



Feature Flag Use Cases You Haven't Heard About Yet

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 Microsoft



Agenda

- ▶ What are feature flags?
- ▶ Typical Use Cases
- ▶ Removing Dead Code
- ▶ Load/Stress Testing
- ▶ Evaluating Tech Costs
- ▶ Parity Testing



What Are Feature Flags?

Other Terms

- Feature Toggle

Other Terms

- Feature Toggle
- Feature Flip

Other Terms

- Feature Toggle
- Feature Flip
- Feature Switch

Other Terms

- Feature Toggle
- Feature Flip
- Feature Switch
- Conditional Feature

Other Terms

- Feature Toggle
- Feature Flip
- Feature Switch
- Conditional Feature
- Split 

Code Branch Controlled by GUI



Code Sample

```
if (Treatments.ON
    .equals(_splitClient.getTreatment(orgId,
Splits.MY_FEATURE.name())) {
    // Do Something
} else {
    // Do Something Else
}
```

Set Targeting Rules

if user add attribute is in segment QA testers

serve on

else if user location is in list Boston

serve on

else if user add attribute is in Split ui_v2

serve off

Code Sample

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Set Targeting Rules

if user add attribute is in segment QA testers
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else if user location is in list Boston
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else if user add attribute is in Split ui_v2
serve off



Typical Use-Cases

- Releasing features



Typical Use-Cases

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- Production Testing



Typical Use-Cases

- Releasing features
- Production Testing
- A/B/C Testing



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- Custom Packages



Typical Use-Cases

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- Production Testing
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- Temporary UI Customization



Typical Use-Cases

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- Temporary UI Customization



Releasing Features

- Separating Deploy from Release
- Canary/Ramped Release
- Off Switch

What Are Some Advanced Use-Cases?



Remove Dead Code

Why is your code dead?



Method no
longer
referenced

Why is your code dead?



Method no
longer
referenced

Endpoint never
called

Why is your code dead?



Method no
longer
referenced

Parameter never
has certain values

Endpoint never
called

Why is your code dead?



```
log.info("CODE NOT DEAD UID: 12345");
```





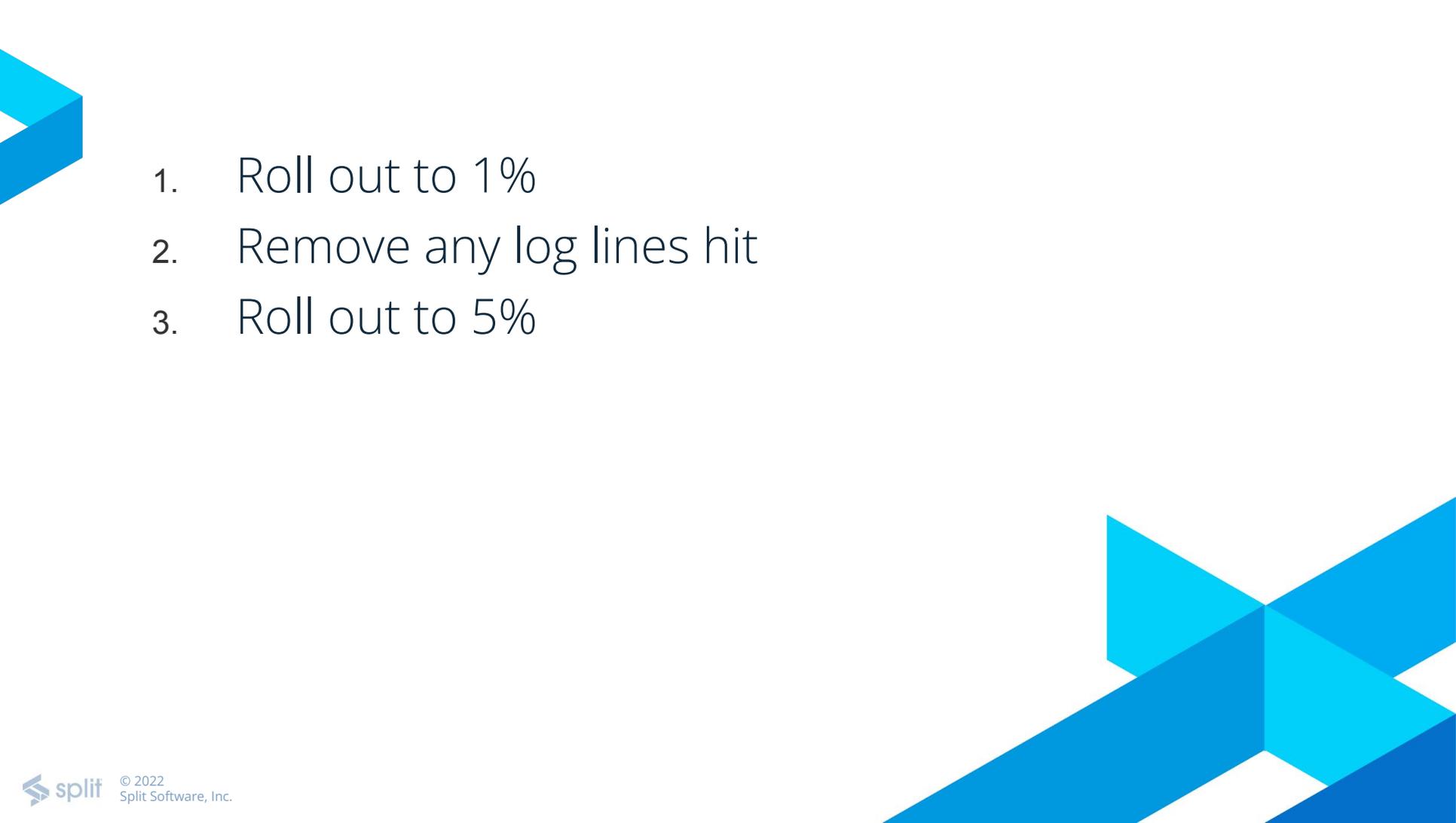
```
private void logForCleanup(String orgId, String uid) {
    if (Treatments.ON
        .equals(_splitClient.getTreatment(orgId, Splits.CLEANUP.name()))) {
        String message = String.format("CODE NOT DEAD UID: %s", uid);
        log.info(message);
    }
}
```

```
private void logForCleanup(String orgId, String uid) {
    if (Treatments.ON
        .equals(_splitClient.getTreatment(orgId, Splits.CLEANUP.name()))) {
        String message = String.format("CODE NOT DEAD UID: %s", uid);
        log.info(message);
    }
}
```

Turn on CLEANUP feature flag to 1%

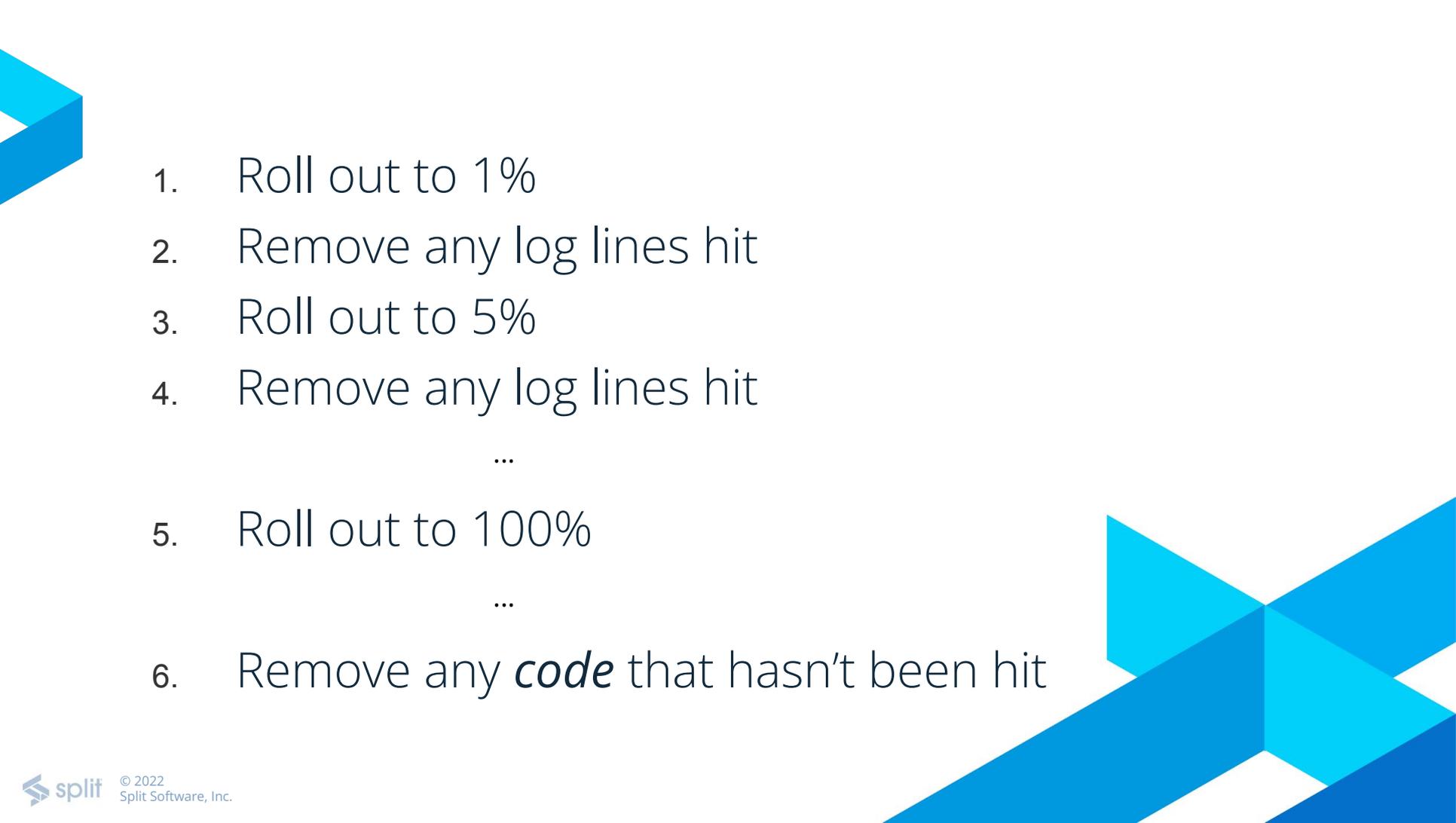
- 
1. Roll out to 1%

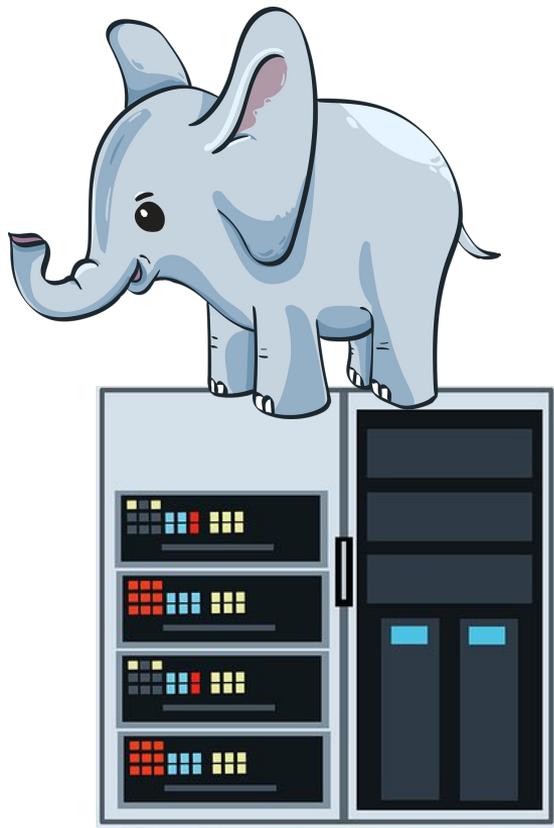
- 
1. Roll out to 1%
 2. Remove any log lines hit

- 
1. Roll out to 1%
 2. Remove any log lines hit
 3. Roll out to 5%

- 
1. Roll out to 1%
 2. Remove any log lines hit
 3. Roll out to 5%
 4. Remove any log lines hit

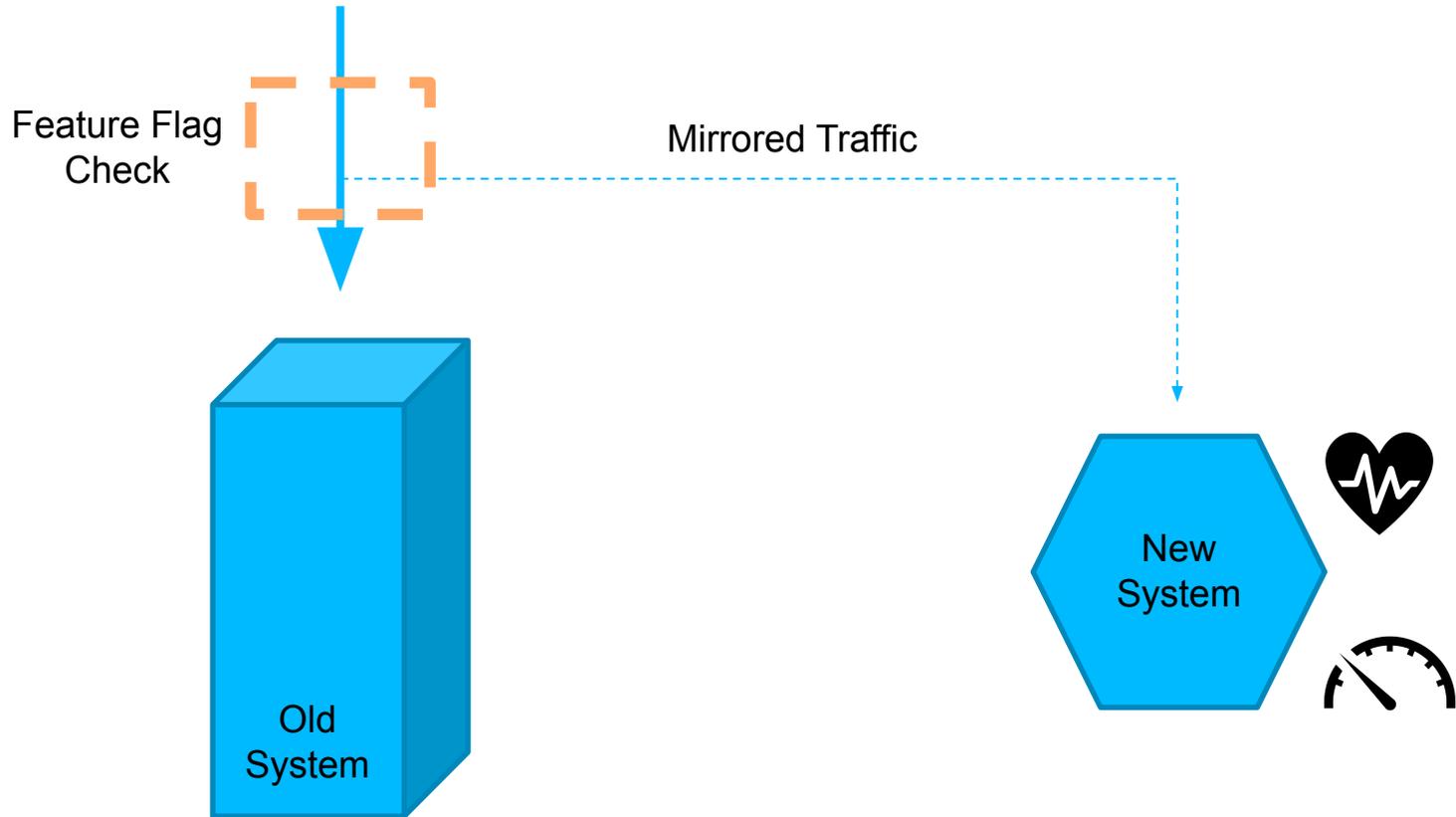
- 
1. Roll out to 1%
 2. Remove any log lines hit
 3. Roll out to 5%
 4. Remove any log lines hit
 - ...
 5. Roll out to 100%

- 
1. Roll out to 1%
 2. Remove any log lines hit
 3. Roll out to 5%
 4. Remove any log lines hit
 - ...
 5. Roll out to 100%
 - ...
 6. Remove any *code* that hasn't been hit



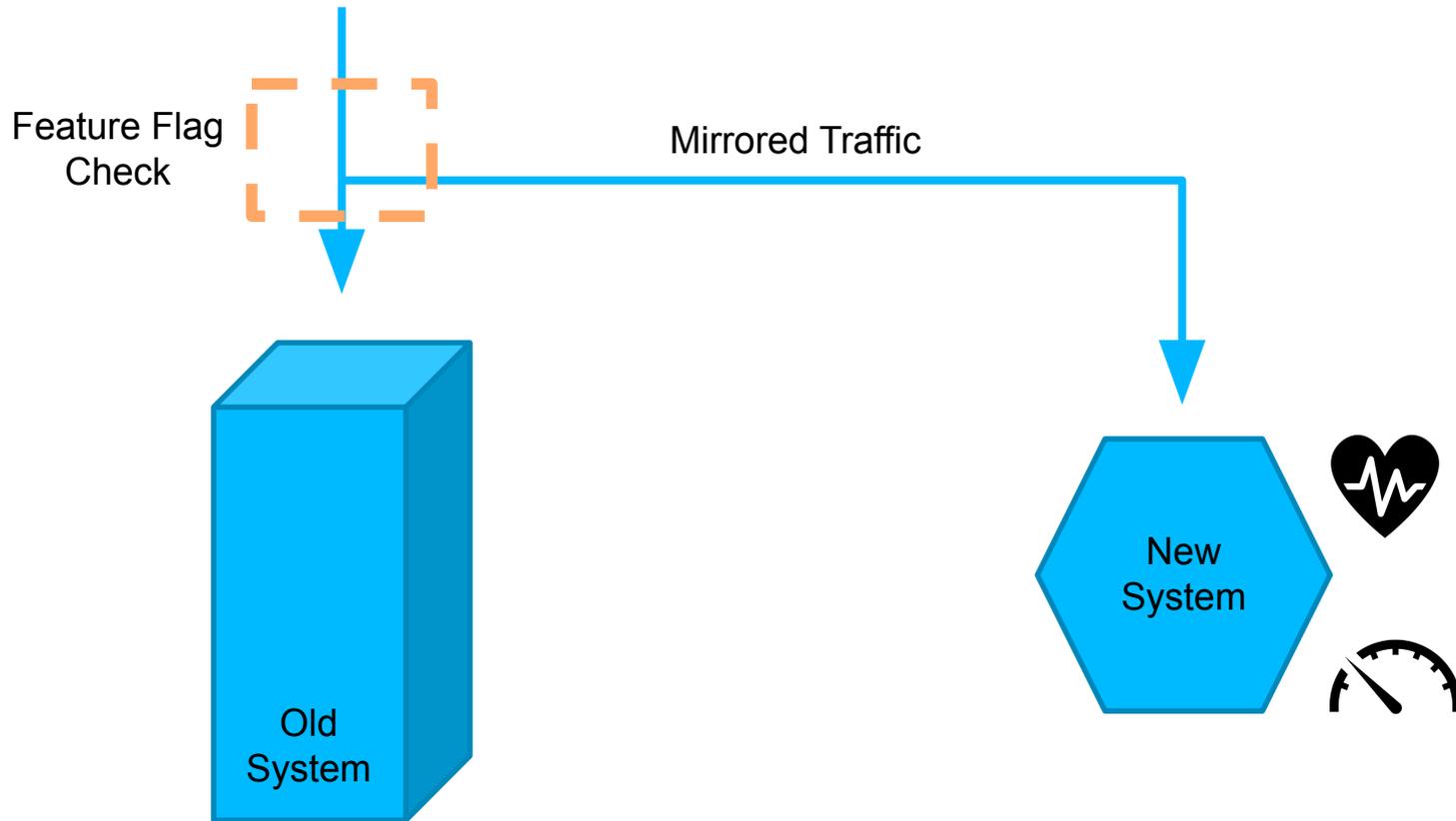
Load & Stress Test

Requests



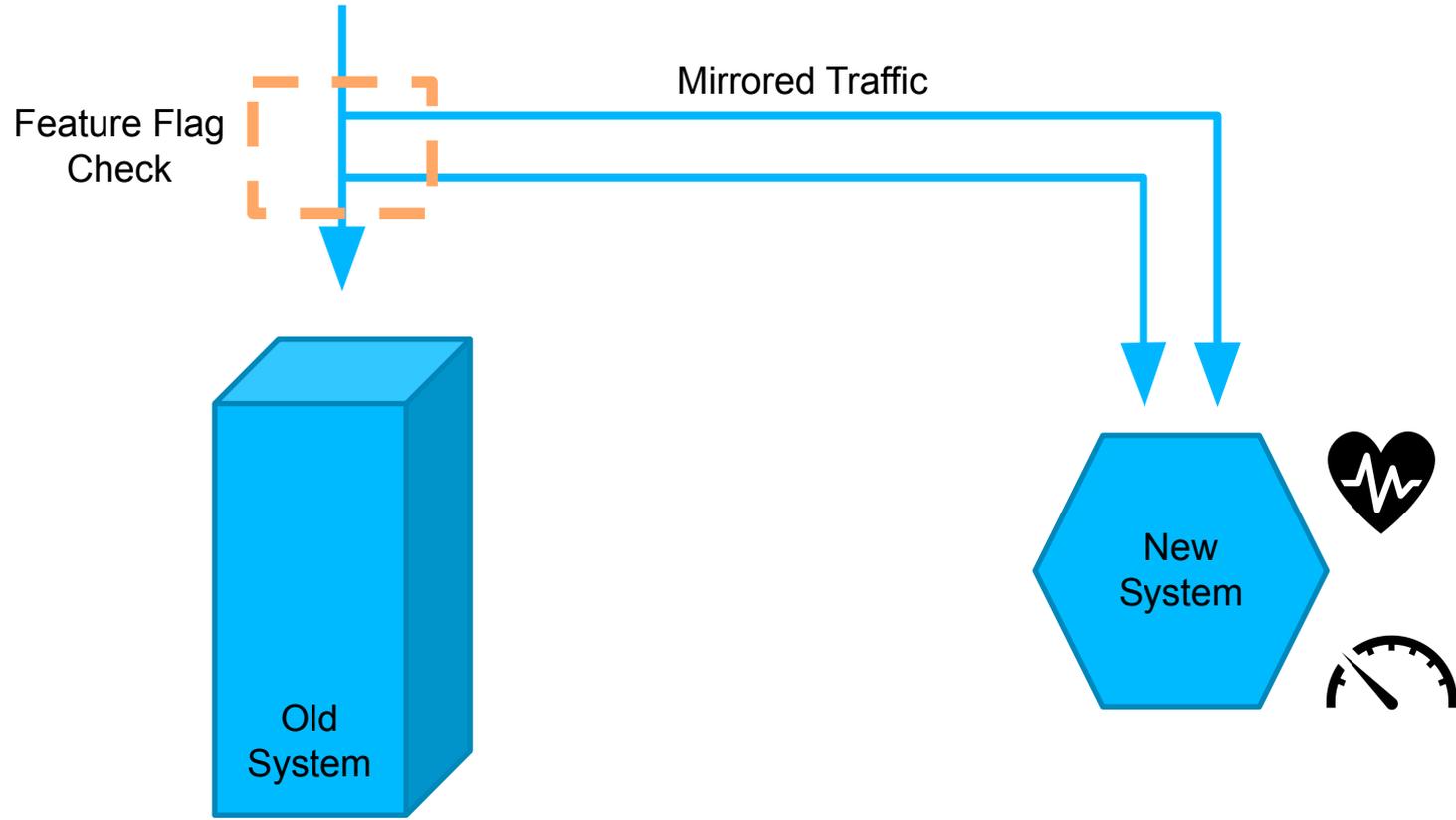
Requests

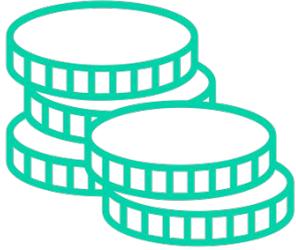
Load Test



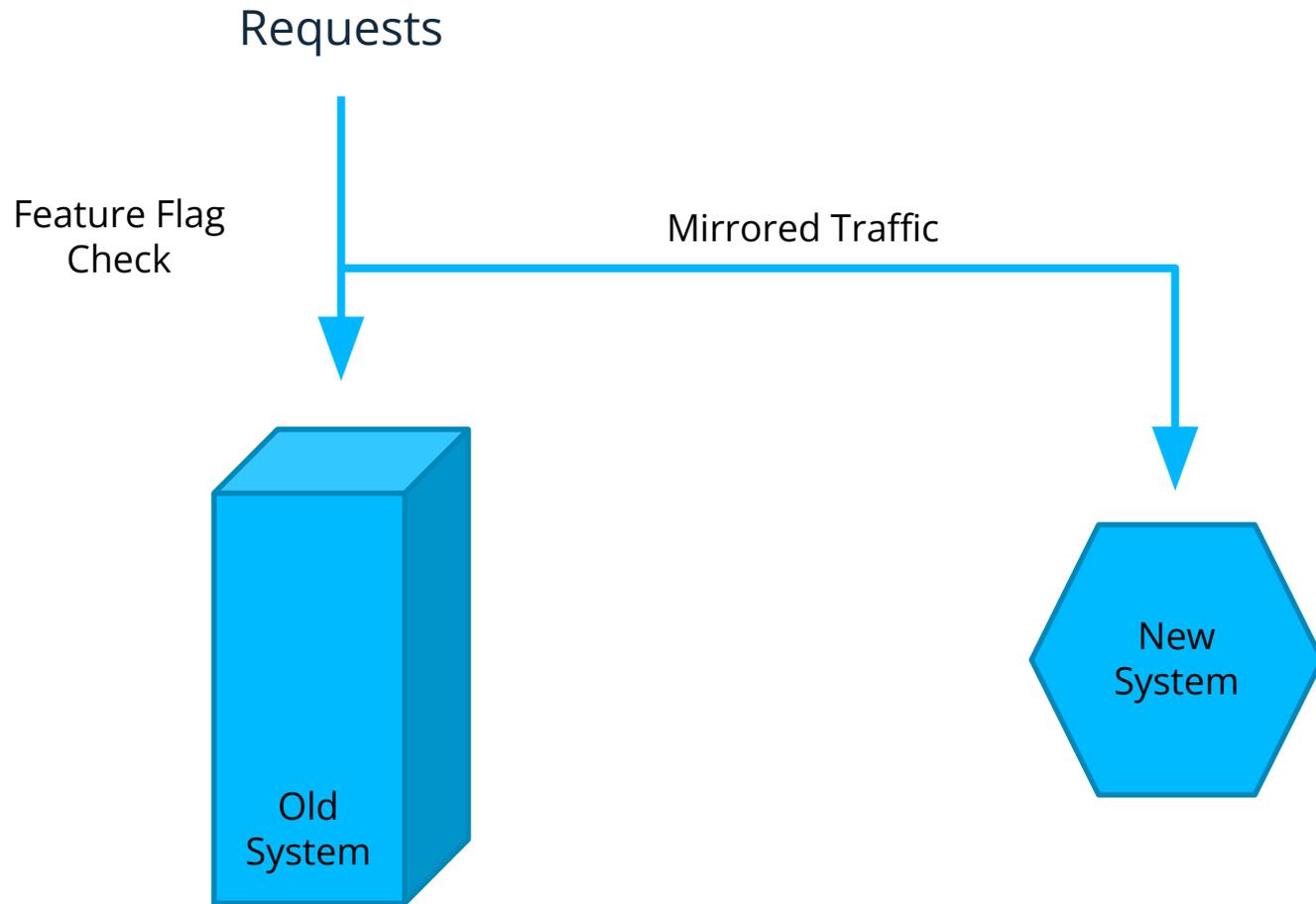
Requests

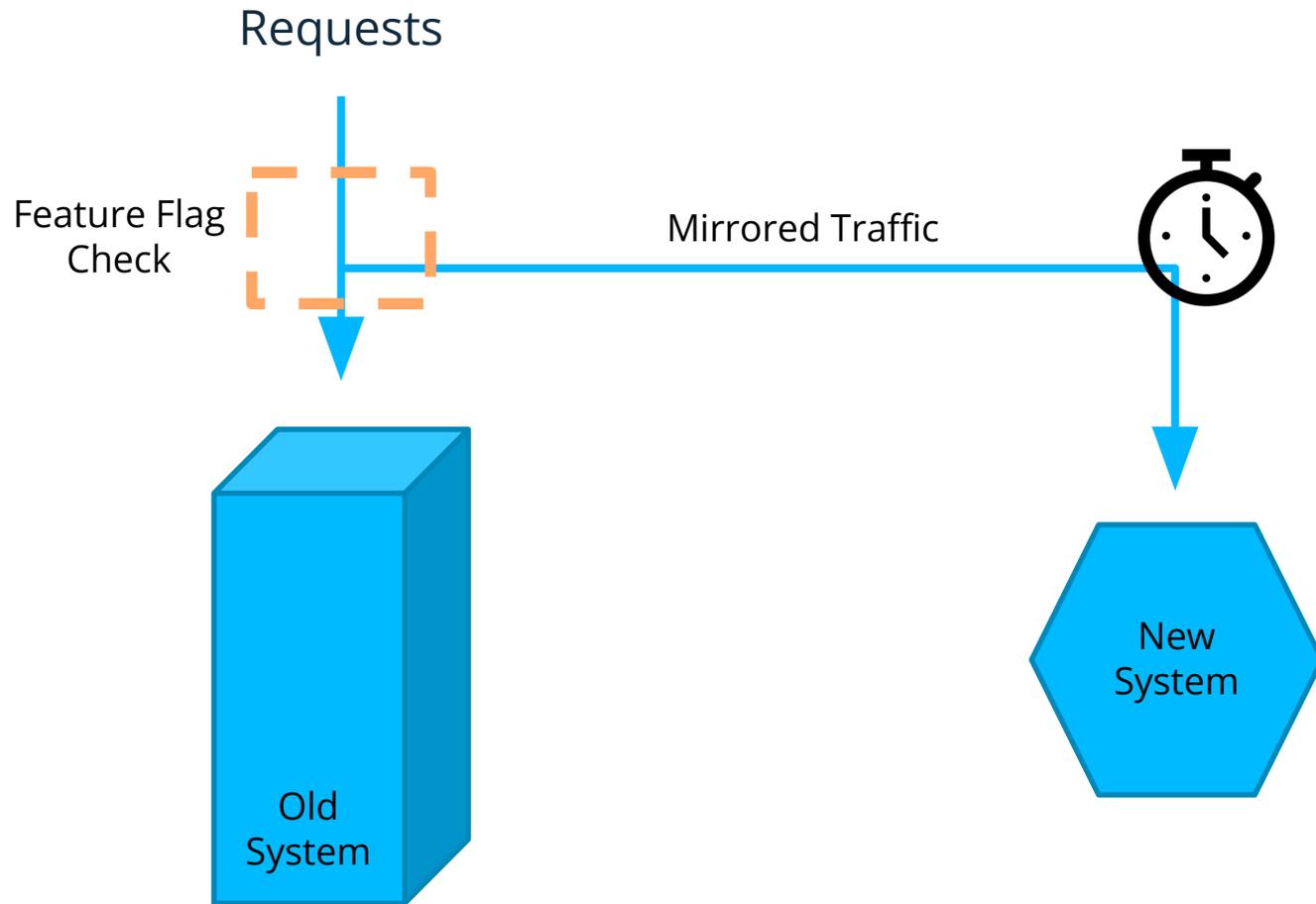
Stress Test

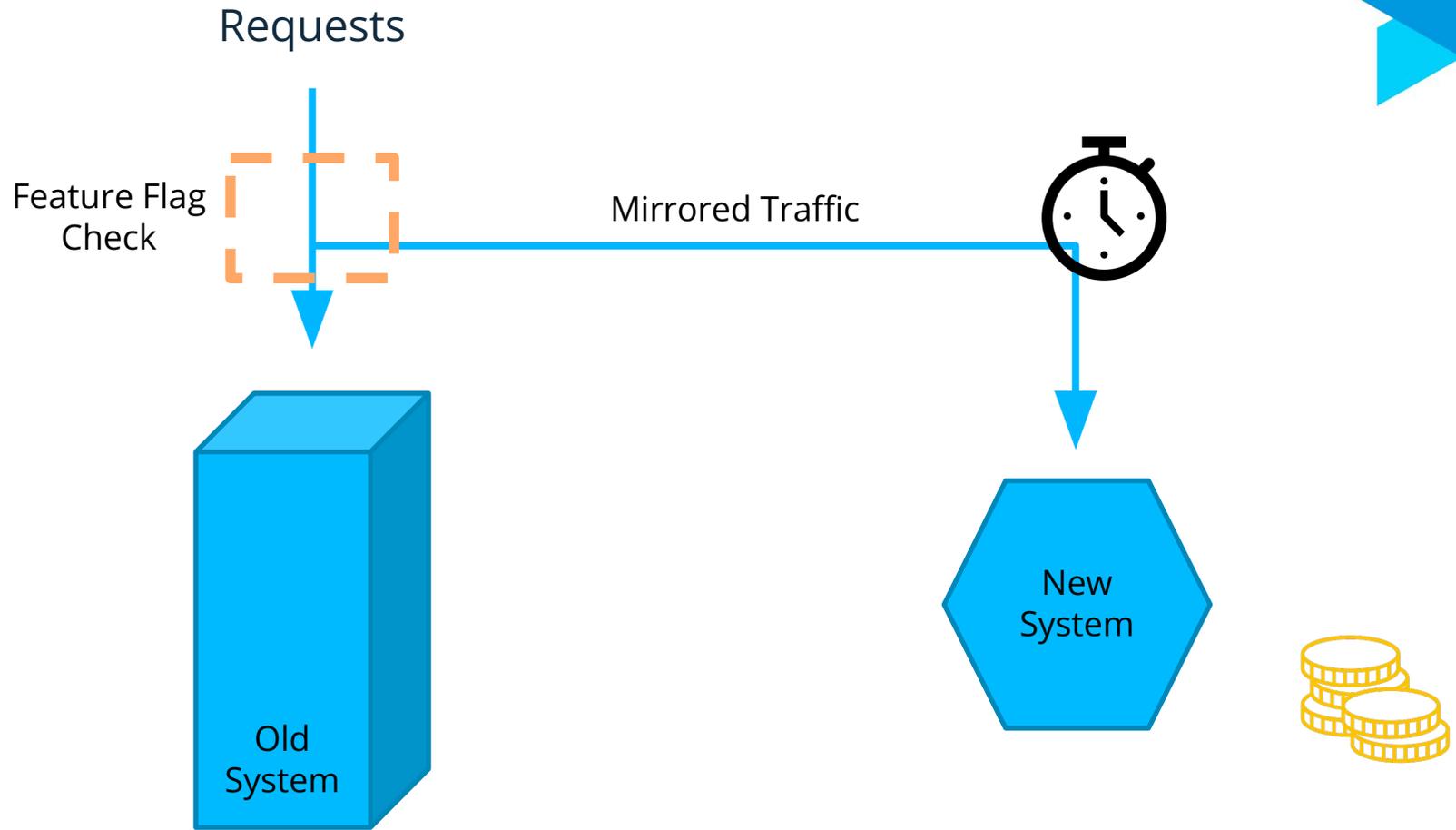




Evaluate Tech Costs



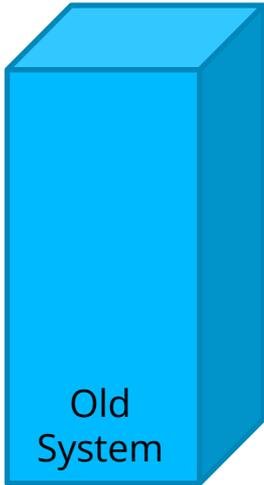




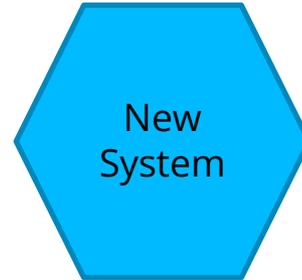


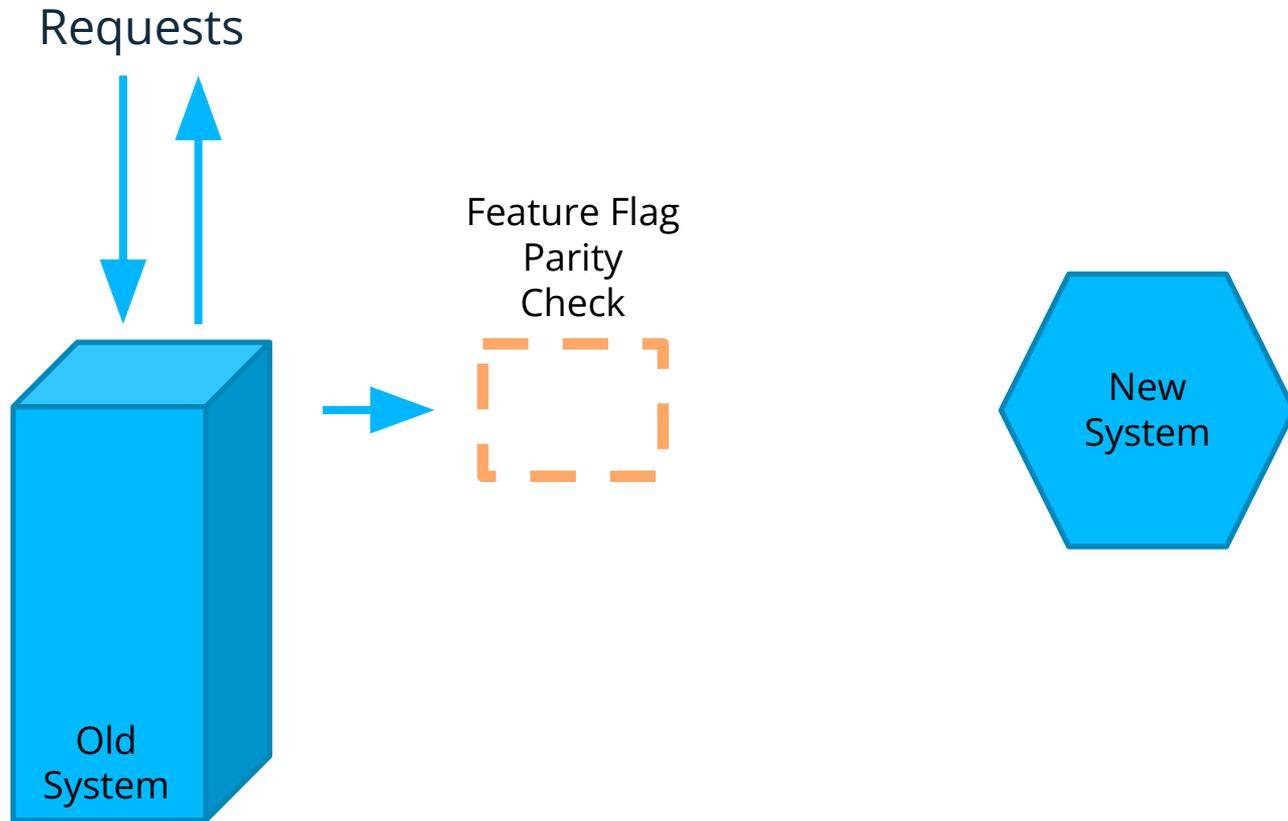
Verify Parity

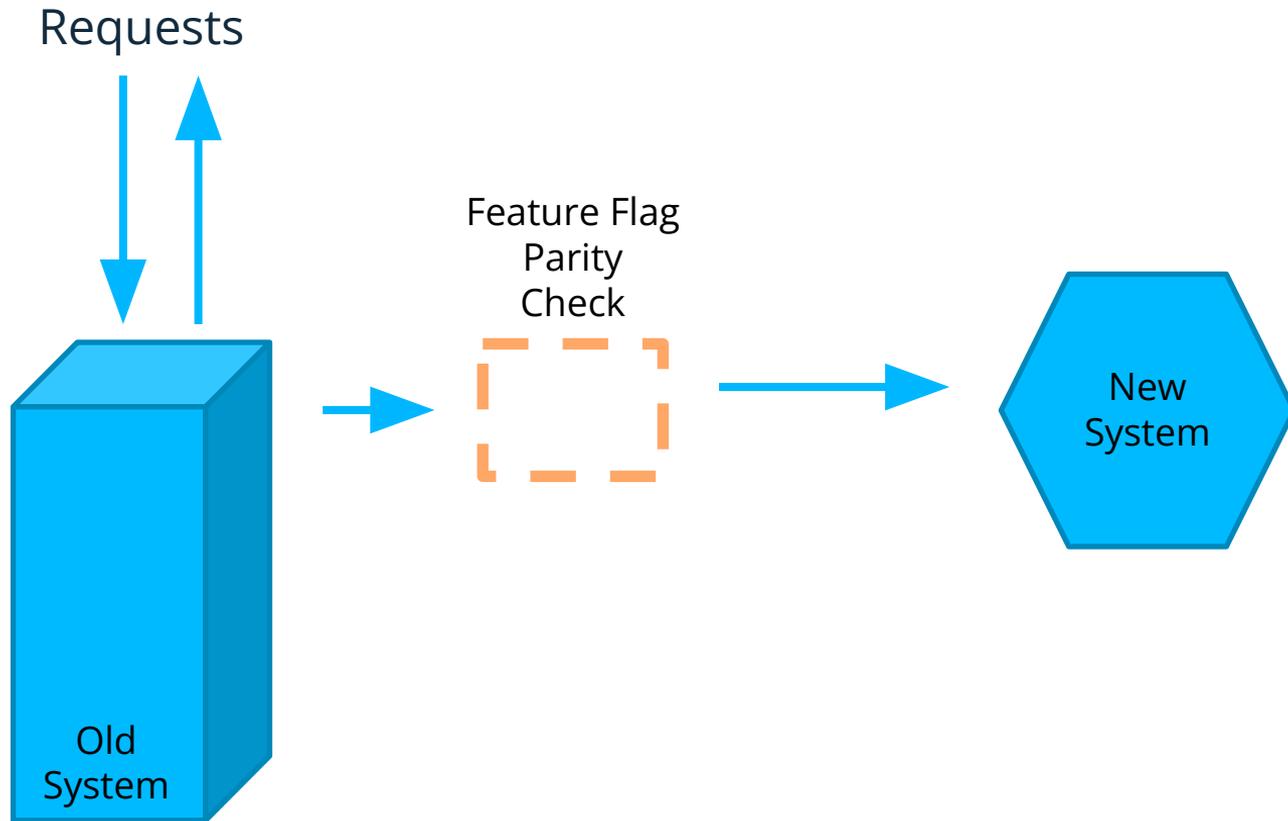
Requests

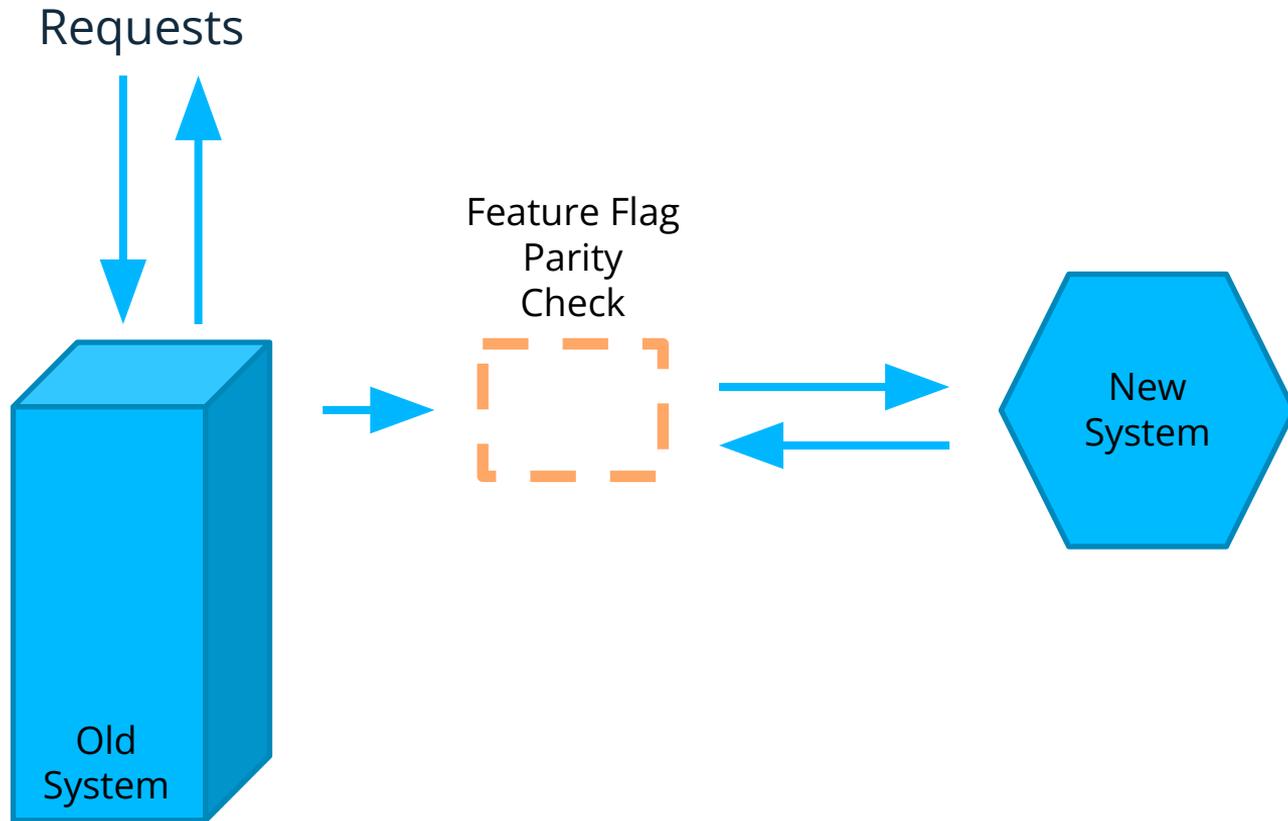


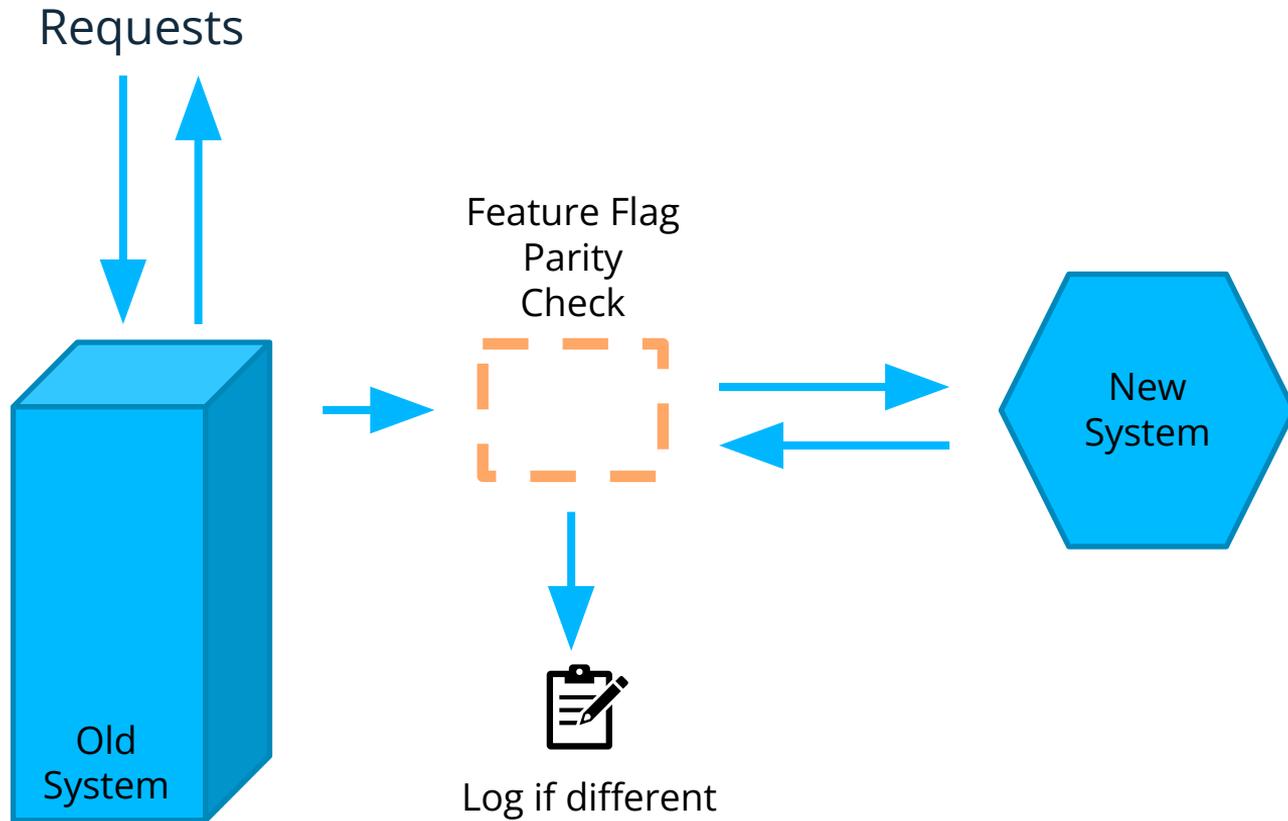
Feature Flag
Parity
Check

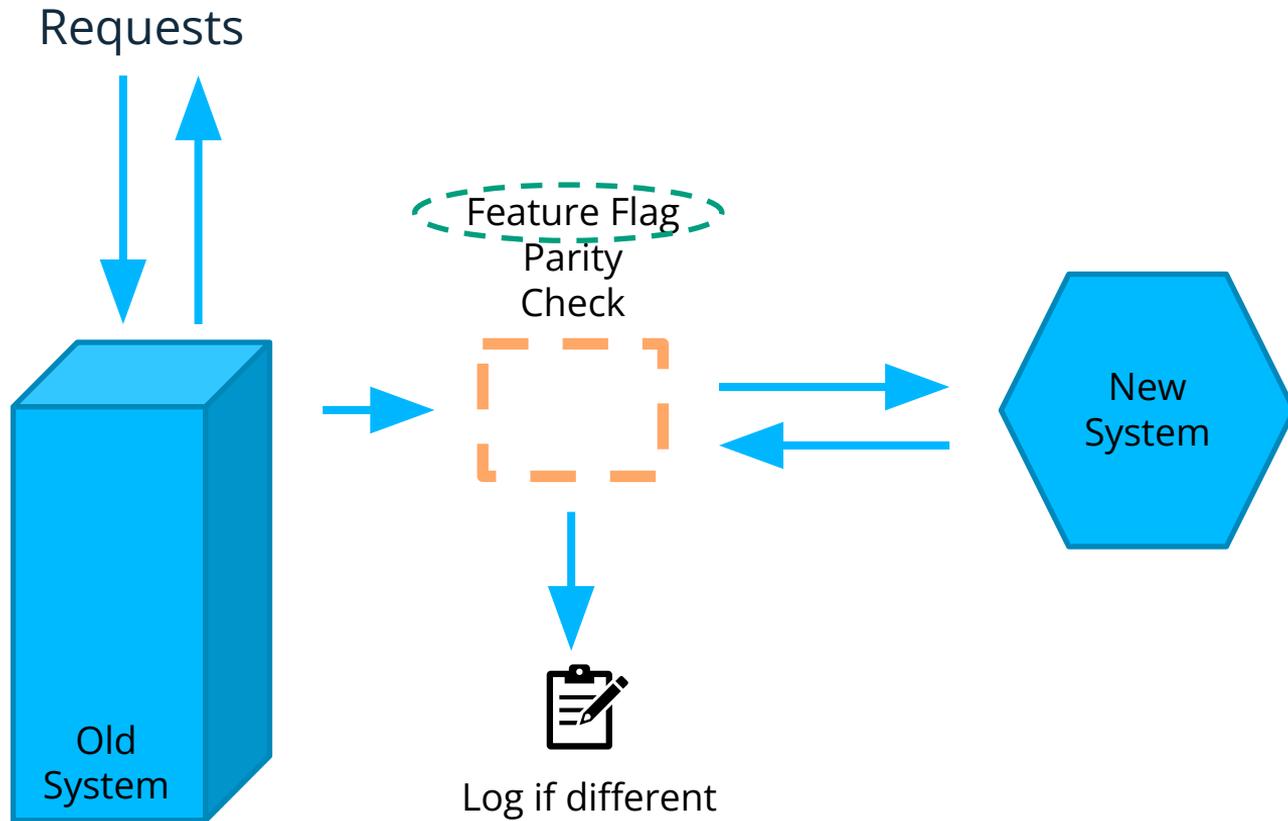






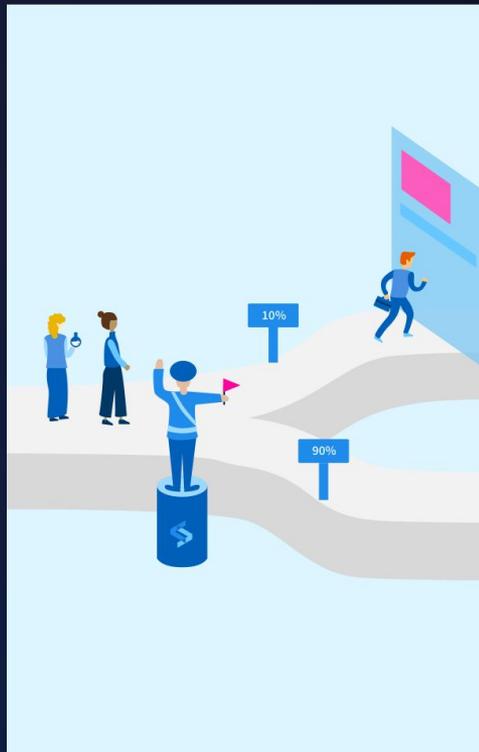






Recap

- ▶ What are feature flags?
- ▶ Typical Use Cases
- ▶ Removing Dead Code
- ▶ Load/Stress Testing
- ▶ Evaluating Tech Costs
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Questions?

- Come talk to me at the speaker tables
- Email me: joy.ebertz@split.io
- Scan the QR code to enter our raffle to win a prize!



Thank You!



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Further Reading

- My blog on this topic:
<https://www.split.io/blog/5-advanced-feature-flag-uses/>
- Some ways we use feature flags:
<https://www.split.io/blog/feature-flags-at-split/>
- More about feature flags generally:
<https://martinfowler.com/articles/feature-toggles.html>



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