



Canary deployments are a myth

True progressive delivery occurs via OpenFeature

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Bob Walker

Field CTO

Octonaut since 2018

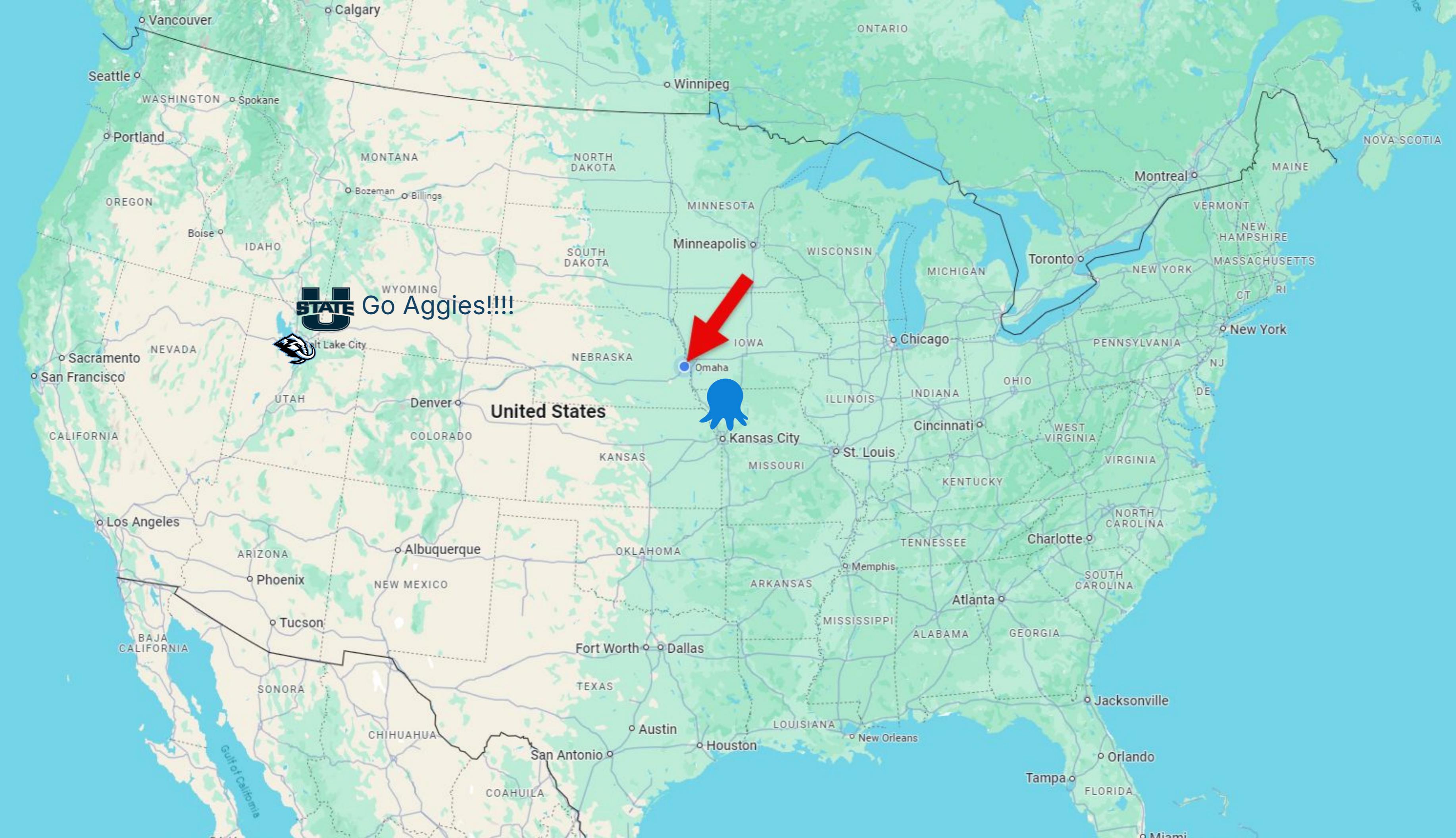
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Farm Credit Services
of America



Sandhills Global.



Octopus Deploy



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



Myth: Implementing Canary Deployments will 100% de-risk your deployments



Agenda

1

The myth of canary deployments

2

Appropriate canary use cases

3

OpenFeature and Progressive Delivery

4

Challenges



The myth of canary deployments



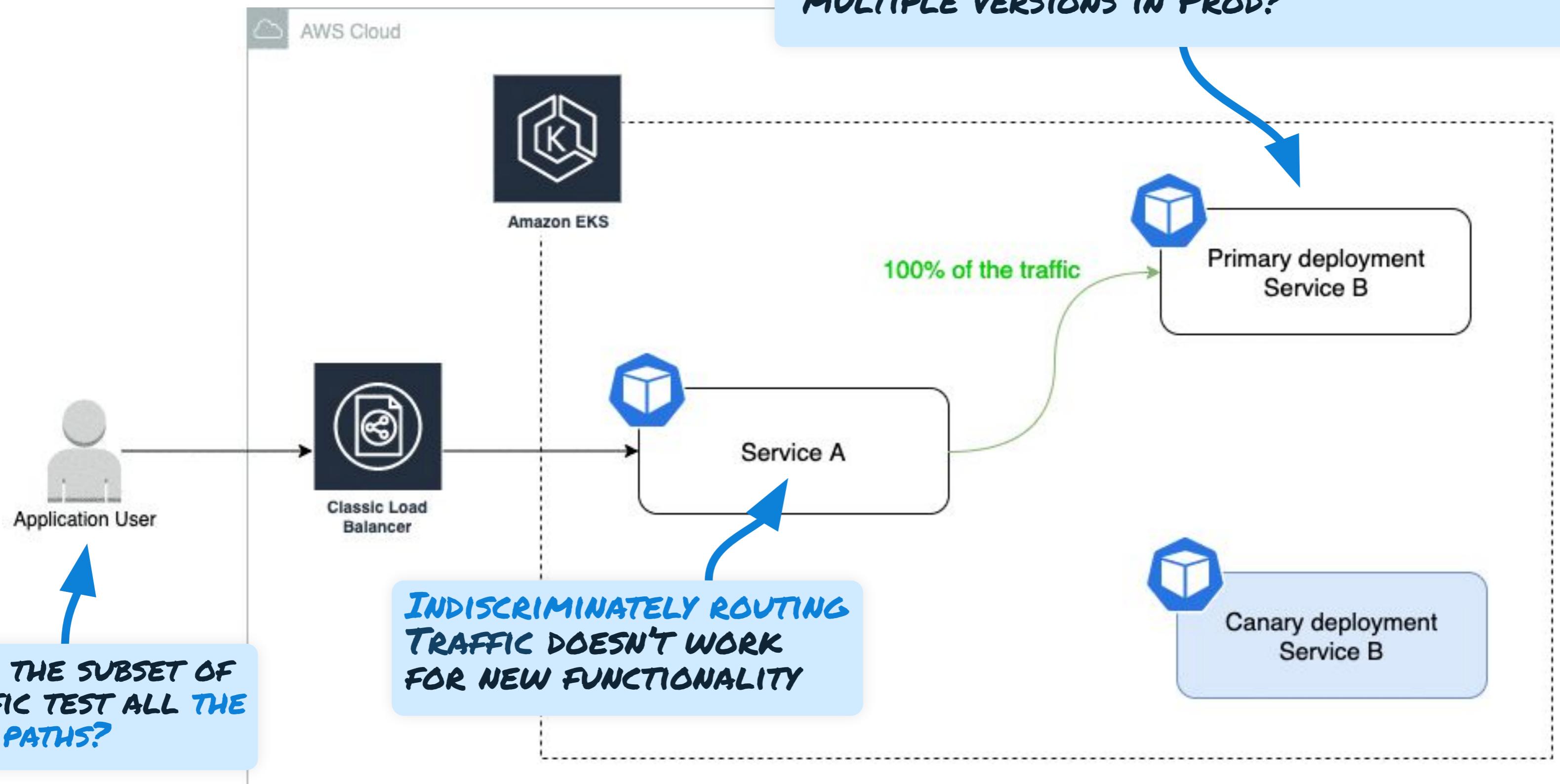
MAGIC WAND DEPLOY AND REVERT
IF SOMETHING GOES WRONG



PREFERABLY MINIMIZING
USER IMPACT



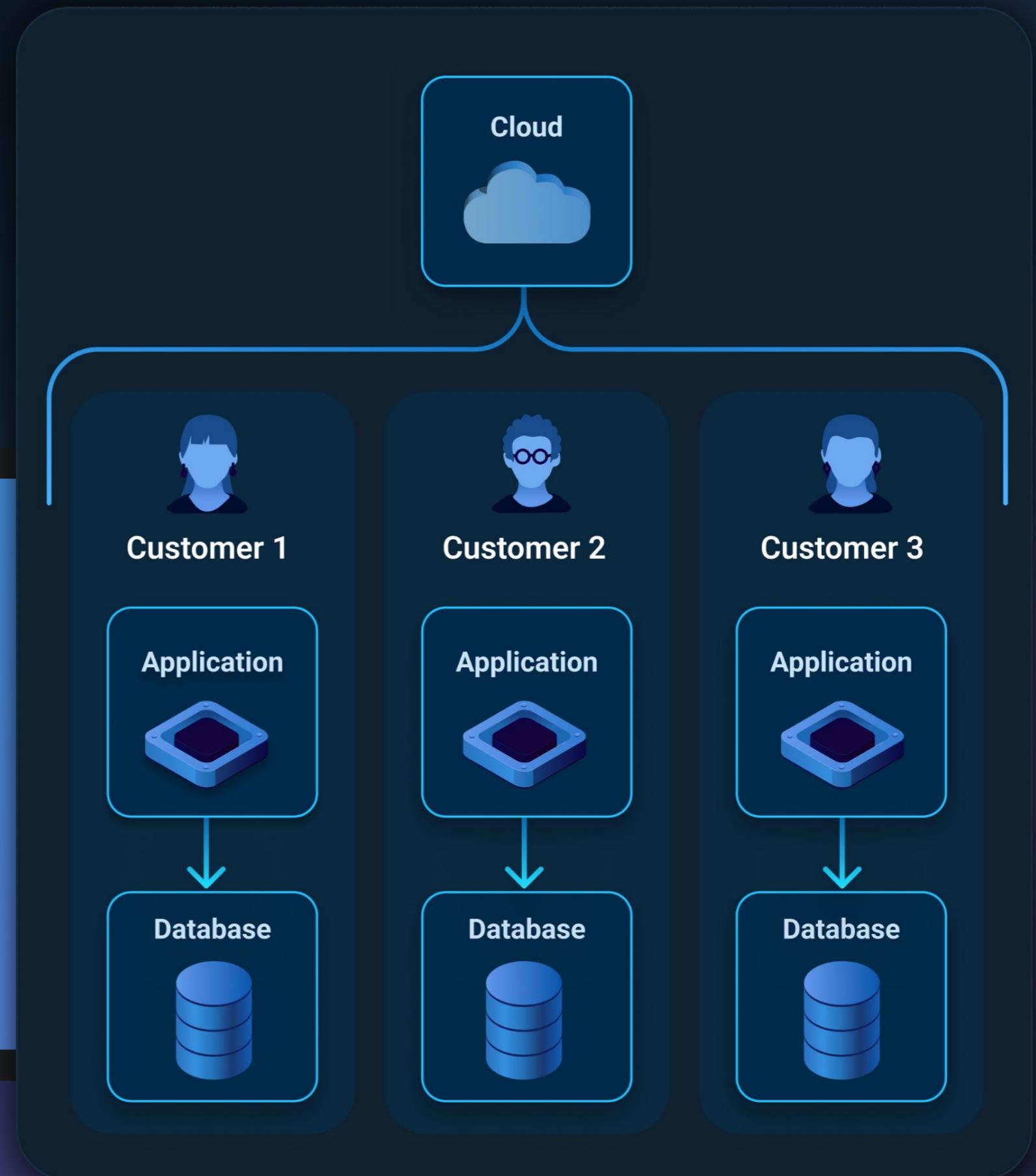
CAN THE APPLICATION ARCHITECTURE SUPPORT MULTIPLE VERSIONS IN PROD?

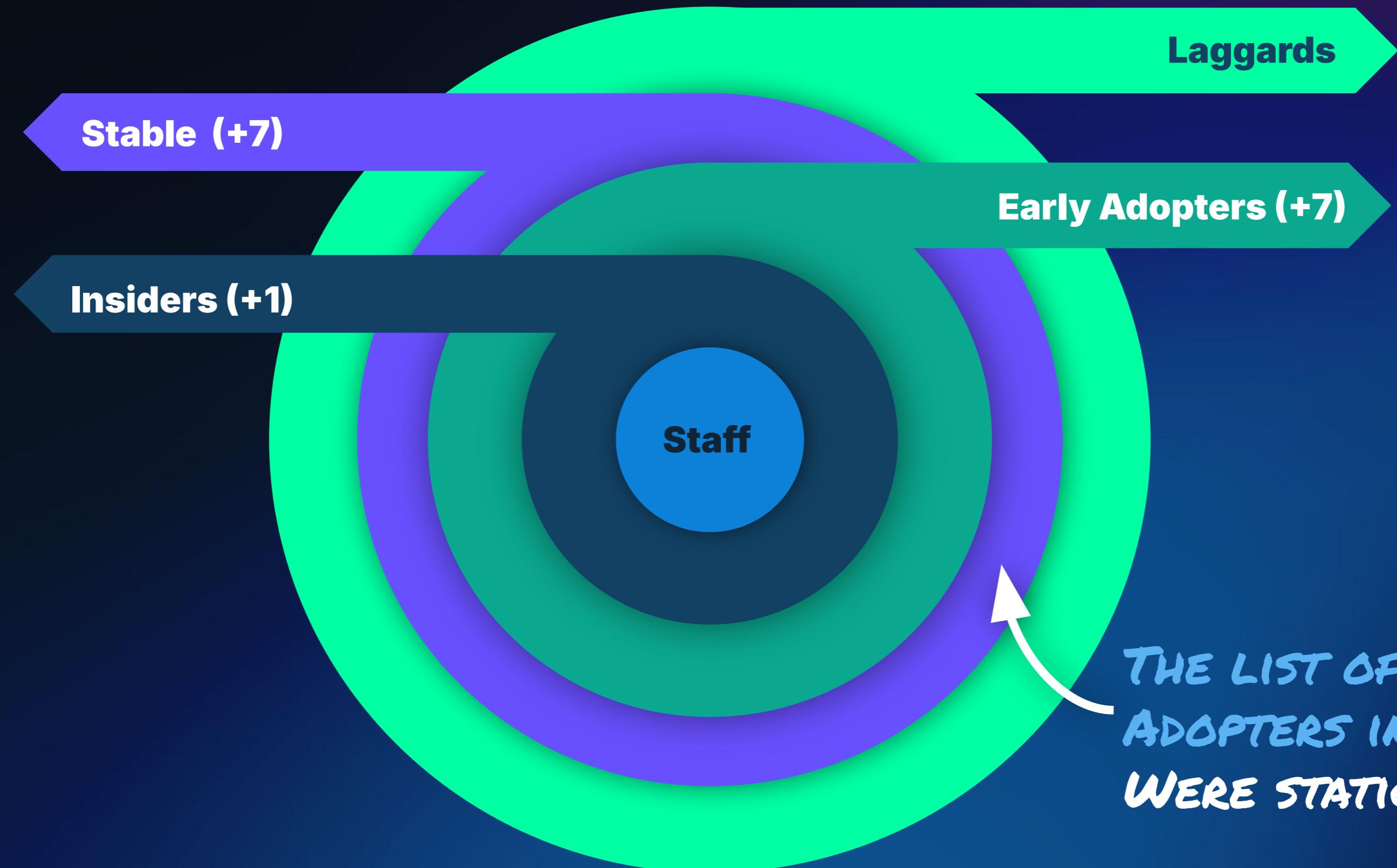


**Unless you are working for a
FAANG-sized company, you
are unlikely to exercise all
code paths in a short period of
time**



Our SaaS Product uses cell-based architecture





Unless it has been
architected into the
application, it is
unlikely it will
support **multiple versions**

in Production



**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
ing

Mar 11, 2024 3:41 PM

4/4

2024.3.0.9
ing

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

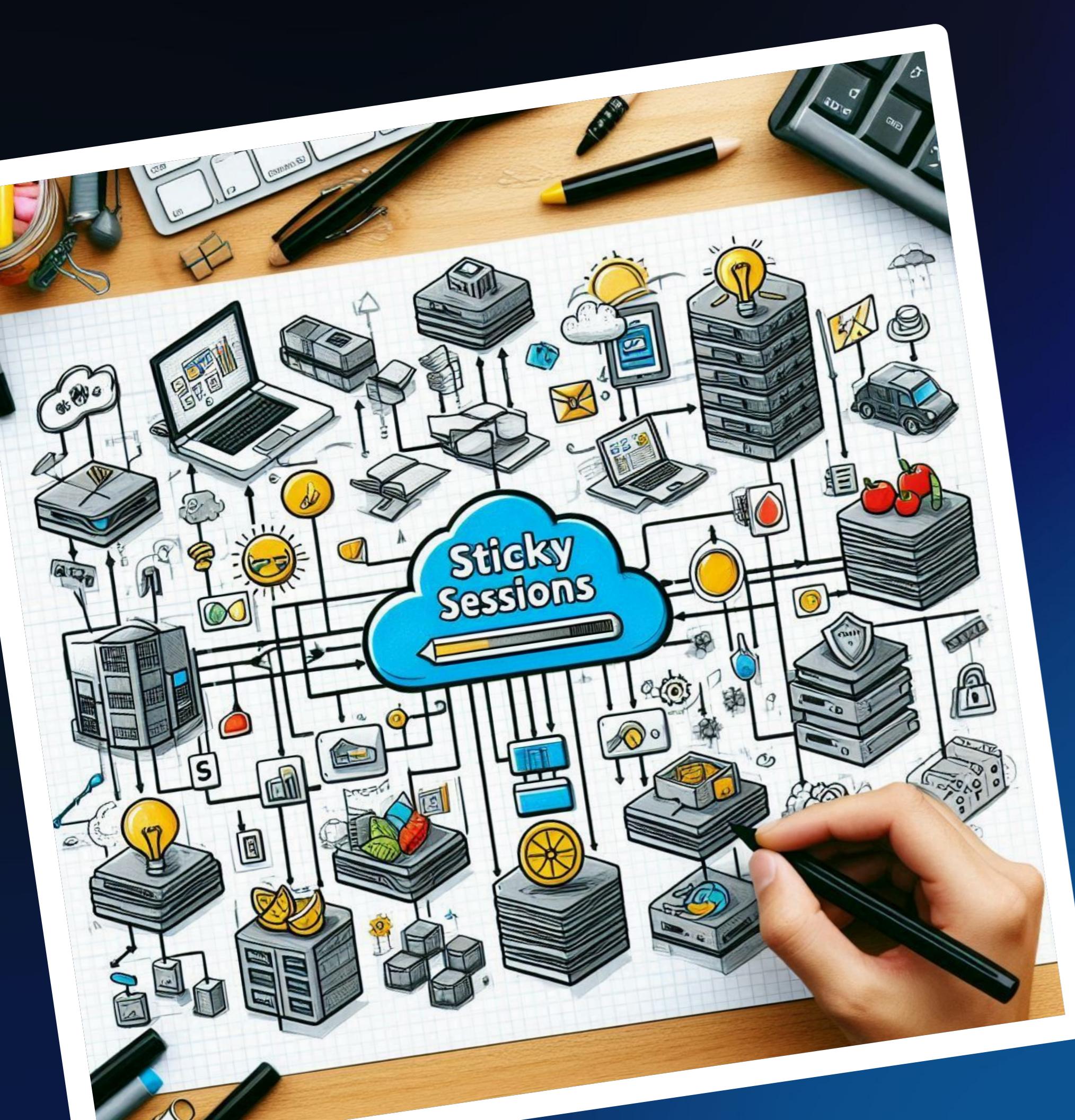
Apr 17, 2024 10:27 AM



4.0.43.421

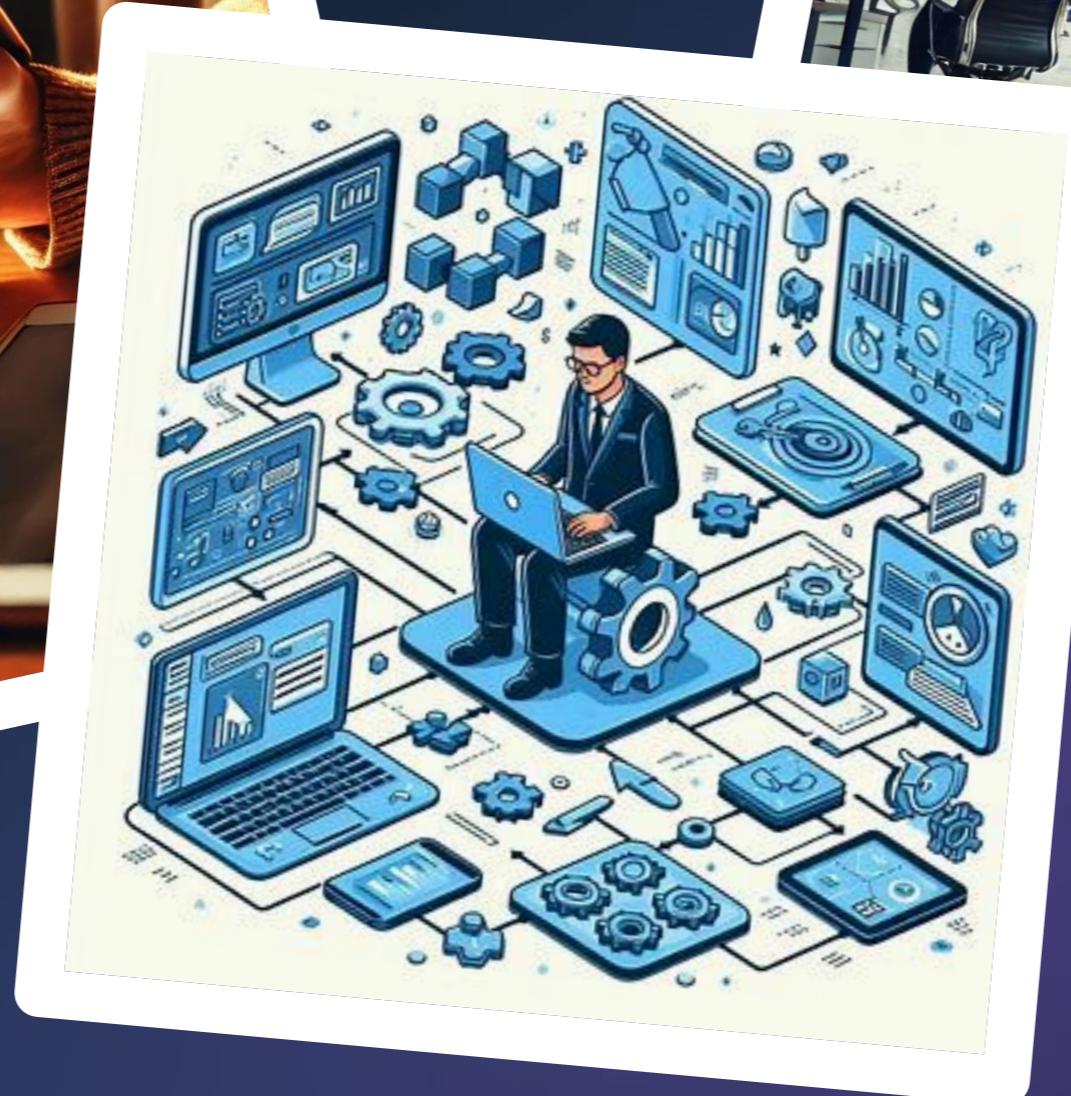
Mar 19, 2024 8:56 AM





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



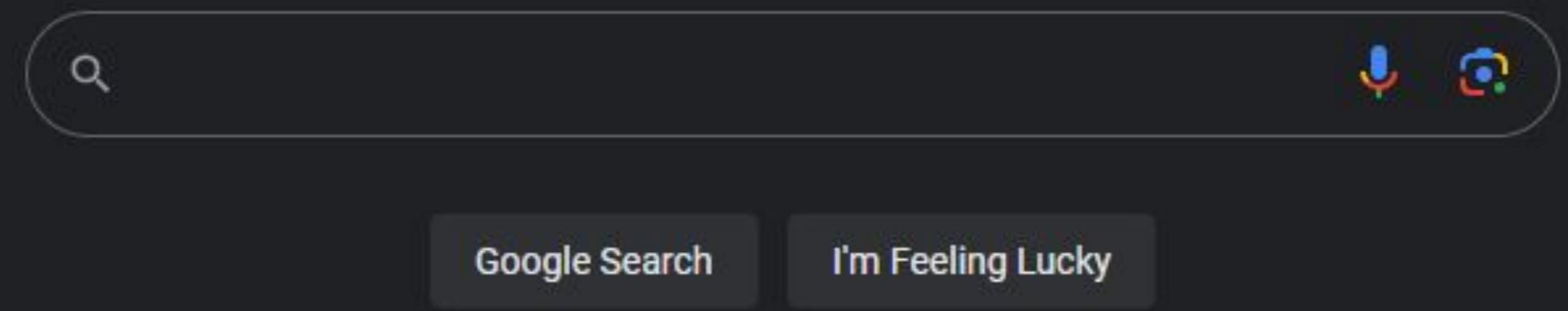


Appropriate Canary Use Cases

Best for de-risking deployment failures and
zero-downtime rollouts



Google



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



3

OpenFeature and Progressive Delivery

De-risking new features and functionality



#1 reason of show
stopping bugs
new features



OpenFeature is a CNCF incubating project for feature toggles

OpenFeature

Standardizing Feature Flagging for Everyone



What's a Feature Flag?

Feature flags are a software development technique that allows teams to enable, disable or change the behavior of certain features or code paths in a product or service, without modifying the source code.



What's OpenFeature?

OpenFeature is an open specification that provides a vendor-agnostic, community-driven API for feature flagging that works with your favorite feature flag management tool or in-house solution.



Why standardize?

Standardizing feature flags unifies tools and vendors behind a common interface, avoiding vendor lock-in at the code level. It provides a framework for building extensions and integrations that can be shared across the community.

```
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

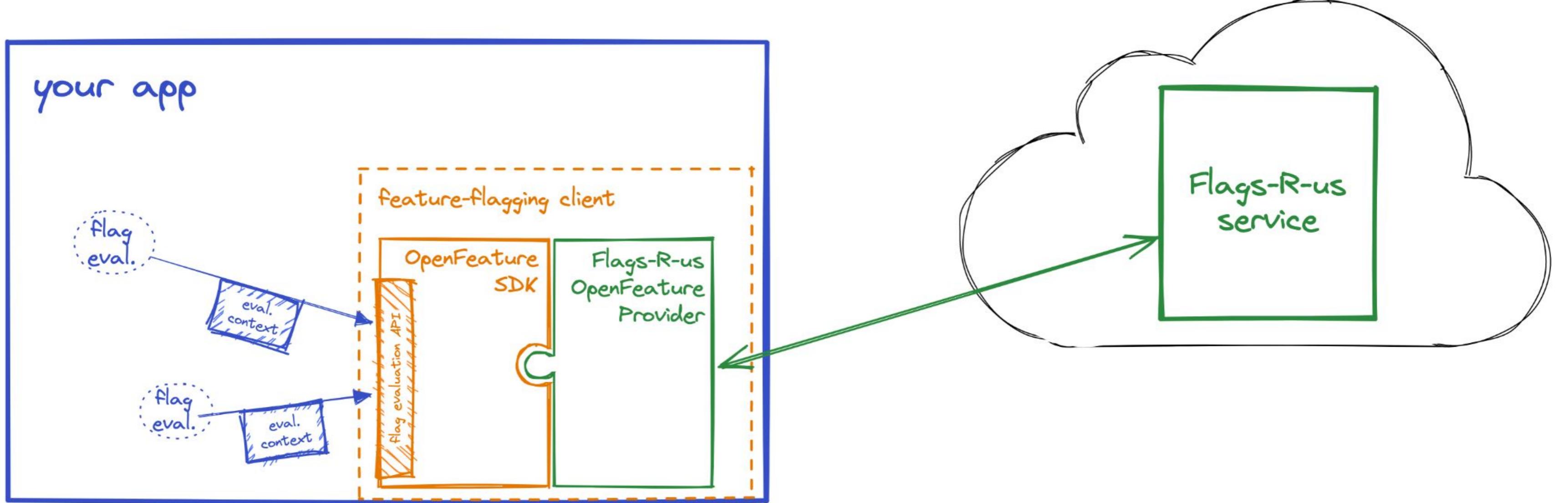
Speaks your language

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

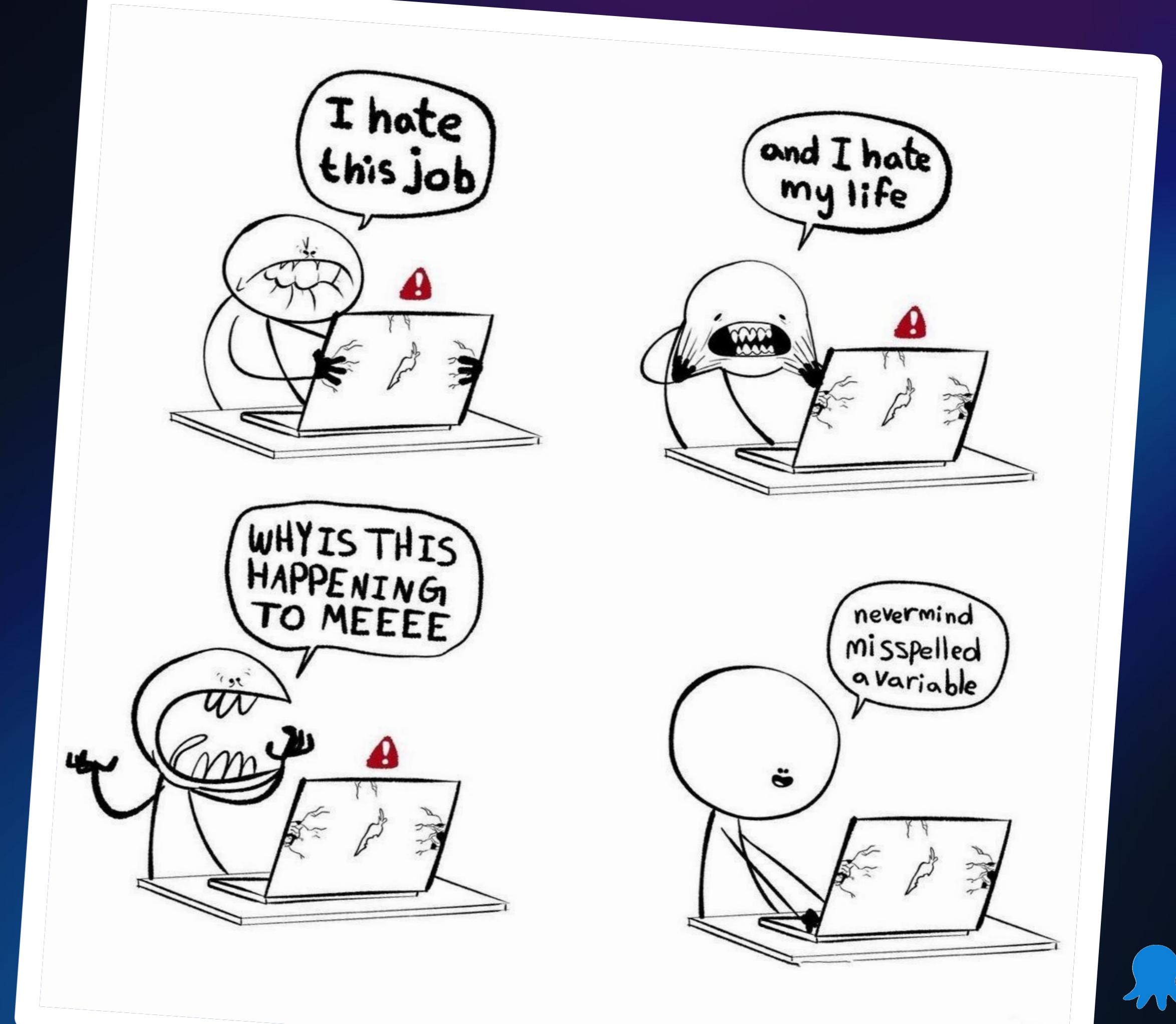


<https://openfeature.dev>

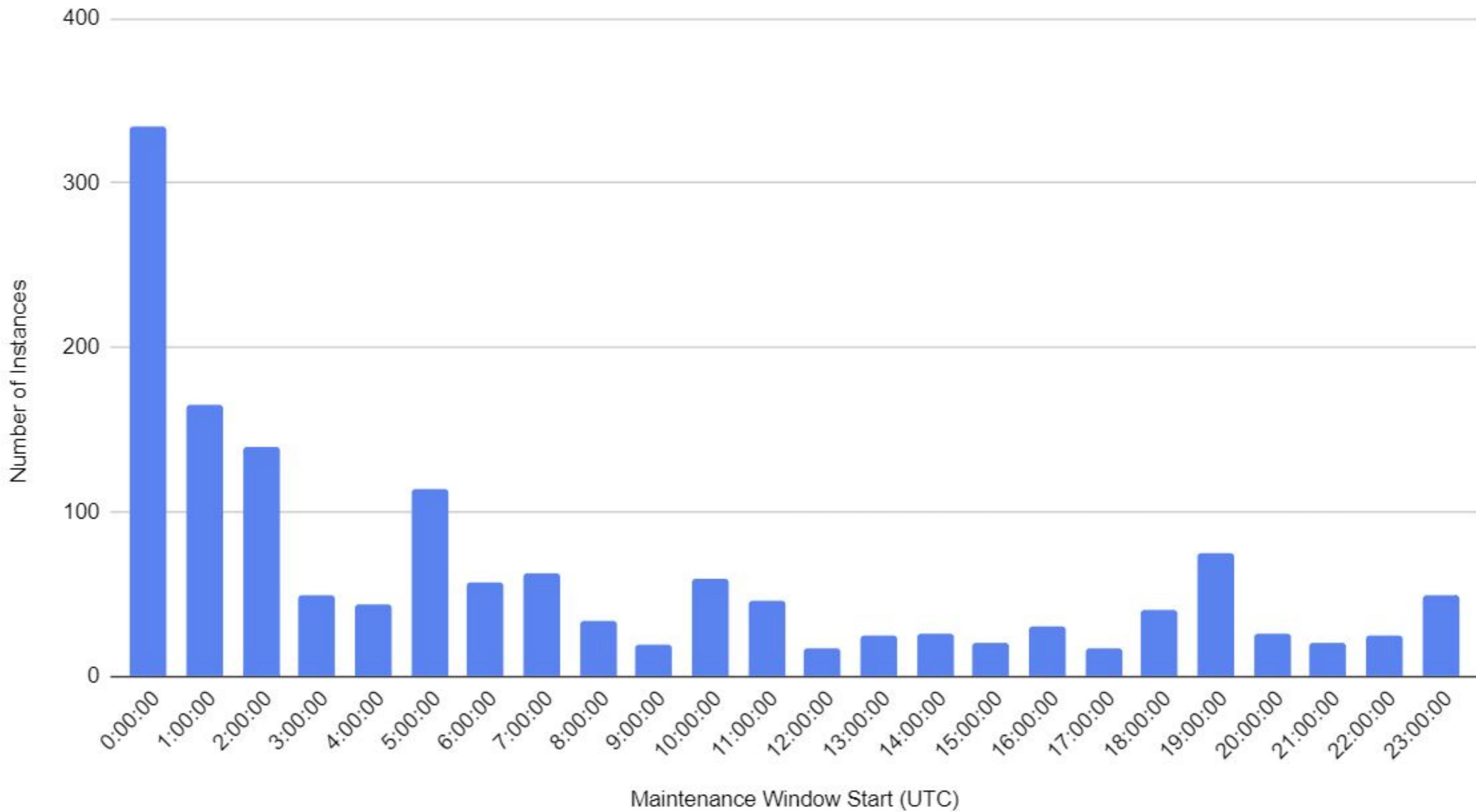
OpenFeature is a CNCF incubating project for feature toggles



We needed to
gather **feedback**
before updating
all users



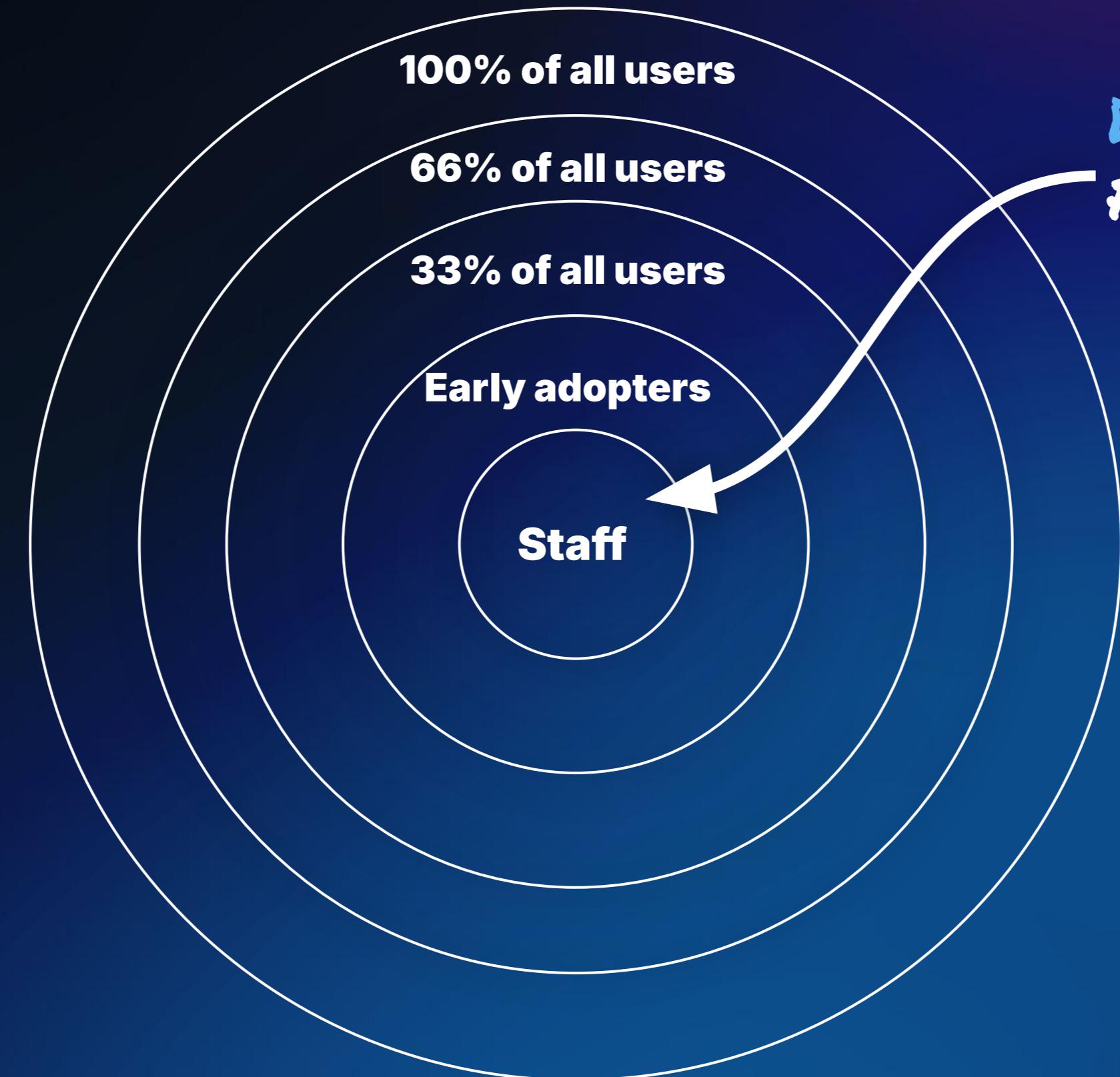
Number of Instances vs. Maintenance Window



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

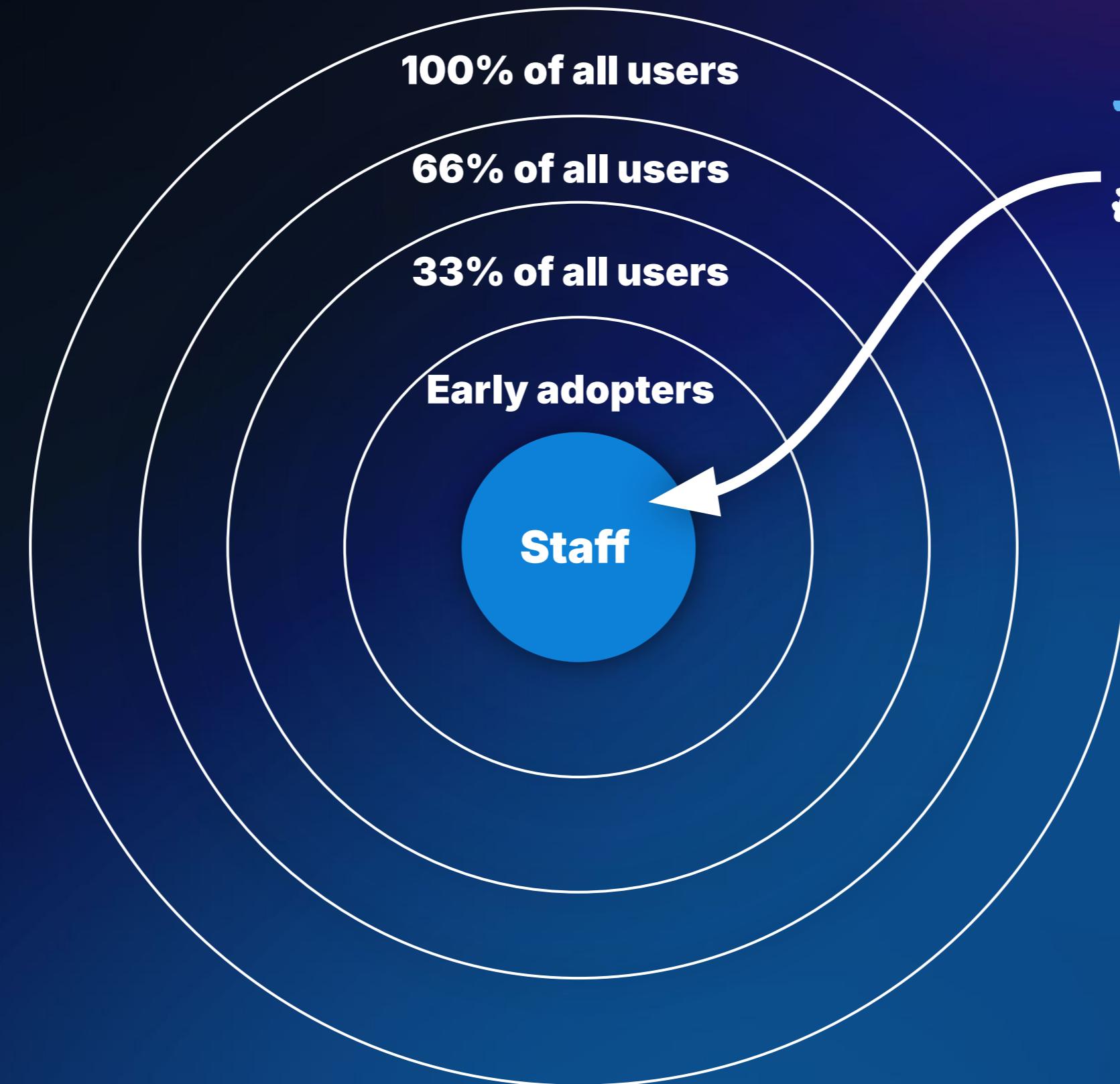


SEGMENT ==
ENVIRONMENT +
INSTANCE

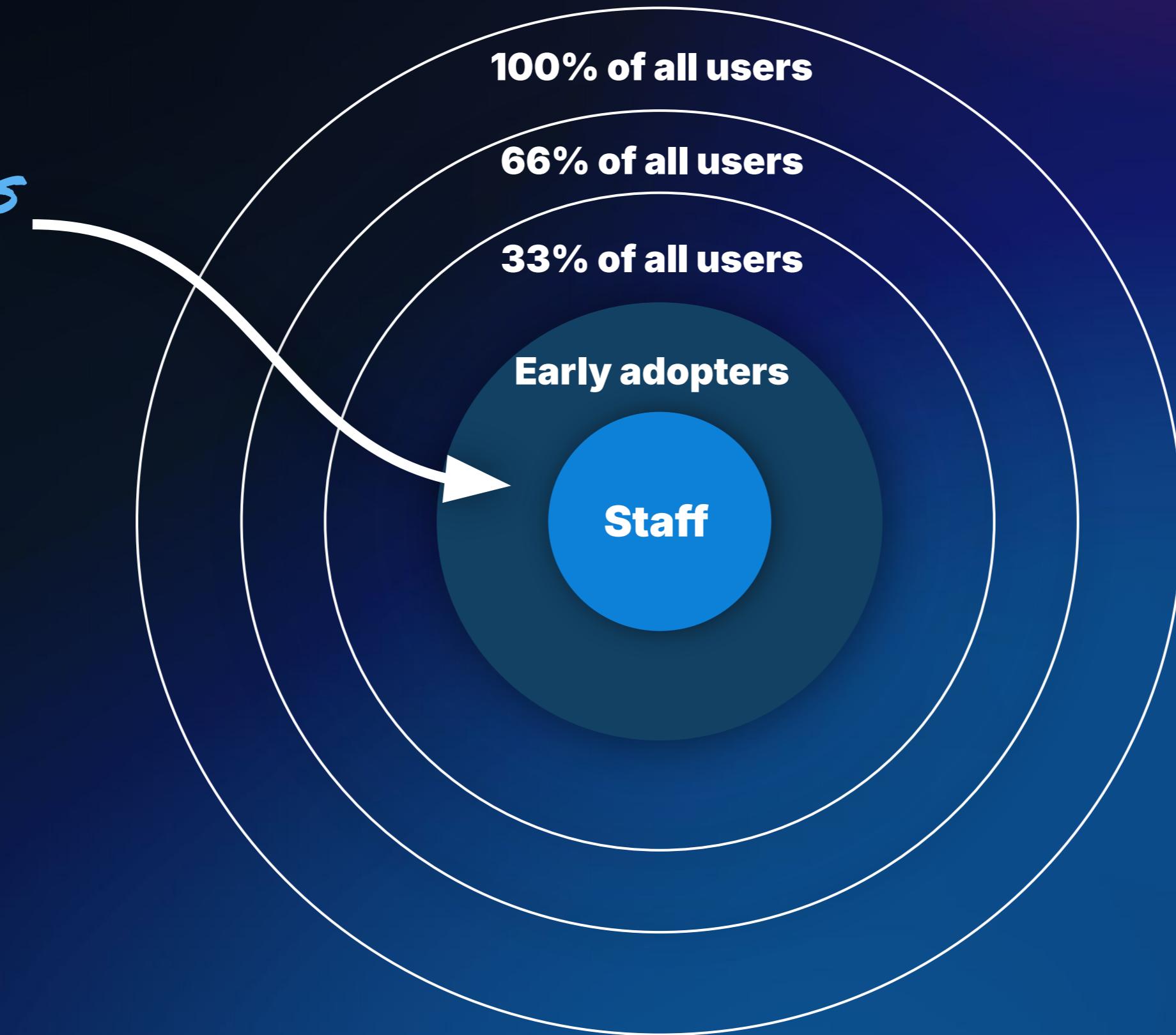


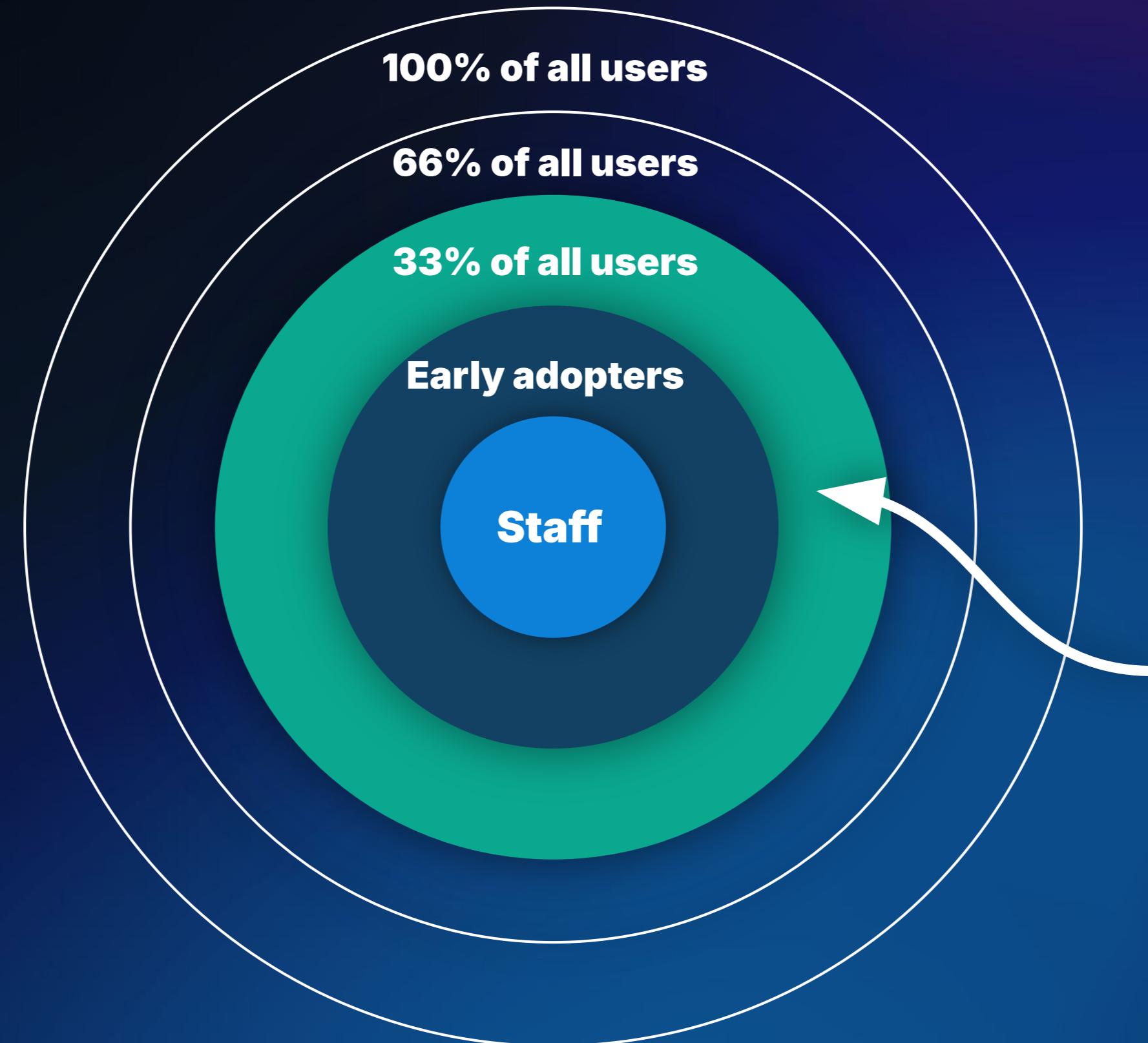
**DEPLOY WITH
FLAG TURNED OFF**





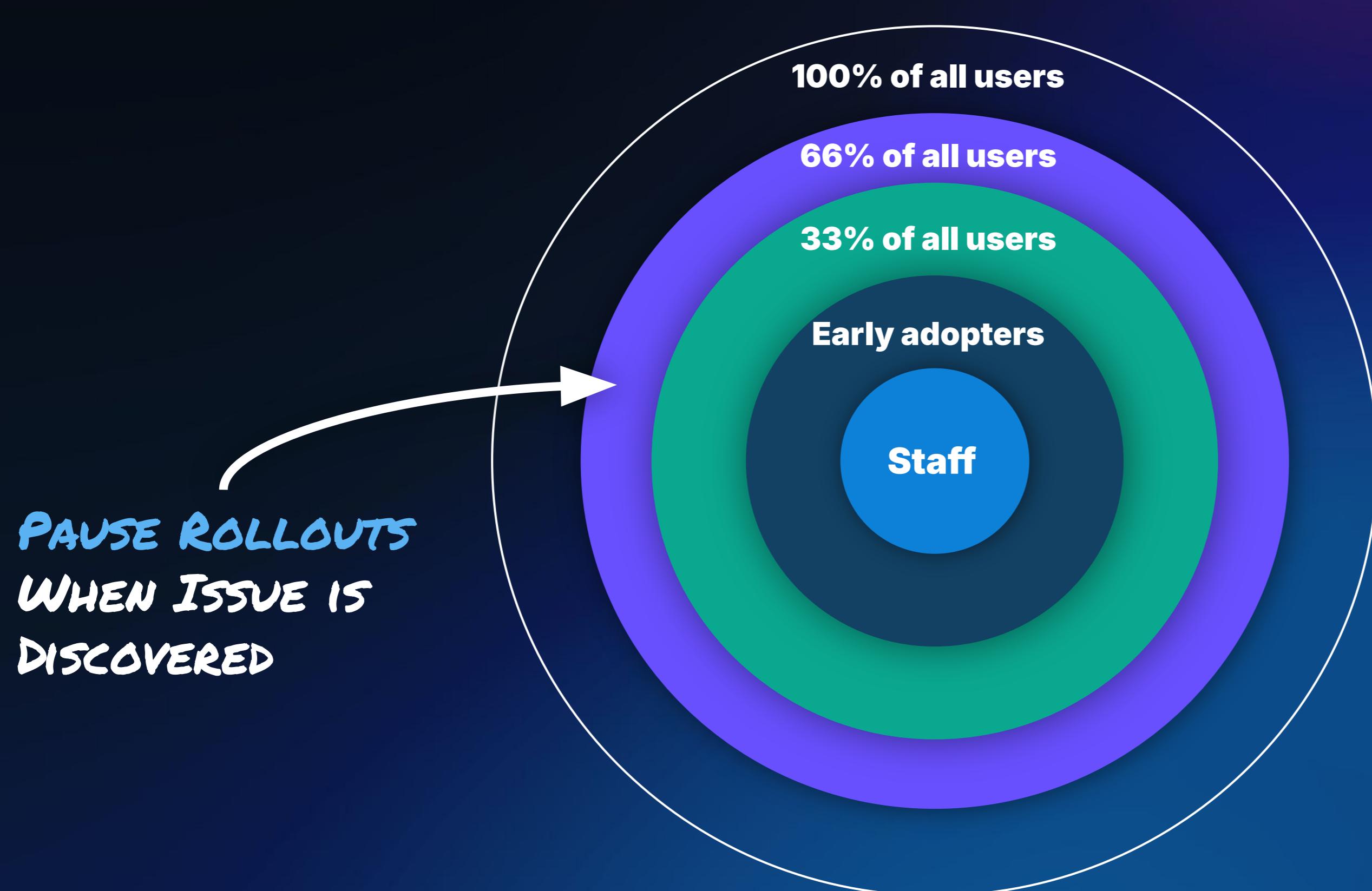
**EARLY ADOPTERS
CAN OPT-IN**

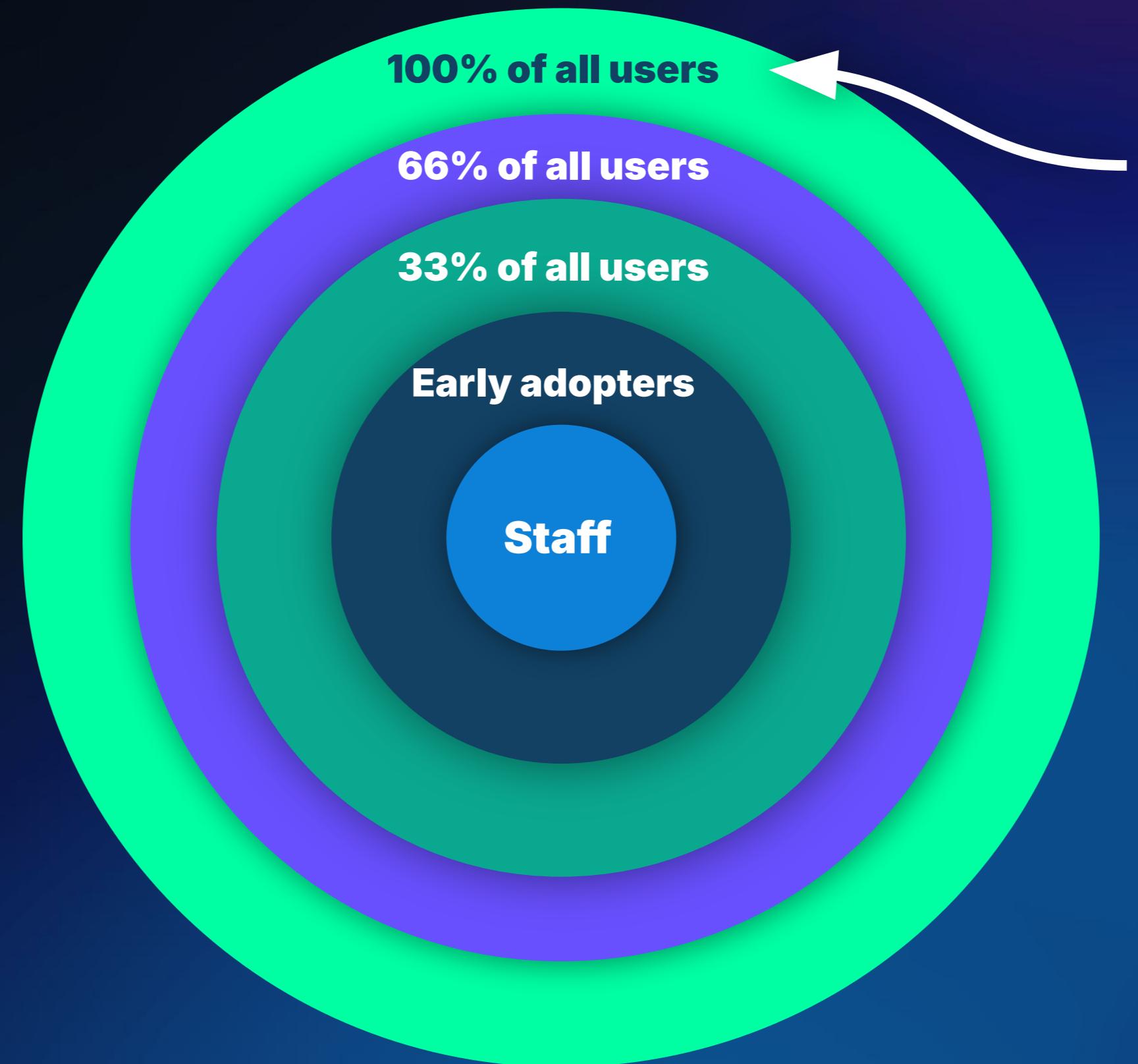




ENABLE FOR
REMAINING
USERS OVER
PERIOD OF TIME







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

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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)
progleasing (47732-78373-43423-18684) emporos (04213-46832-45425-29161)
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)
buildertrend (53376-10727-74424-39923) stackeng (41302-73251-26421-78361)
modernhire (45361-42811-84429-61561) phocas (63664-40282-41424-11662)
littler (54969-70935-08427-12217) simplyture (01582-43252-41422-08674)
re-enterprise (95679-23067-12424-61370) parenta (35432-25583-38420-99140)
kuk (54261-81626-46428-99725) ding (90374-45616-59425-82162)
mimecast-eis (00265-16258-53424-58936) servicepath (34361-11113-22424-78116)
tradinglabs (25161-52728-22420-22331) stigg (02116-49214-44429-62650)
stg-bcg-smp-it (19990-05301-26423-48225) rws (80434-85013-59422-42840)
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plchester (73941-14579-62421-59213) simplyture (01582-43252-41422-00674)
johny (05443-40958-39424-89032) wilqo (44955-97440-21429-60432)

Excluded Tenants

Segments

Cancel Ok

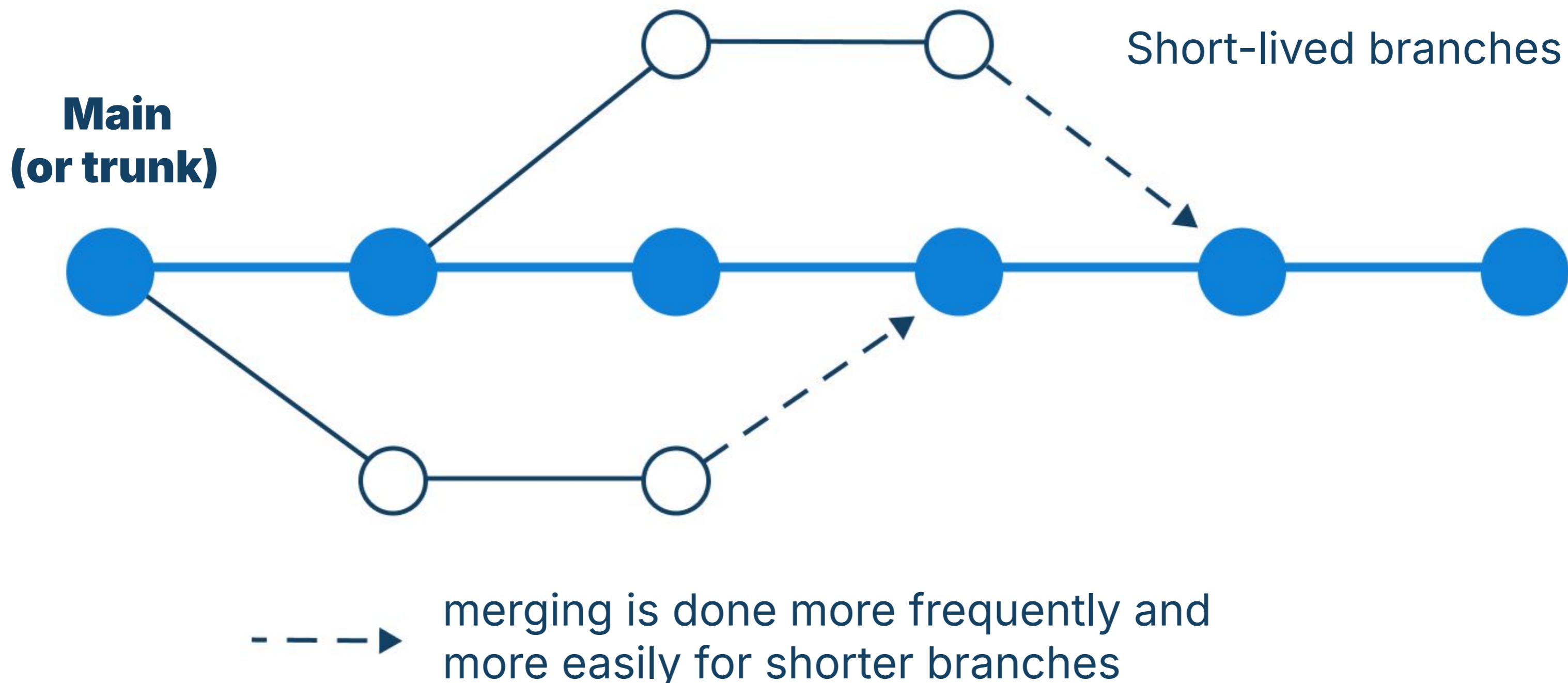
Additional Benefits



When you are gonna merge two branches after a long time



Trunk-based development



4

Challenges



Feature Flags are for SaaS only

34%

Total customers are
on Octopus Cloud

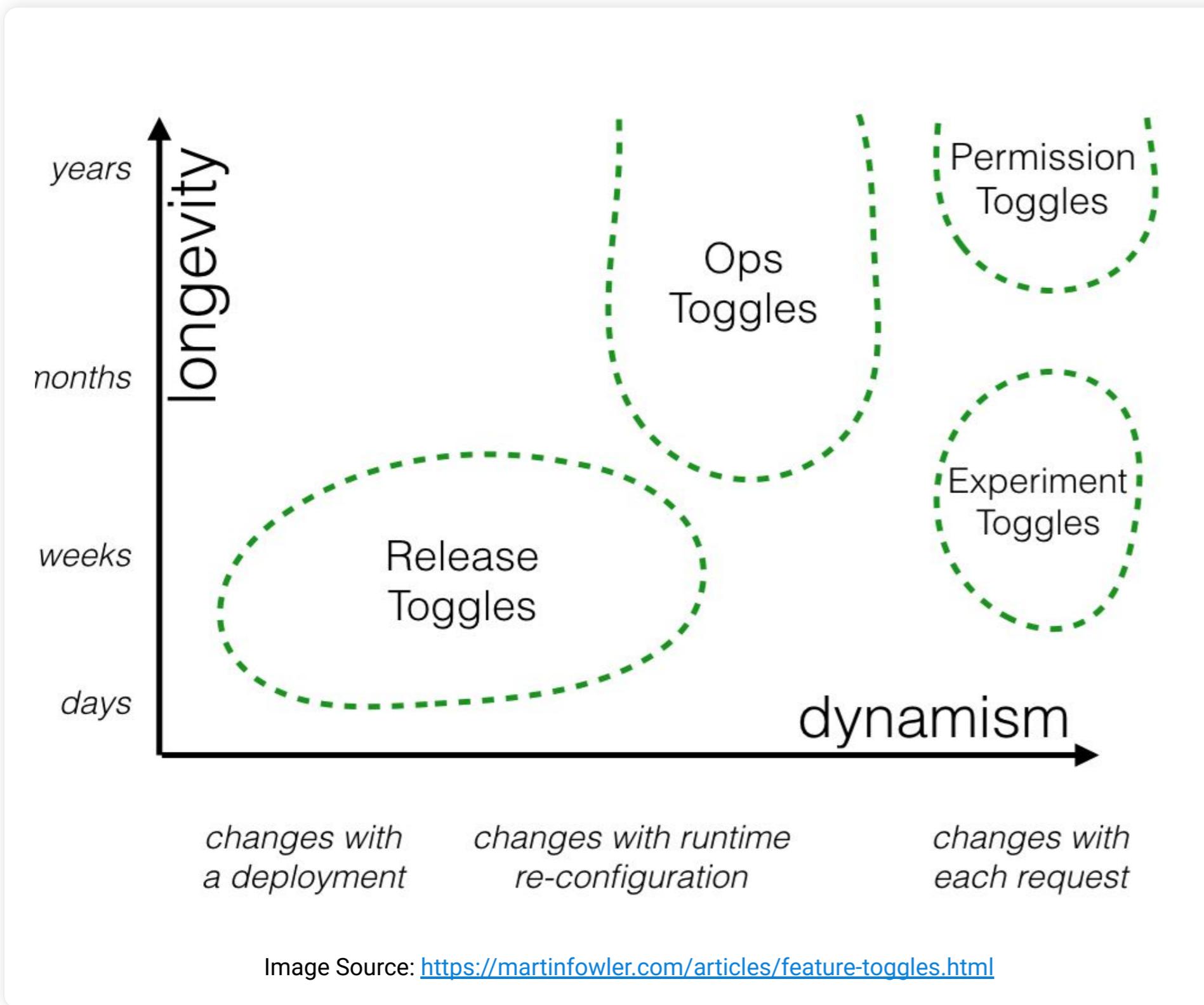
66%

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

Requires
investment in
changes to SDLC



First Stage

Implement feature toggles

Adopt trunk based development

Second Stage

Implement canary or blue/green deployments



Thank you



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