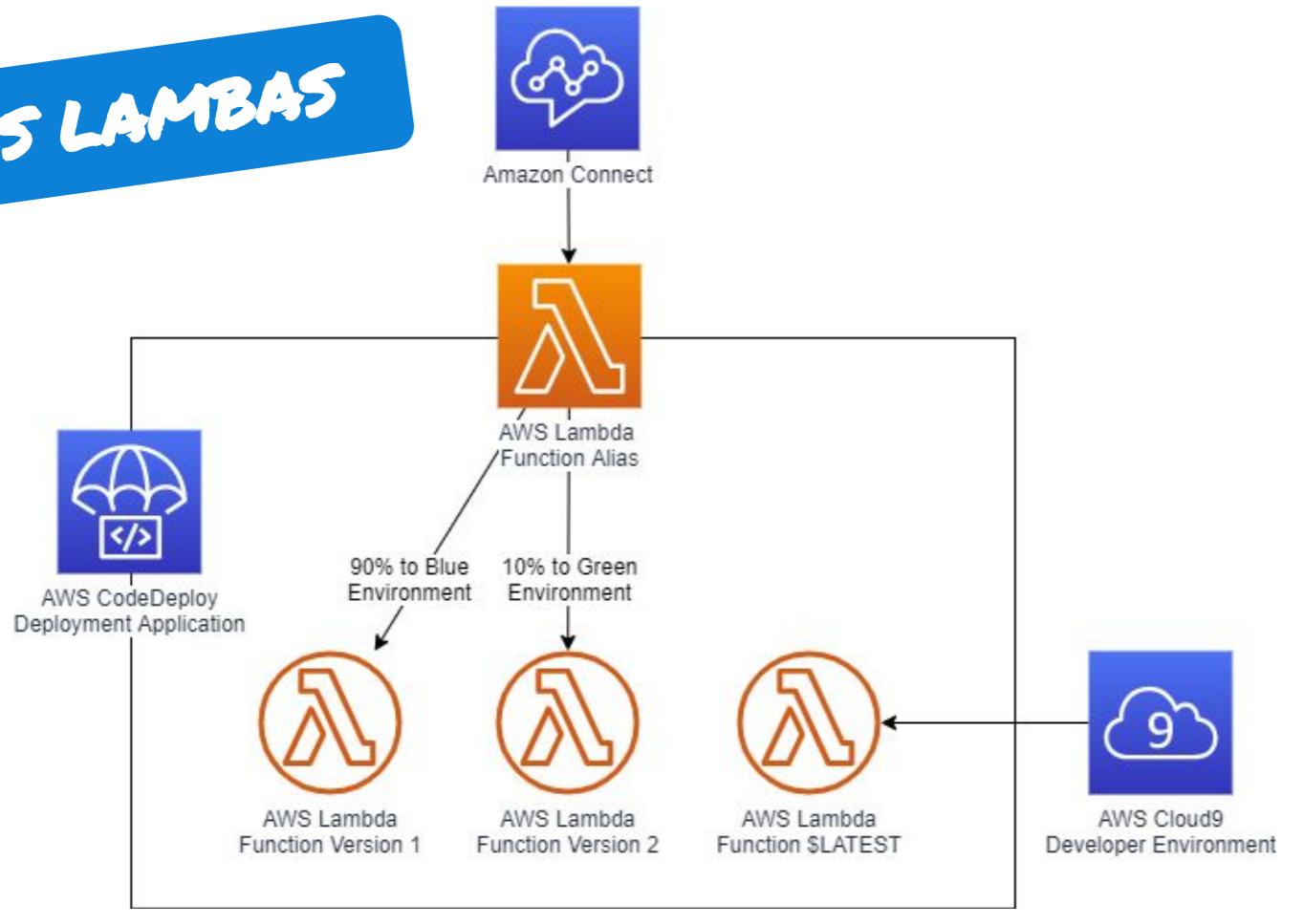




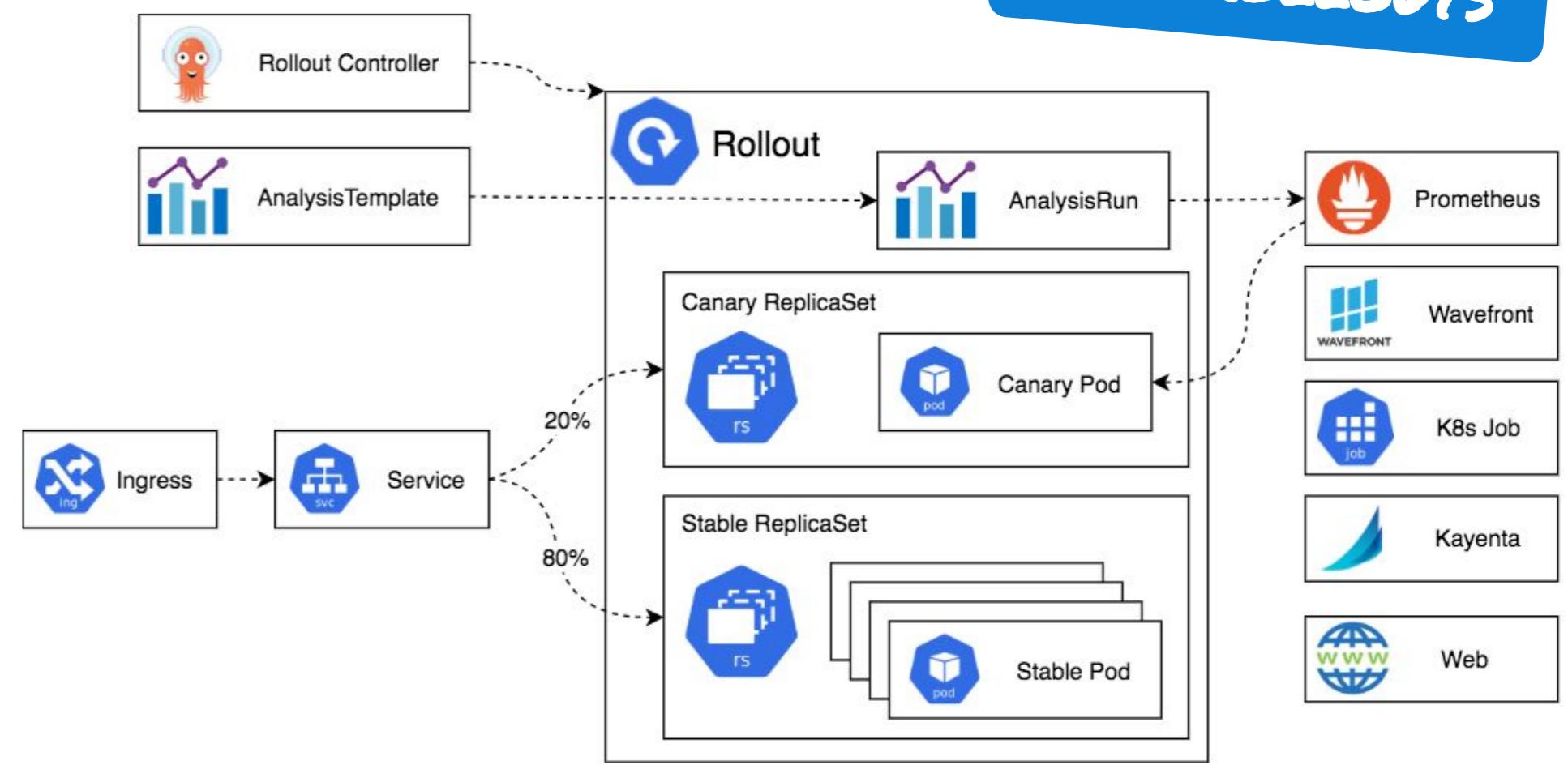
**Unless you are working for a  
FAANG-sized company, you  
are unlikely to exercise all  
code paths in a short period of  
time**



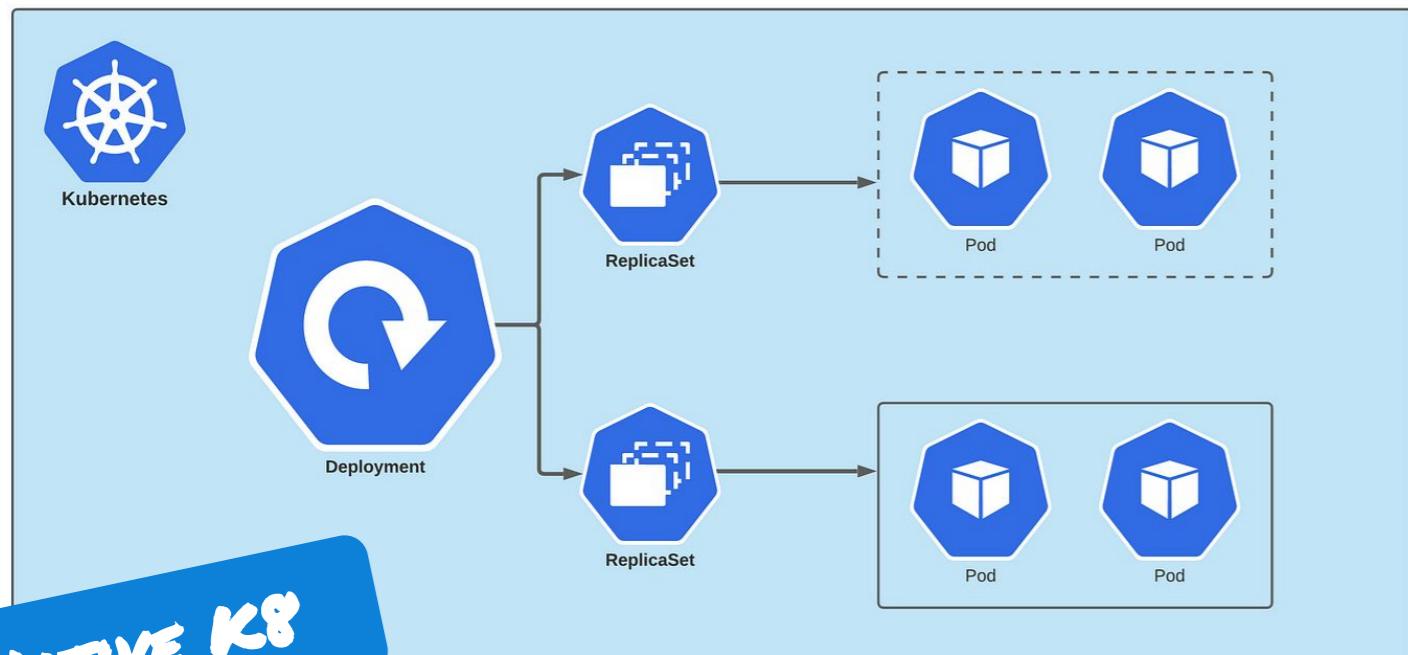
## AWS LAMBAS



## ARGO ROLLOUTS



## NATIVE K8



**Indiscriminately  
routing a percentage  
of traffic for new  
functionality leads to  
a disjointed user  
experience**





Default



Type Ctrl+Space to search or switch projects...



All Projects



Tenants

Tenant Tag Sets



Variable Sets

INFRASTRUCTURE

Overview

Deployment Targets

Environments

Machine Policies

Machine Proxies

Workers

Worker Pools

MANAGE

Accounts

Build Information

Certificates

External Feeds

Git Credentials

Lifecycles

Packages

Script Modules

Step Templates

## All Projects

Search projects...

Advanced filters

Filters applied

### Default Project Group

Development

Test

Staging

Production



Pet Shop

2024.3.1.1-ClinicsBrand

ing

Mar 11, 2024 3:22 PM

1/1



2024.3.0.9

Mar 11, 2024 3:26 PM

1/1



2024.3.0.9

Mar 11, 2024 3:41 PM

4/4



2024.3.0.9

Mar 11, 2024 3:35 PM

5/12



Random Quotes

0.1.42

Feb 27, 2024 3:01 PM

0.1.79.1

Feb 27, 2024 3:24 PM

0.1.79.1

Feb 27, 2024 3:26 PM

0.1.79.1

Feb 27, 2024 3:30 PM



Trident

4.0.56-helm.9

Apr 17, 2024 9:55 AM

4.0.56.466

Apr 17, 2024 10:21 AM

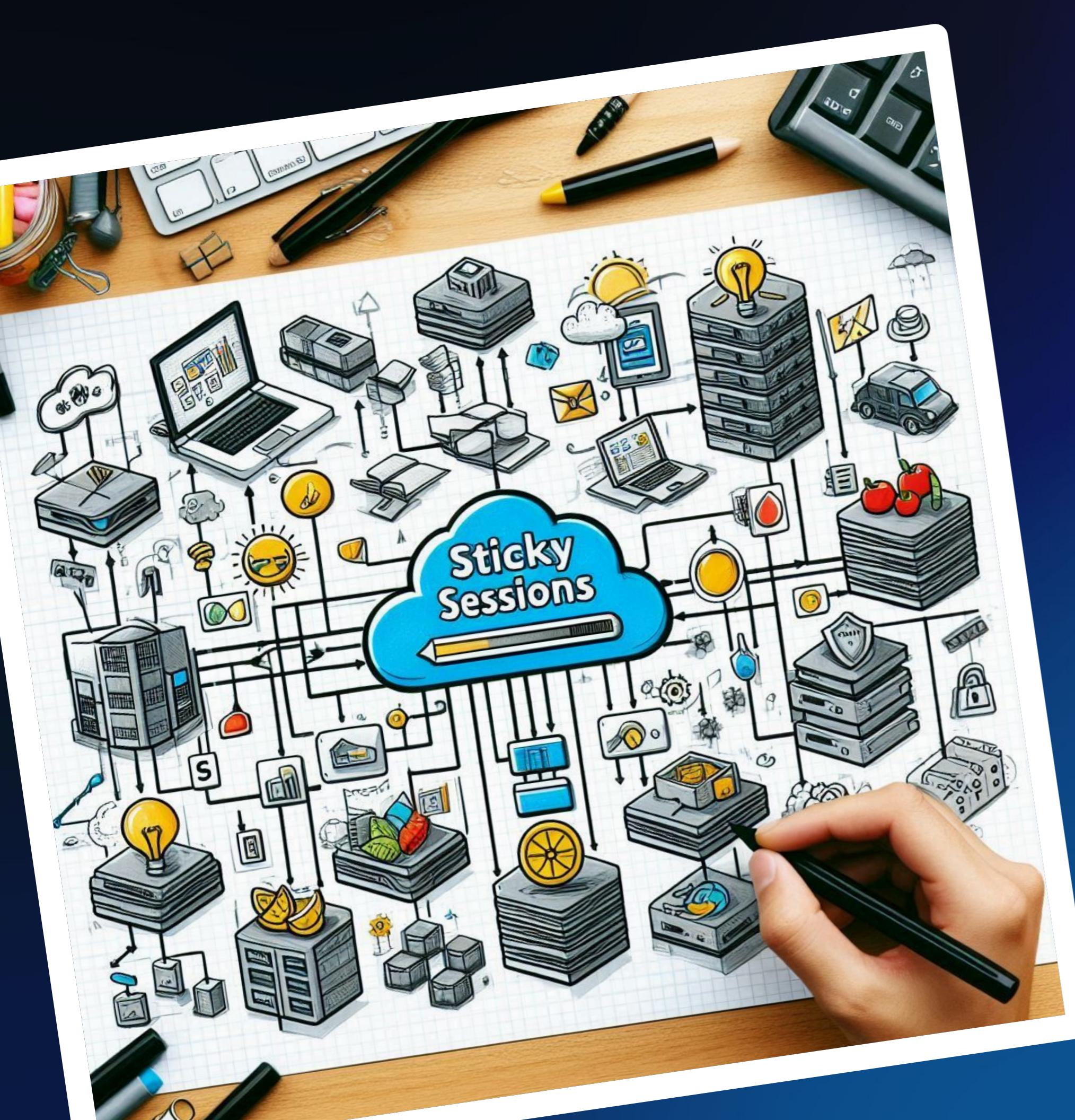
4.0.56.466

Apr 17, 2024 10:27 AM

4.0.43.421

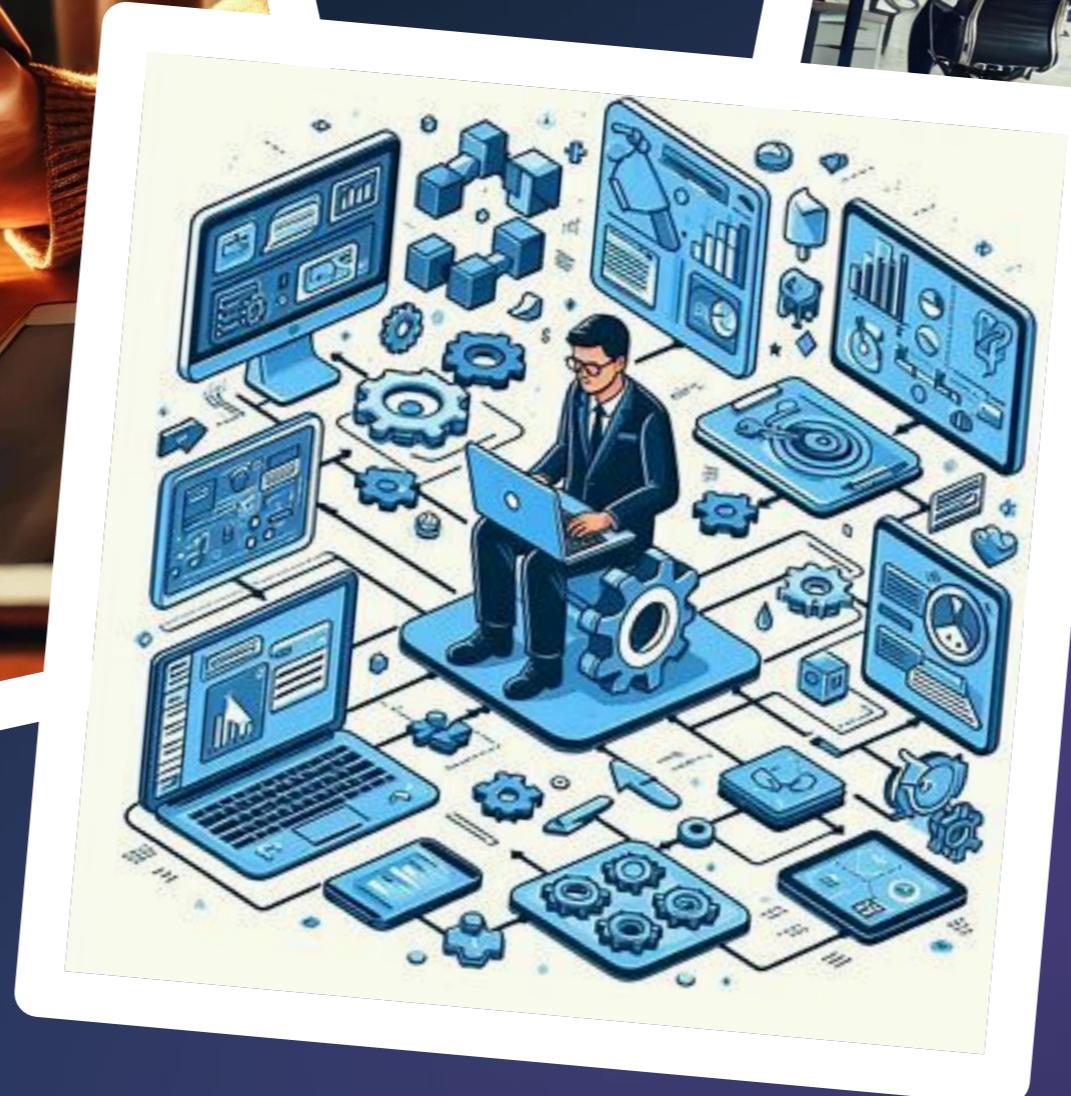
Mar 19, 2024 8:56 AM





Session affinity  
or sticky  
sessions can  
help  
(However...)



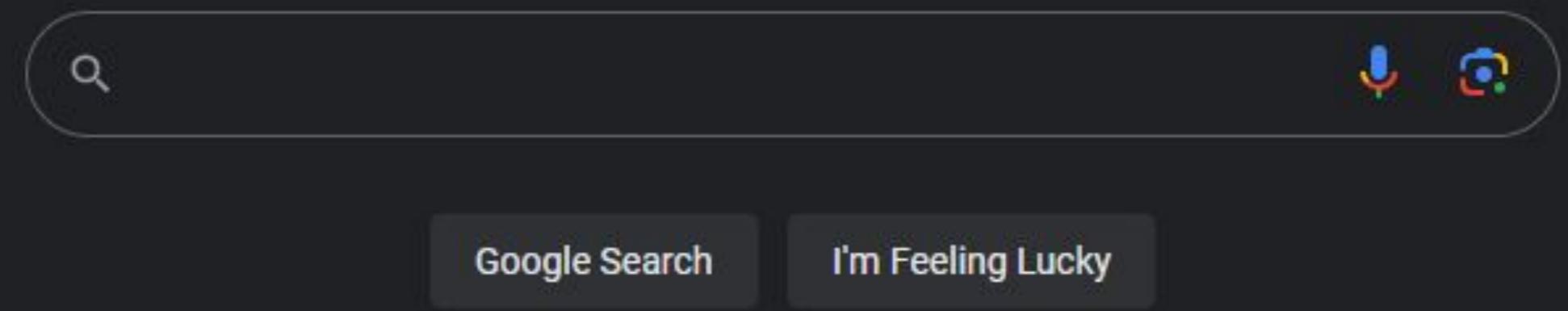


# Appropriate Canary Use Cases

Useful for verifying the new version works  
and can pass simple verification tests



# Google



- Transactional - sessions do not matter
- Moving / upgrading application hosts
- Business rules don't change / core rewrite

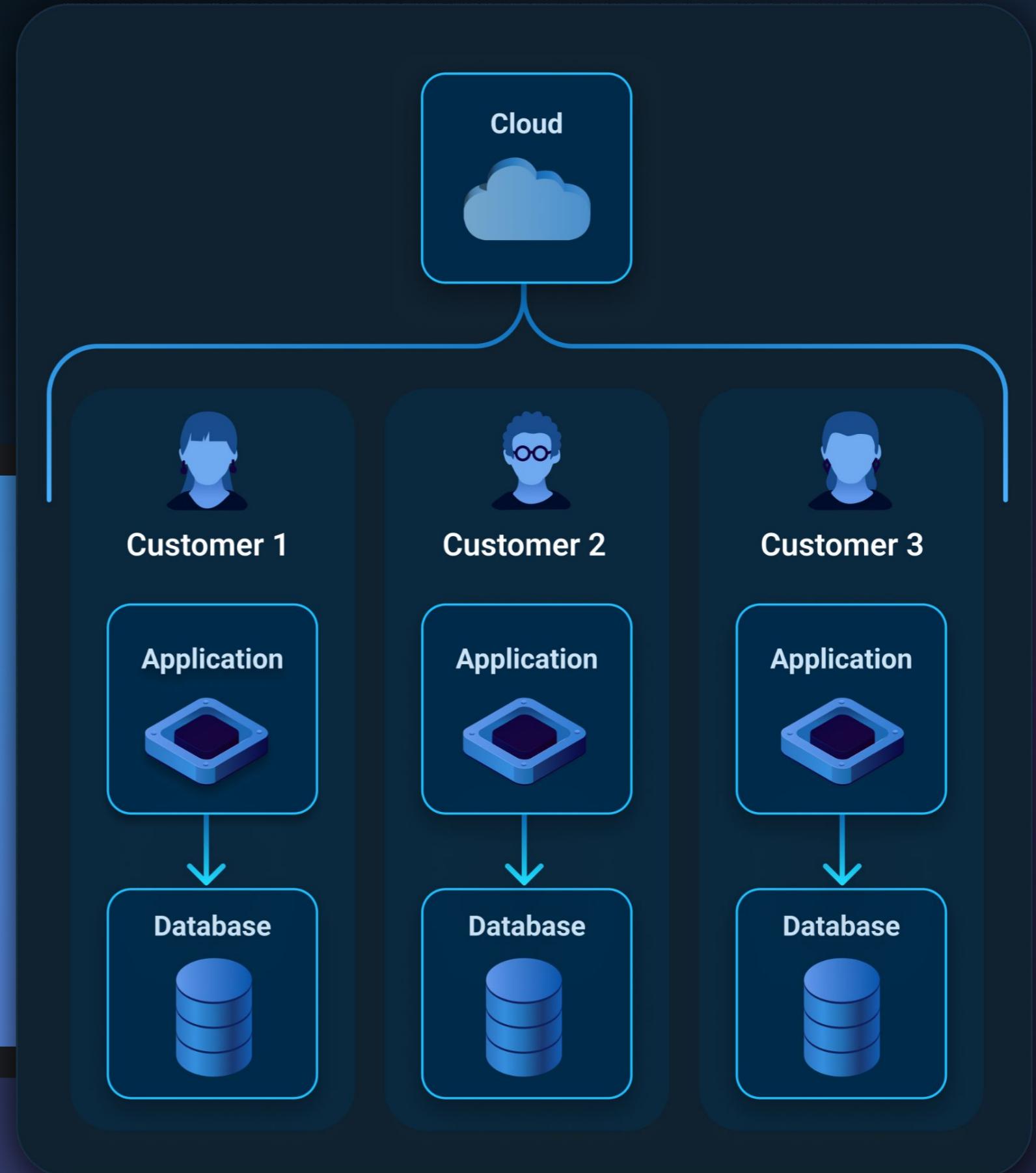
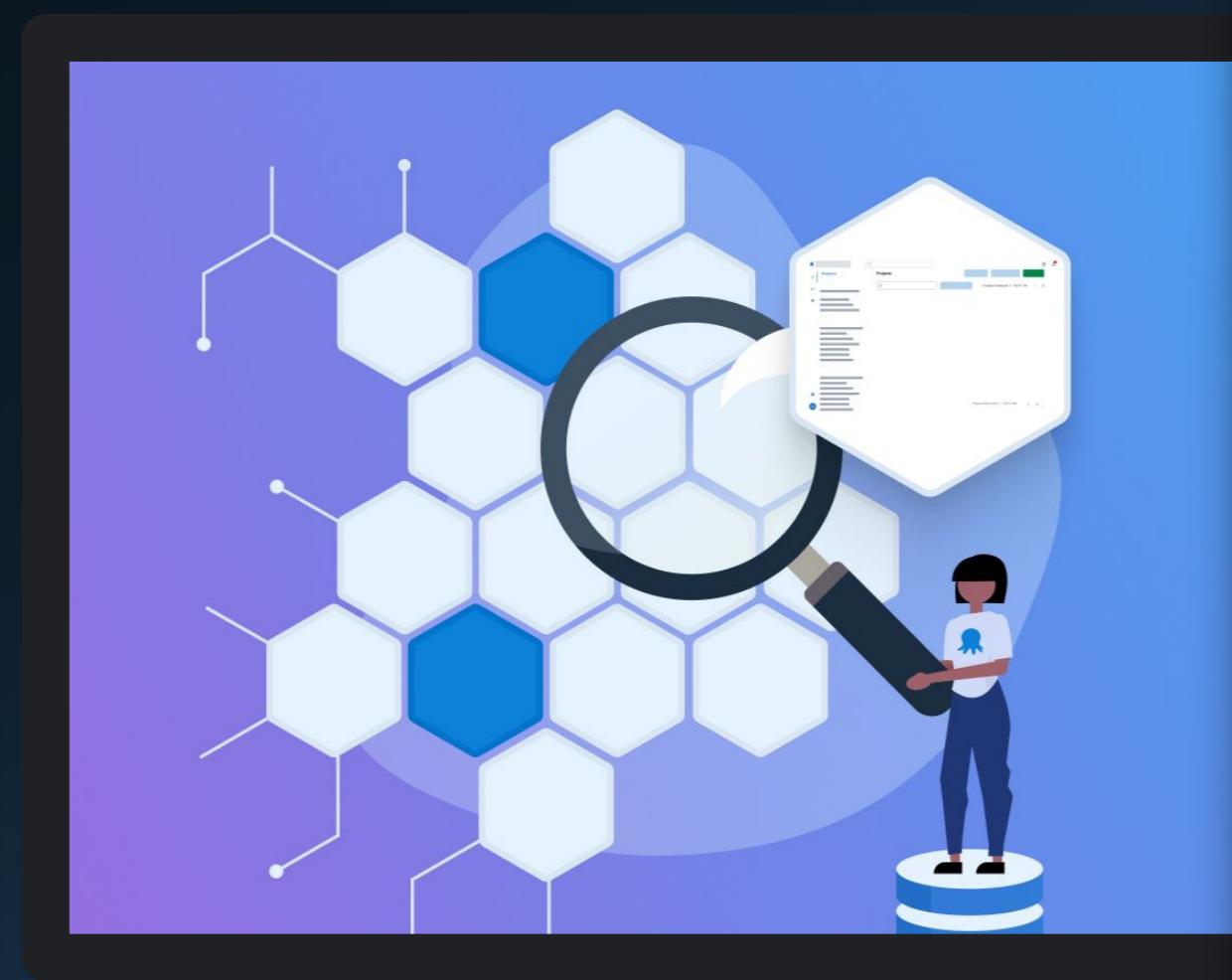


3

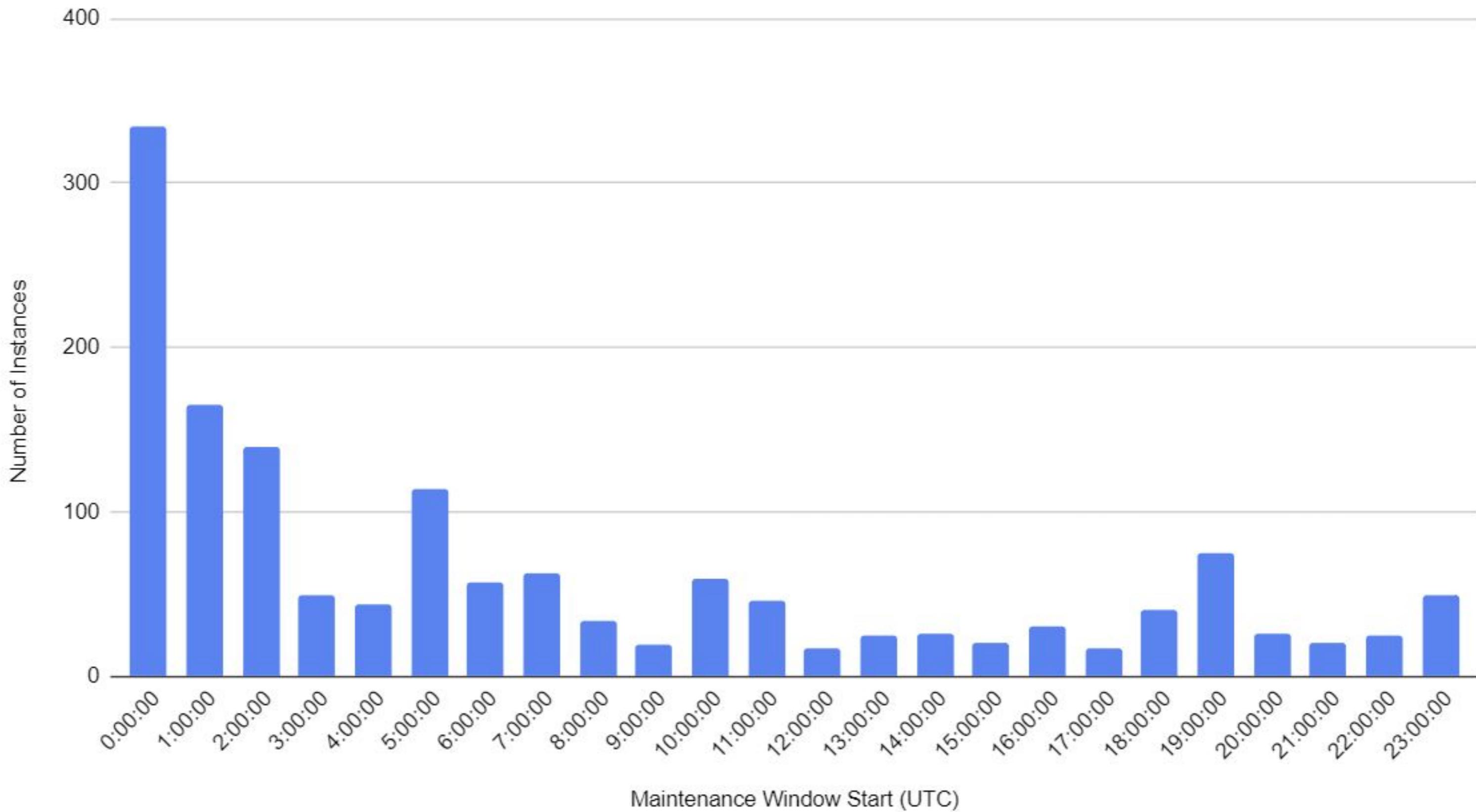
# OpenFeature and Progressive Delivery



# SaaS Product uses cell-based architecture



## Number of Instances vs. Maintenance Window

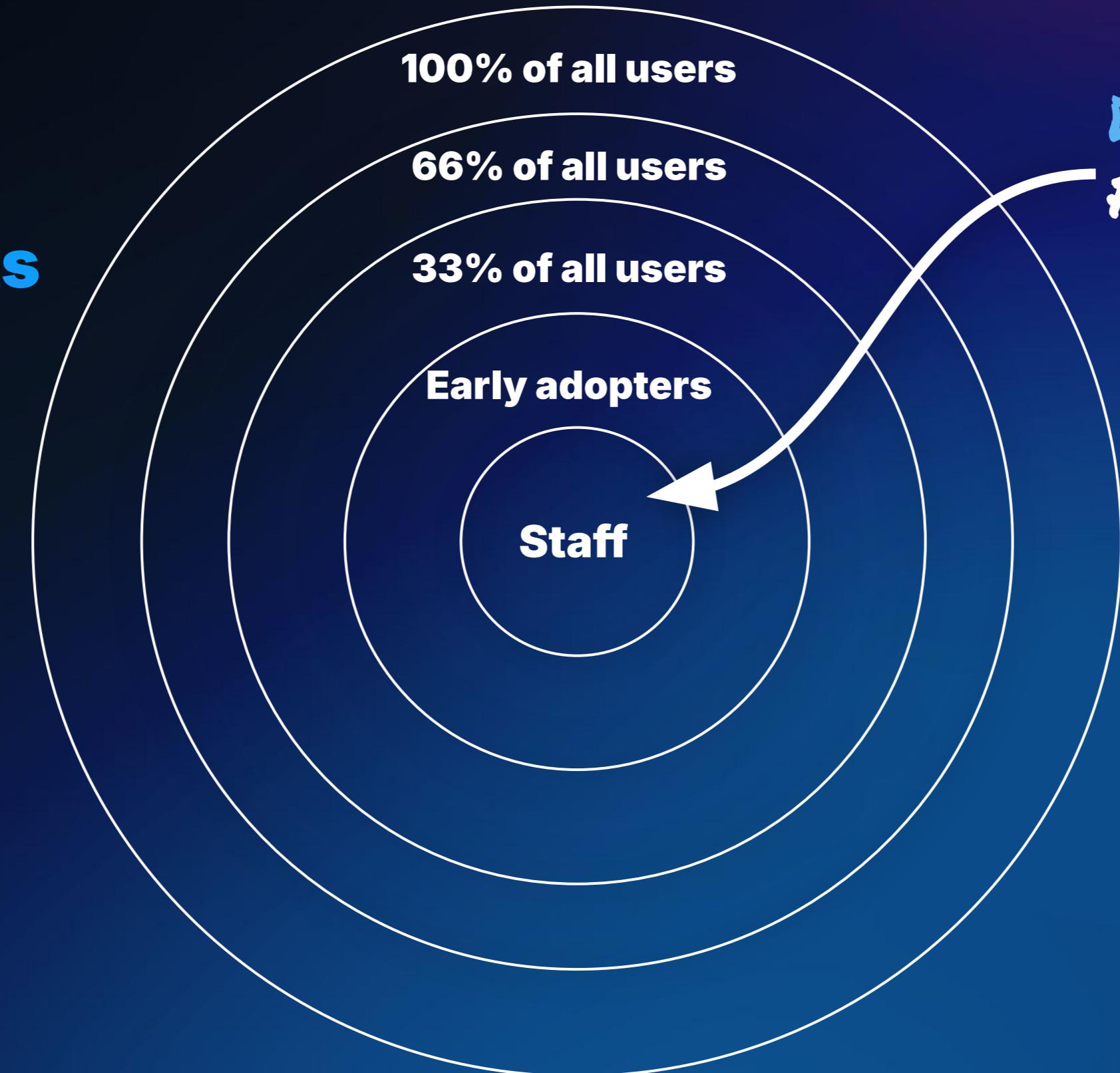


**Needed a way to separate  
deploying new versions  
from releasing new  
functionality**



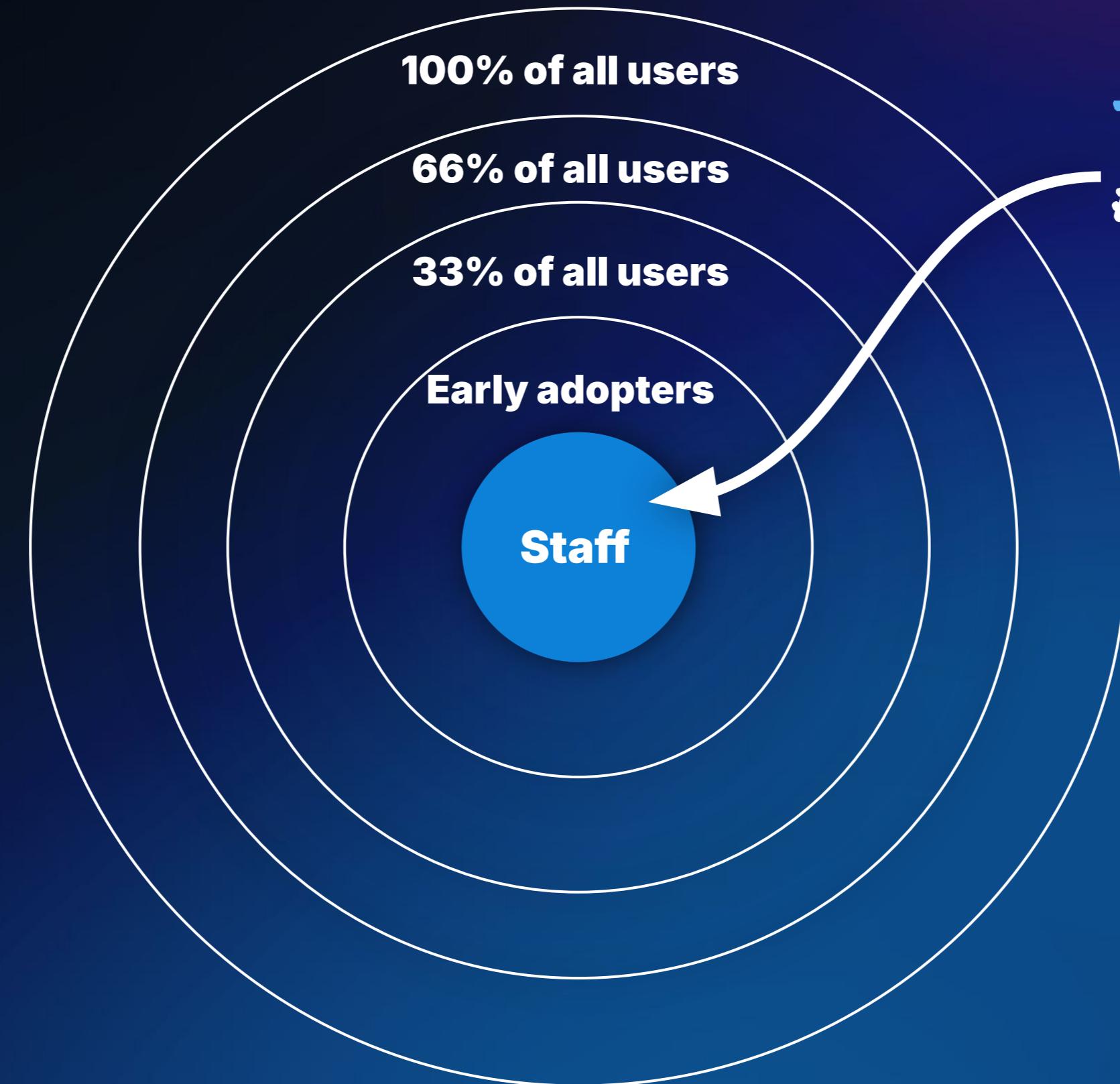
## Open feature to create segments of users

- Location
- Team
- Usage History
- Deploy Environment
- User Sign-upA

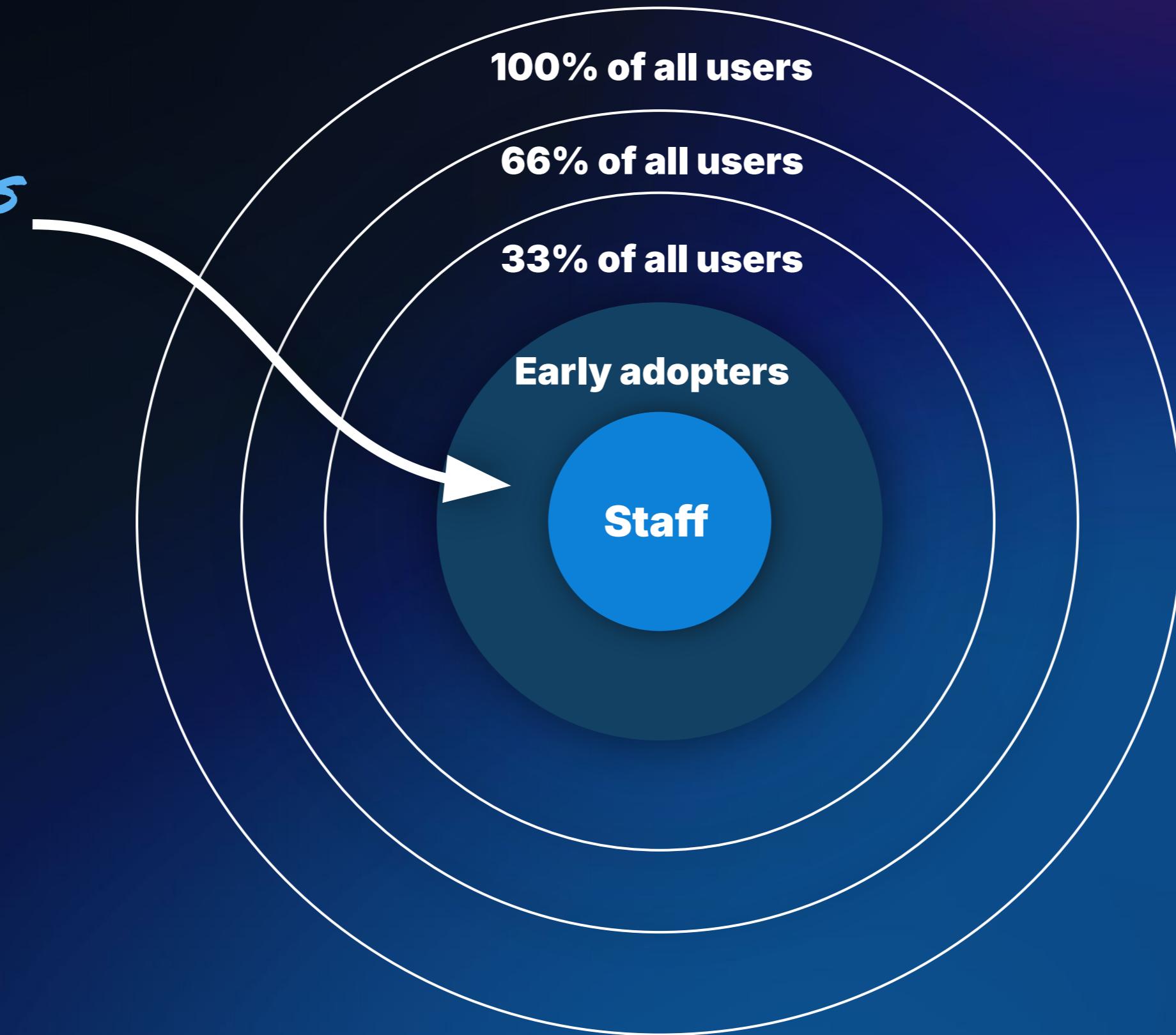


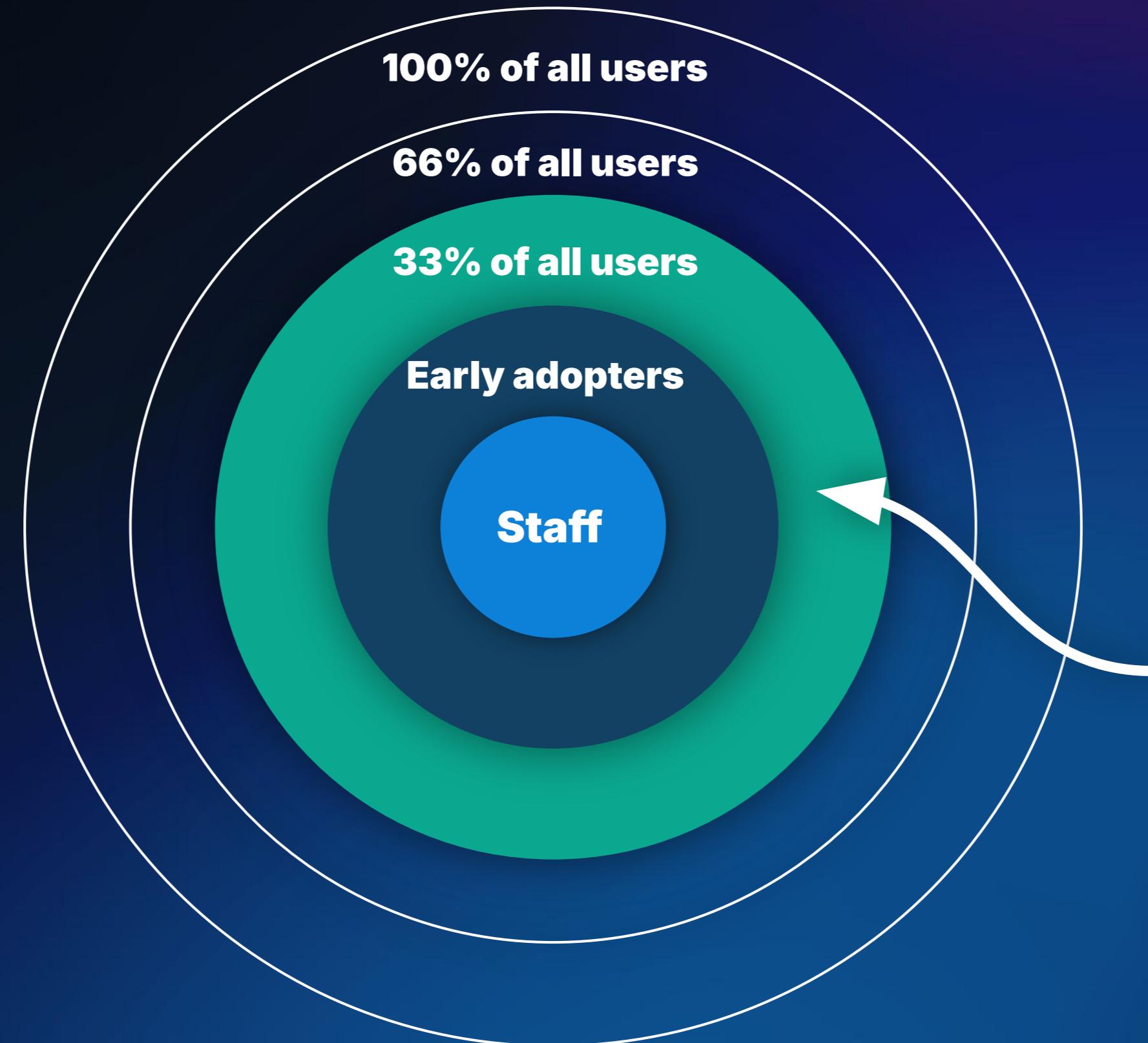
DEPLOY WITH  
FLAG TURNED OFF





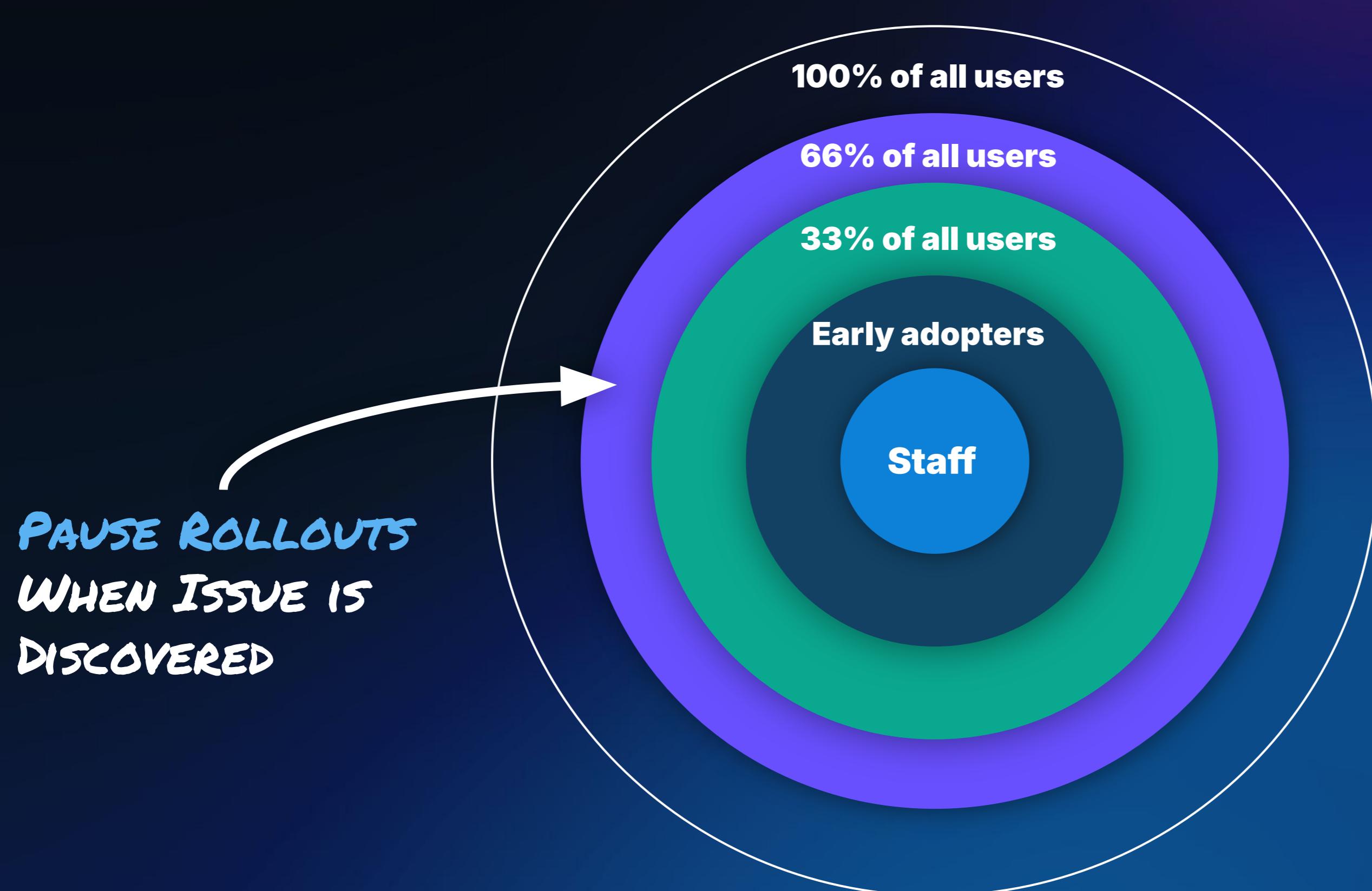
**EARLY ADOPTERS  
CAN OPT-IN**

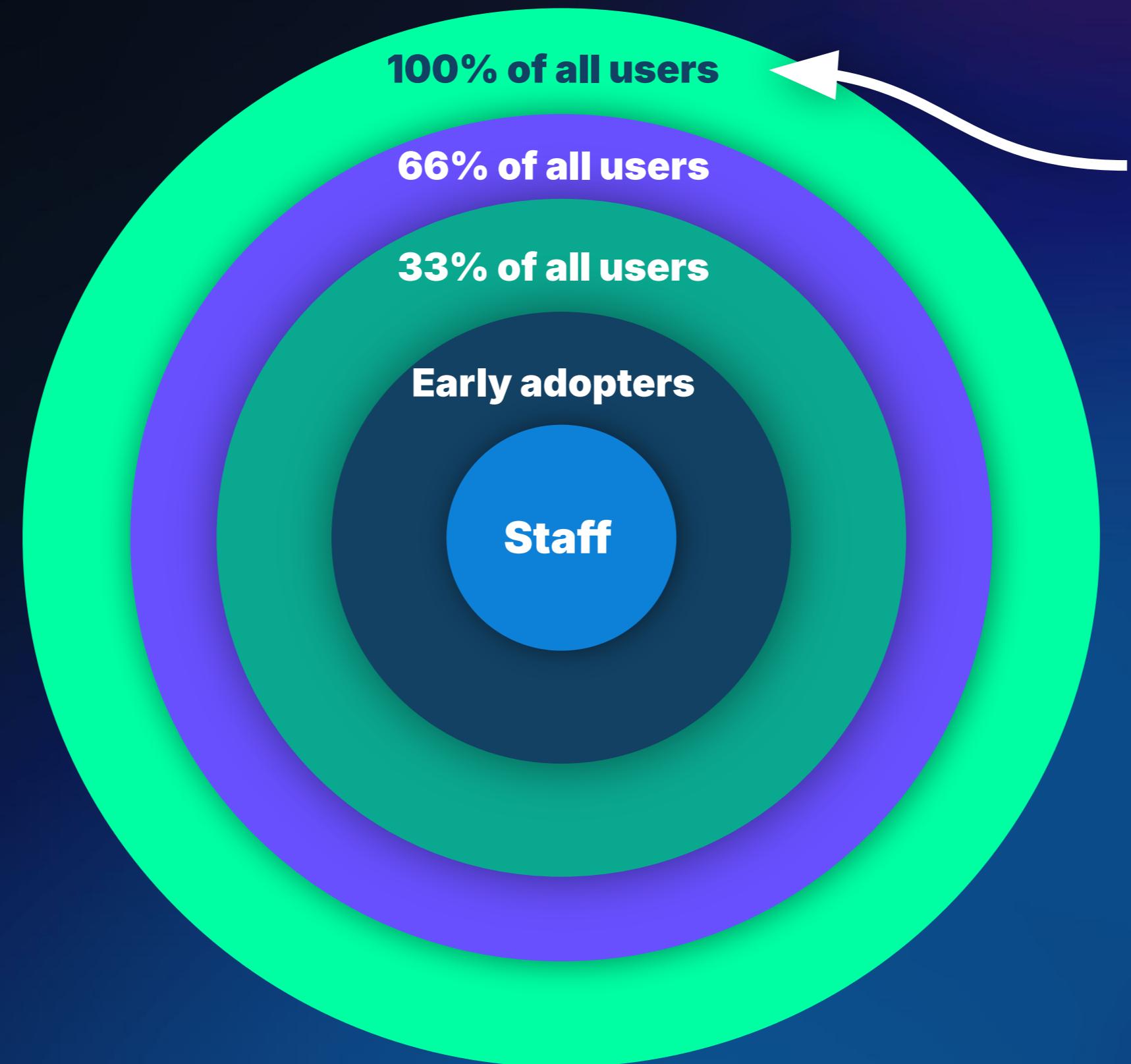




ENABLE FOR  
REMAINING  
USERS OVER  
PERIOD OF TIME







CONTINUE TO 100%  
BUT EXCLUDE  
CUSTOMERS UNTIL  
ISSUE IS RESOLVED





## Dashboard

Filter by project group



Filter by project name



AWS

Development

Test

Staging

Production



OctopusDeploy



PetClinic

2023.11.24.0  
Jan 8, 2024 1:38 PM2023.09.05.1  
Sep 5, 2023 4:35 PM2023.09.05.1  
Sep 5, 2023 4:37 PM2023.09.05.1  
Sep 5, 2023 4:39 PM

Azure

Development

Test

Staging

Production

Octo Pet Shop -  
Kustomize2024.04.08.1  
Apr 8, 2024 1:10 PM2024.03.25.0  
Apr 12, 2024 12:26 PM2023.09.12.1  
Sep 12, 2023 12:59 PM2023.09.12.1  
Sep 12, 2023 1:06 PMOcto Pet Shop - Raw  
YAML2024.04.08.1  
Apr 8, 2024 1:04 PM2023.09.12.0  
Sep 12, 2023 12:35 PM2023.09.12.0  
Sep 12, 2023 12:59 PM2023.09.12.0  
Sep 12, 2023 1:06 PM

PetClinic Helm Chart

2023.11.24.0  
Nov 24, 2023 12:28 PM2023.09.01.0  
Sep 12, 2023 12:38 PM2023.09.01.0  
Sep 12, 2023 12:59 PM2023.09.01.0  
Sep 12, 2023 1:06 PMWHAT OUR USERS  
SAW FOR MONTHS

Feature Toggles

## Git Runbooks Migration

Save

⋮

EXPAND AI

Name Git Runbooks Migration git-runbooks-migration

Notes Enter markdown notes

### Environments

Add Environment

Branch Instances (Staging)

Production  bobwalker (93210-38123-34424-02406)

 geofflamrock (52813-83013-13426-32423)

 matt-richardson (14422-43153-05428-91393)

 michrich (26536-51719-66422-08236)  robpearson (07302-11441-38429-68838)

Cloud Customers  caitlyn (81532-51943-29424-61361)

 claimsxten (85067-69362-42425-31633)  deploy (86975-78074-67420-1241)

 fctg (28283-23273-85426-51305)  fish-net (51662-13732-13426-22520)

 recruitwizard (40147-20555-01421-42353)  vista (85312-63437-83423-6212)

 vista2 (95223-72613-36426-49244)

### Edit Environment



Environment

Production

Tenants

Select which tenants should be targeted by this toggle

Included tenants

All Tenants

Specific Tenants

 bobwalker (93210-38123-34424-02406)   michrich (26536-51719-66422-08236) 

 geofflamrock (52813-83013-13426-32423) 

 matt-richardson (14422-43153-05428-91393) 

 robpearson (07302-11441-38429-68838) 

Included Tenants

Percentage of Tenants

Excluded Tenants

Segments

Cancel

Ok



Cloud Customers demo (09696-14460-43424-29942)

- deploy (86975-78074-67420-12411)
- gelato-digital (91336-46366-69422-68413)
- velocityehs (55326-14323-26425-58157)
- bcg-smp-it (26013-95671-56427-01247)
- biobright (46716-34932-15420-51563)
- britishrowing (37536-67975-44421-89859)
- buildertrend (53376-10727-74424-39923) bullish (00567-55181-84425-98014)
- clubspark (35682-32661-96425-62034) connect (42024-61171-60424-89685)
- ding (90374-45616-59425-82162)
- dotmatics-luma (54338-13683-52421-31781)
- drbsystems (52553-28785-57420-51226)
- emphasyspha (35447-06772-53424-52615)
- emporos (04213-46832-45425-29161) energetiq (57434-45304-95421-62595)
- hawaiianair (33222-91626-14424-08329)
- inx-software (44125-26526-33425-19632)
- janacorporation (72626-92729-11424-68065)
- jetmax (15510-29601-84426-89722) johny (05443-40958-39424-89032)
- kailengarcia (69802-02193-79429-62305) kuk (54261-81626-46428-99725)
- littler (54969-70935-08427-12217) markel (63561-34330-13422-69740)
- mimecast-eis (00265-16258-53424-58936)
- mmdemo (97733-14128-51422-69213)
- modernhire (45361-42811-84429-61561) parenta (35432-25583-30420-99140)
- phocas (63664-40282-41424-11662) plchester (73941-14579-62421-59213)
- progleasing (47732-78373-43423-10604)
- pullapart (17914-64236-63421-21273)
- re-enterprise (95679-23067-12424-61370)
- recordfg (23027-84472-27425-32563) roydan (25596-81766-43420-59215)
- rws (80434-85013-59422-42840) servicepath (34361-11113-22424-78116)
- simplyture (01582-43252-41422-00674) stackeng (41302-73251-26421-78361)
- stg-bcg-smp-it (19990-05301-26423-48225)
- stigg (02116-49214-44429-62650) t-cetra-deploy (78620-20453-15423-29612)
- tradinglabs (25161-52728-22420-22331) valocity (06509-61443-33421-31153)
- vinsolutions (97722-30302-15426-29011) wilqo (44955-97440-21429-60432)

Edit Environment

Cloud Customers

Environment

Tenants

Select which tenants should be targeted by this toggle

Included tenants

All Tenants

Specific Tenants

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demo (09696-14460-43424-29942) gelato-digital (91336-46366-69422-68413)

Included Tenants

Percentage of Tenants

biobright (46716-34932-15420-51563) vinsolutions (97722-38302-15426-29011)  
emphasyspha (35447-06772-53424-52615) roydan (25596-81766-43420-59215)  
kailengarcia (69802-02193-79429-62305) valocity (06509-61443-33421-31153)  
energetiq (57434-45304-95421-62595) inx-software (44125-26526-33425-19632)  
pullapart (17914-64236-63421-21273) markel (63561-34330-13422-69740)  
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mmdemo (97733-14128-51422-69213) bullish (00567-55181-84425-98014)  
bcg-smp-it (26013-95671-56427-01247) connect (42024-61171-60424-89685)  
drbsystems (52553-28785-57420-51226) wilqo (44955-97440-21429-68432)  
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mimecast-eis (00265-16258-53424-58936) servicepath (34361-11113-22424-78116)  
tradinglabs (25161-52728-22420-22331) stigg (02116-49214-44429-62650)  
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johny (05443-40958-39424-89032) wilqo (44955-97440-21429-60432)

Excluded Tenants

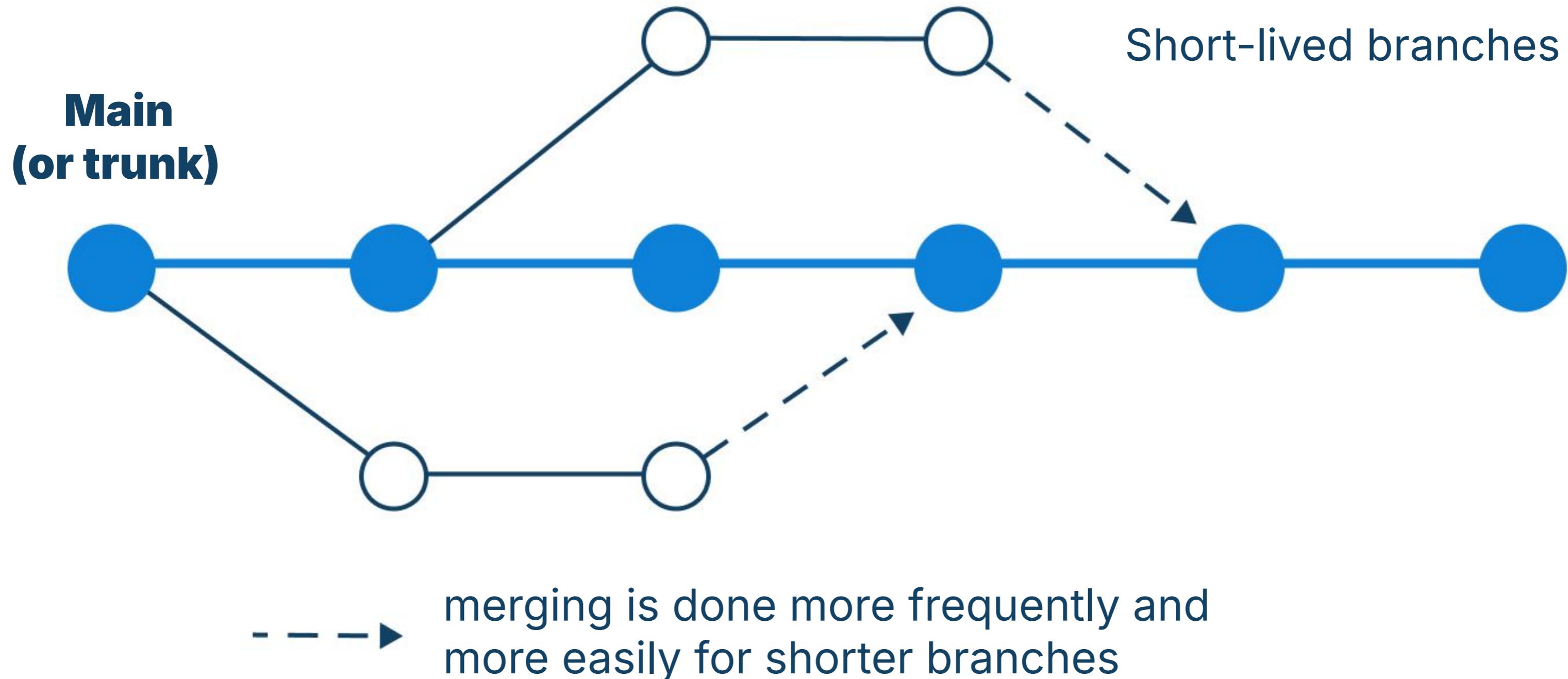
Segments

Cancel Ok

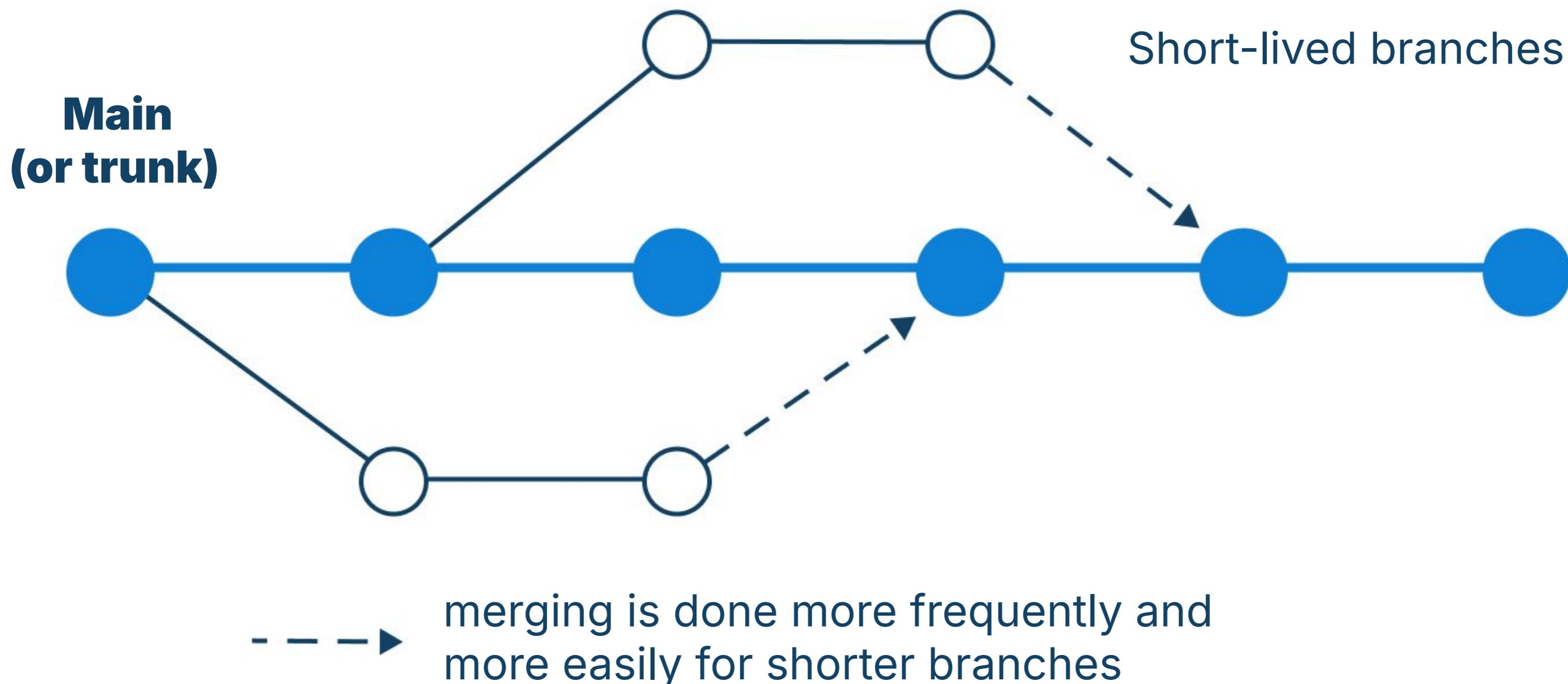
# When you are gonna merge two branches after a long time



# Trunk-based development



# Trunk-based development



4

# Challenges



# Feature Flags are for SaaS only

**34%**

Total customers are  
on Octopus Cloud

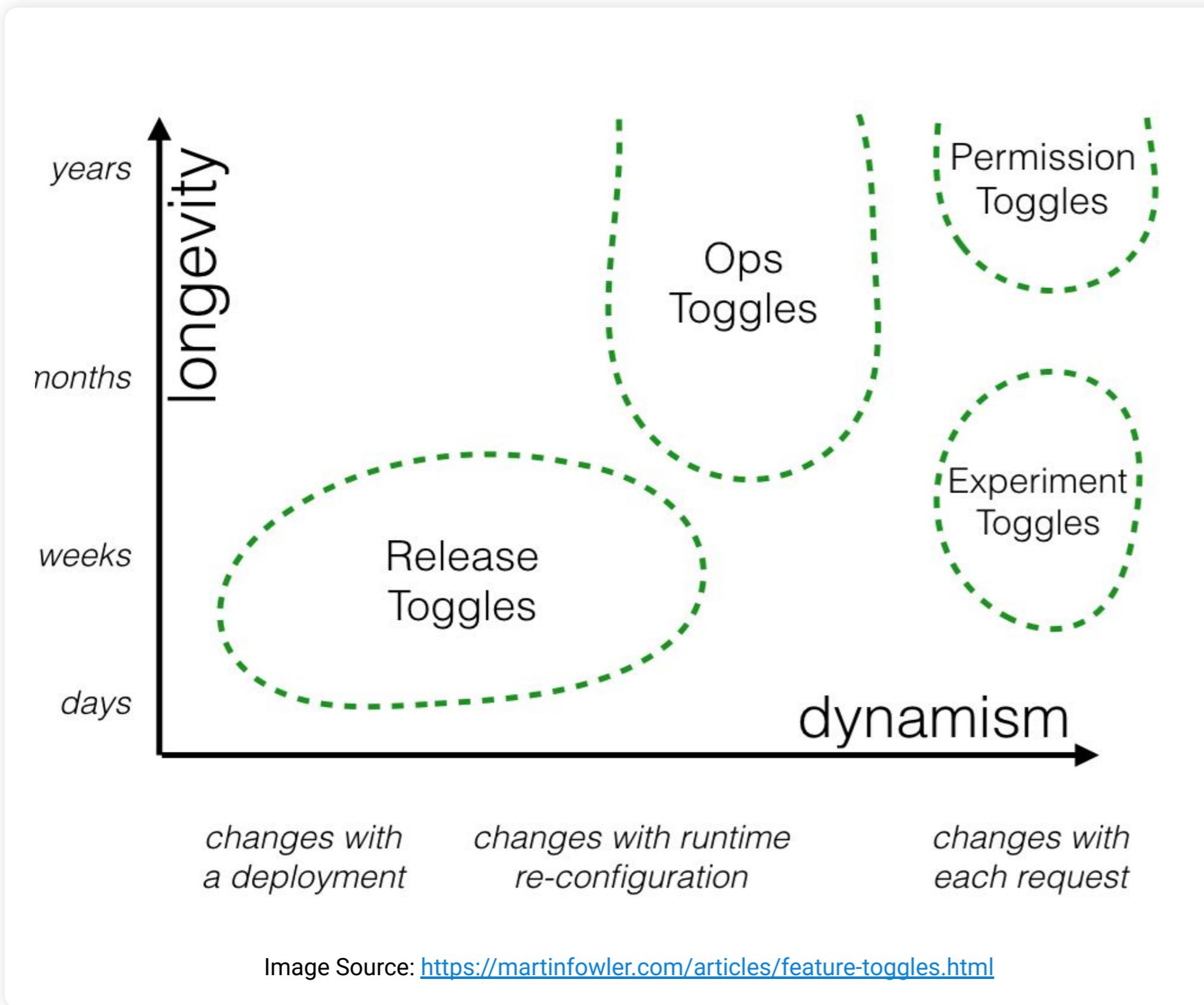
**66%**

New customers  
choose Octopus  
Cloud

**25%**

Will never move to  
Octopus Cloud

# Feature flags require Expand and Contract Pattern



# OpenFeature

Standardizing Feature Flagging for Everyone

[Learn more](#)

[Get started](#)

```
OpenFeature.setProvider(new MyProvider());  
  
const featureFlags = OpenFeature.getClient();  
  
const withCows = await featureFlags.getBooleanValue("with-cows", false);  
if (withCows) {  
  res.send(cowsay.say({ text: "Hello, world!" }));  
} else {  
  res.send("Hello, world!");  
}
```

ultimate flexibility

**Speaks your language**

OpenFeature supports many of the top programming languages, with more on the way.

<https://openfeature.dev>

Requires  
investment in  
changes to SDLC



# But... so do Canary Deployments

Openfeature is significantly easier to implement



# Canary deployments **are not a panacea**

- Limited use cases - not all use cases
- New functionality often causes the most bugs
- For new functionality - indiscriminately routing traffic results in a disjointed user experience.



# OpenFeature separates deploying code from releasing functionality

- Always merge to main and deploy to prod
- Enable for subset of segments for controlled feedback and testing
- Disable in the event something isn't working
- Don't forget to remove feature flags



# Thank you



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