Migration: Hacks or architecture

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PGP 0x320205E7539B6203
130D C446 1F1A 2E50 D6E3
3DA8 3202 05E7 539B 6203

.NF3

AKADEMIJA .NF3

Auginte

What we can learn from migrations

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Code

Change vs Refactor

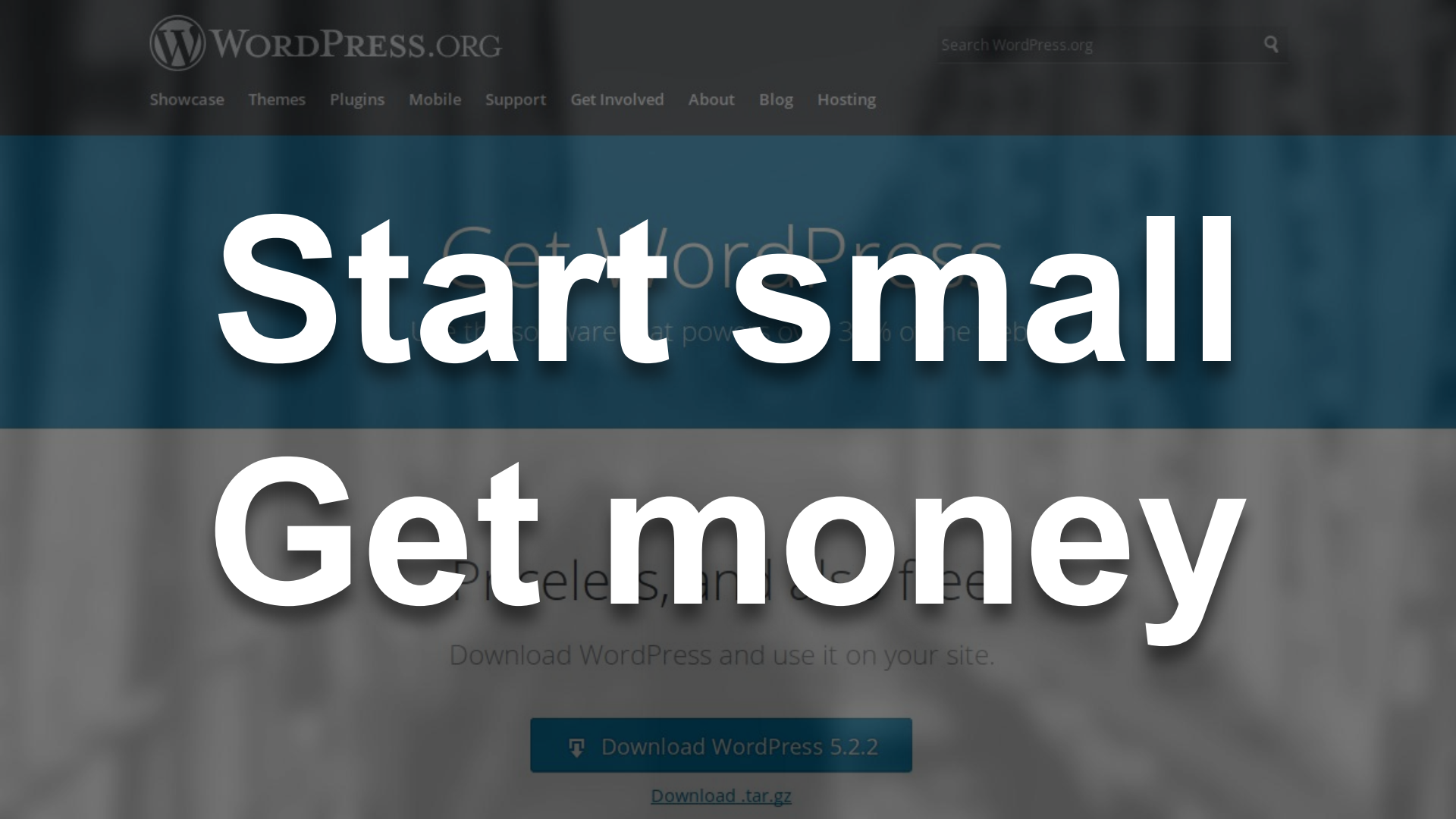
A lot of code

Illustration: www.minecraft.net

Illustration: www.minecraft.net

Why	Complex refactoring For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement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Mobile
Support
Get Involved
About
Blog
Hosting
Start small
Get money
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Download WordPress 5.2.2
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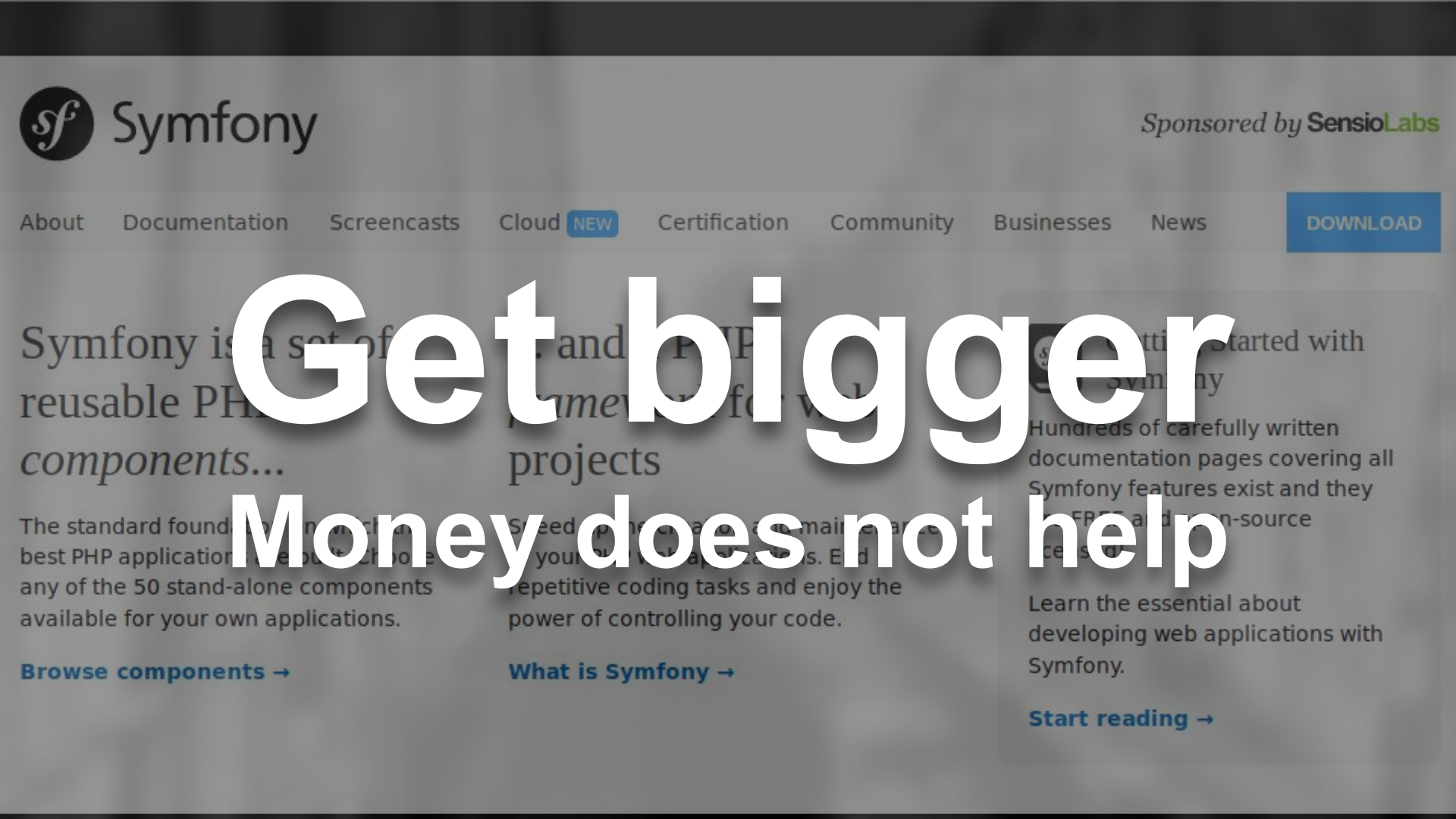
Symfony
Sponsored by SensioLabs
About
Documentation
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Community
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News
DOWNLOAD
components...
projects
The standard found
best PHP application
any of the 50 stand-alone components
available for your own applications.
Browse components →
Repetitive coding tasks and enjoy the
power of controlling your code.
What is Symfony →
started with
Hundreds of carefully written
documentation pages covering all
Symfony features exist and they
Learn the essential about
developing web applications with
Symfony.
Start reading →
Get bigger
Money does not help

Need to change

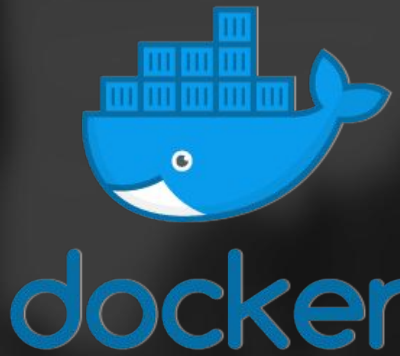
Slow parts

Why	For developers Change to grow
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Limitations
↓
hacks

Dependencies

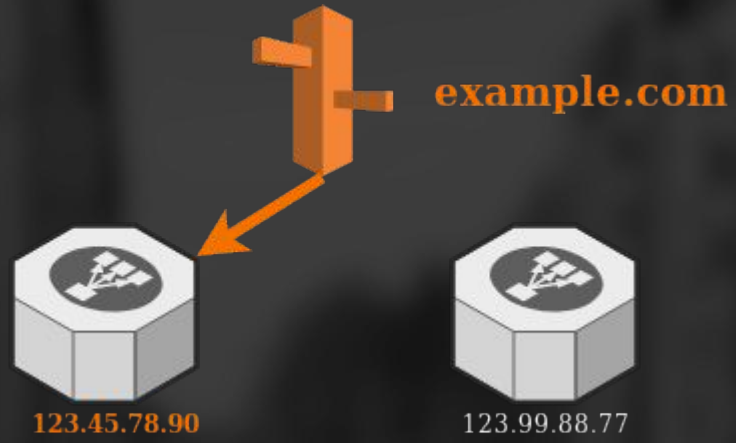


Ifs in kernel

Database

PERCONA
Toolkit

Rename + triggers

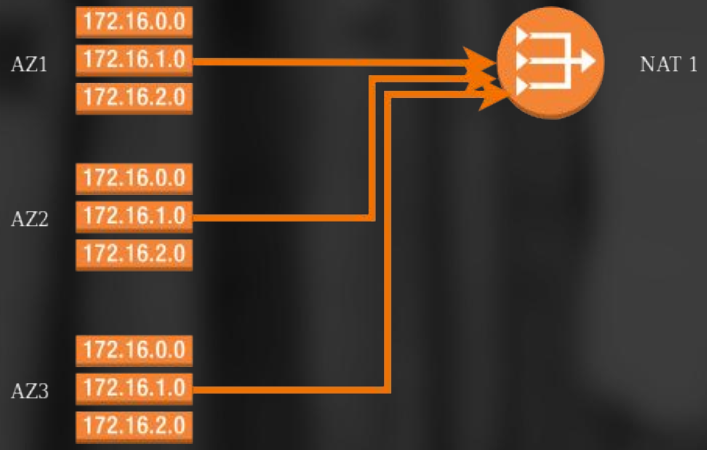


DNS

DNS

internal.example.com
*.example.com
internal.example.com
123.45.78.90
123.99.88.77

*.wildcard

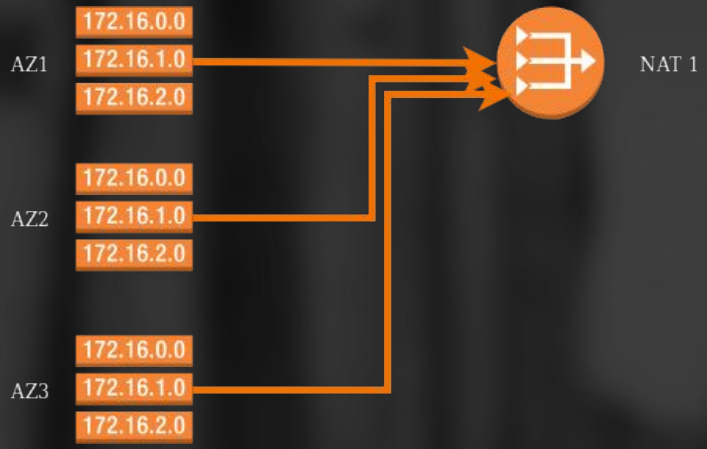

AZ1
172.16.0.0
172.16.1.0
172.16.2.0
AZ2
172.16.0.0
172.16.1.0
172.16.2.0
AZ3
172.16.0.0
172.16.1.0
172.16.2.0
NAT 1

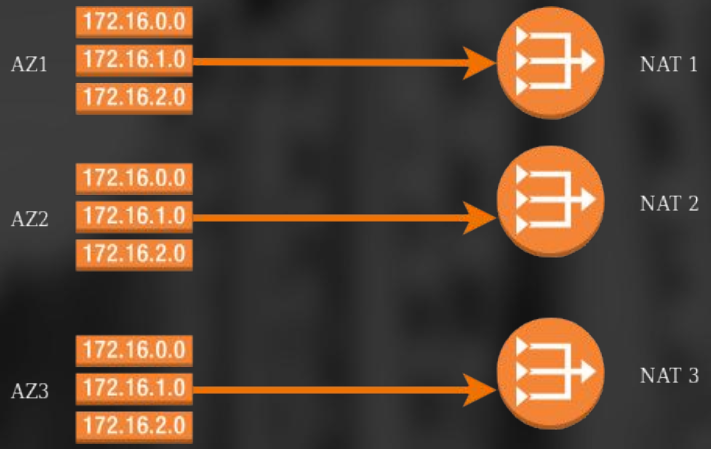
AZ1
172.16.0.0
172.16.1.0
172.16.2.0
NAT 1
AZ2
172.16.0.0
172.16.1.0
172.16.2.0
NAT 2
AZ3
172.16.0.0
172.16.1.0
172.16.2.0
NAT 3

Network

AZ1
172.16.0.0
172.16.1.0
172.16.2.0
AZ2
172.16.0.0
172.16.1.0
172.16.2.0
AZ3
172.16.0.0
172.16.1.0
172.16.2.0
NAT 1
0.0.0.0/0 → NAT1
0.0.0.0/0 → NAT2
AZ1
172.16.0.0
172.16.1.0
172.16.2.0
AZ2
172.16.0.0
172.16.1.0
172.16.2.0
AZ3
172.16.0.0
172.16.1.0
172.16.2.0
NAT 1
NAT 2
NAT 3

Network





wildcard

0.0.0.0/1 128.0.0.0/1

```
0 0000000.00000000.00000000.00000000
0 1111111.11111111.11111111.11111111
```

```
1 0000000.00000000.00000000.00000000
1 1111111.11111111.11111111.11111111
```

New
hack
Old
Down time

Why

For developers
For business

How

Hacks to overlap
To test
Wait during switch

Future

Quality of architecture
Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Changing
blind?

Getting Started
- Setup
- Creating Pages
- Routing
- Controllers
- Templates
- Configuratio

Guides

Components

Training

Certification

Master Symfony fundamentals
Be trained by SensioLabs experts (2 to 6 day sessions -- French or English).
training.sensiolabs.com

Discover SensioLabs' Professional Business Solutions
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You are browsing the **Symfony 4 documentation**, which changes significantly from Symfony 3.x. If your app doesn't use Symfony 4 yet, browse the Symfony 3.4 documentation.

Debug Configuration Reference (DebugBundle)

```
# displays the default config values defined by Symfony
$ php bin/console config:dump-reference debug
```

When using XML, you must use the `http://symfony.com/schema/dic/debug` namespace and the related XSD schema is available at: `https://symfony.com/schema/dic/debug/debug-1.0.xsd`

Configuration

Computed state

THE **CODE** WHISPERER

Your code is trying to tell you something.

Ask Me a Question
Past Articles
Integrated Tests are a Scam
On-Site Training
Online Training
JUnit on One Page

Twitter
GitHub
Stack Overflow
RSS

Replay, compare

Golden Master

I use *Golden Master* to help me detect changes in the behavior of a system when I can't justify writing the typical kind of assertion that you've grown used to seeing in tests. I use this trick, for example, when I find it difficult to articulate the expected result of a test. Imagine a function whose output consists of an image. It happens quite often that a binary comparison between actual and expected result yields a *hyperactive* [illegible] which frequently fails even when a [illegible] man would judge that the test [illegible] passed [illegible] people [illegible] tricks to [illegible] it [illegible] articulate "looks [illegible] ign" for [illegible] ages, [illegible] I d[illegible] know [illegible] that, and [illegible] leave me [illegible] ose e[illegible] a hy[illegible] active bit-by[illegible] comp[illegible] on [illegible] ng [illegible], ma[illegible] I insp[illegible] [illegible] her than [illegible] rt to [illegible] Ch[illegible] [illegible] anti[illegible] tern [illegible] I take [illegible] apsho[illegible] of the last-known acceptable outp[illegible]—I call that the *golden master*—an[illegible] it for future use. When I run the test again, I compare the output to the golden master, and if they match, then the test passes; if they don't match, then the test fails. This doesn't make the code wrong, but it means that I need to check the result and decide whether [illegible] co[illegible] ing [illegible] r ne[illegible] [illegible].

You [illegible] use Go[illegible] M[illegible] er wh[illegible] ever [illegible] already [illegible] me ou[illegible] t to [illegible] k, ev[illegible] you find the form of that output particularly challenging. With this technique, you simply diff the output and inspect the situation only when you find differences between the current test run and the golden master. If your system already sends text to an output stream that you can capture, then you have the tools to use this technique.

If [illegible] system [illegible] ady [illegible] ends [illegible] to an [illegible] that you can capture, then you have the tools to use this technique.

Most
important

New
Compare
Old
Scope explode

Why	For developers For business
How	To change Keep something stable Wait during switch
Future	Quality of architecture Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

Distributed
applications

Forward compatibility

Amazon SNS

Dashboard

Topics

Subscriptions

Mobile

Push notifications

Overview of Amazon SNS

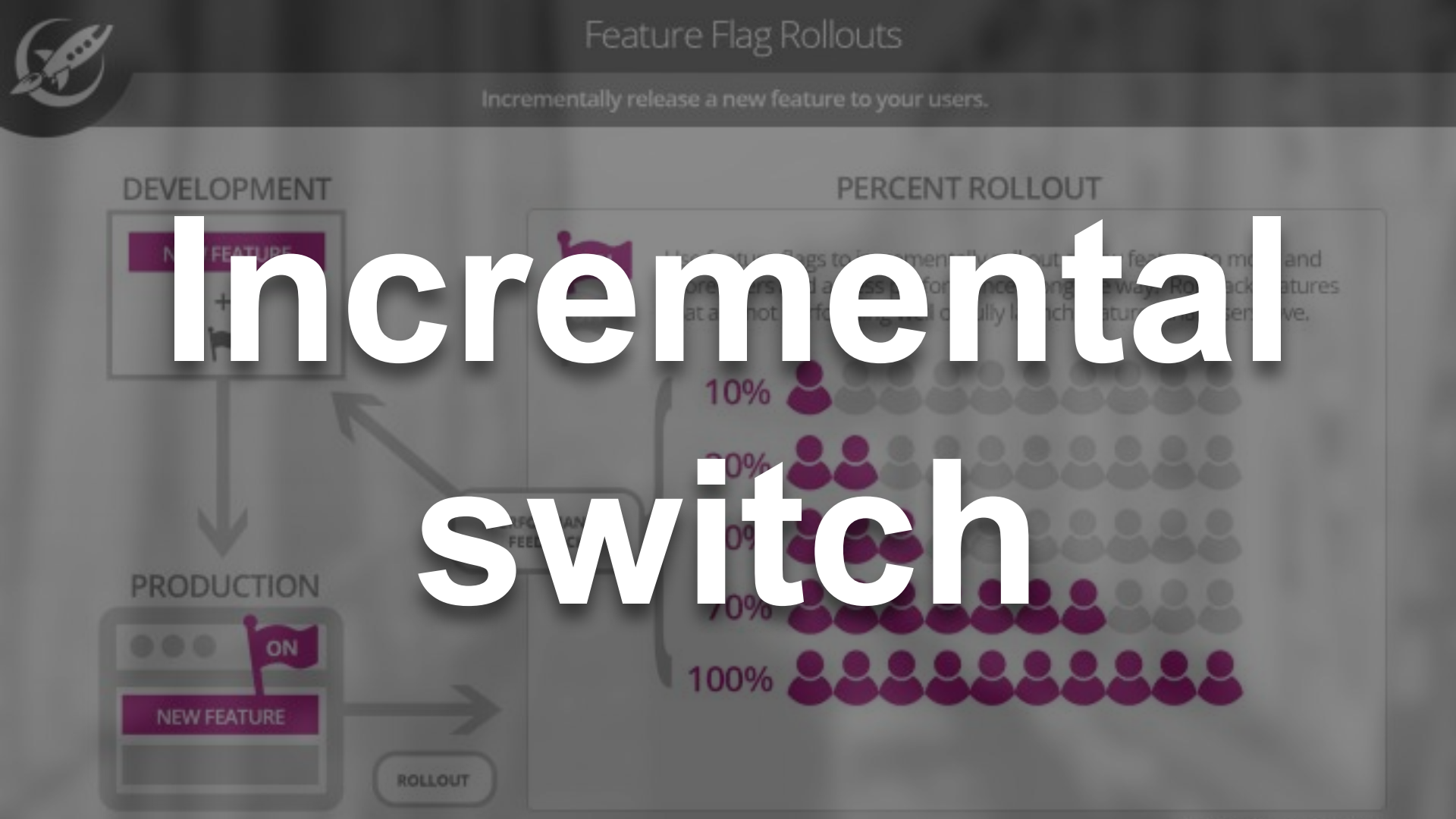
System-to-system messaging

Amazon SNS is a managed messaging service that lets you to decouple publishers from subscribers. This system-to-system messaging microservices, distributed architectures, and serverless applications. Learn more

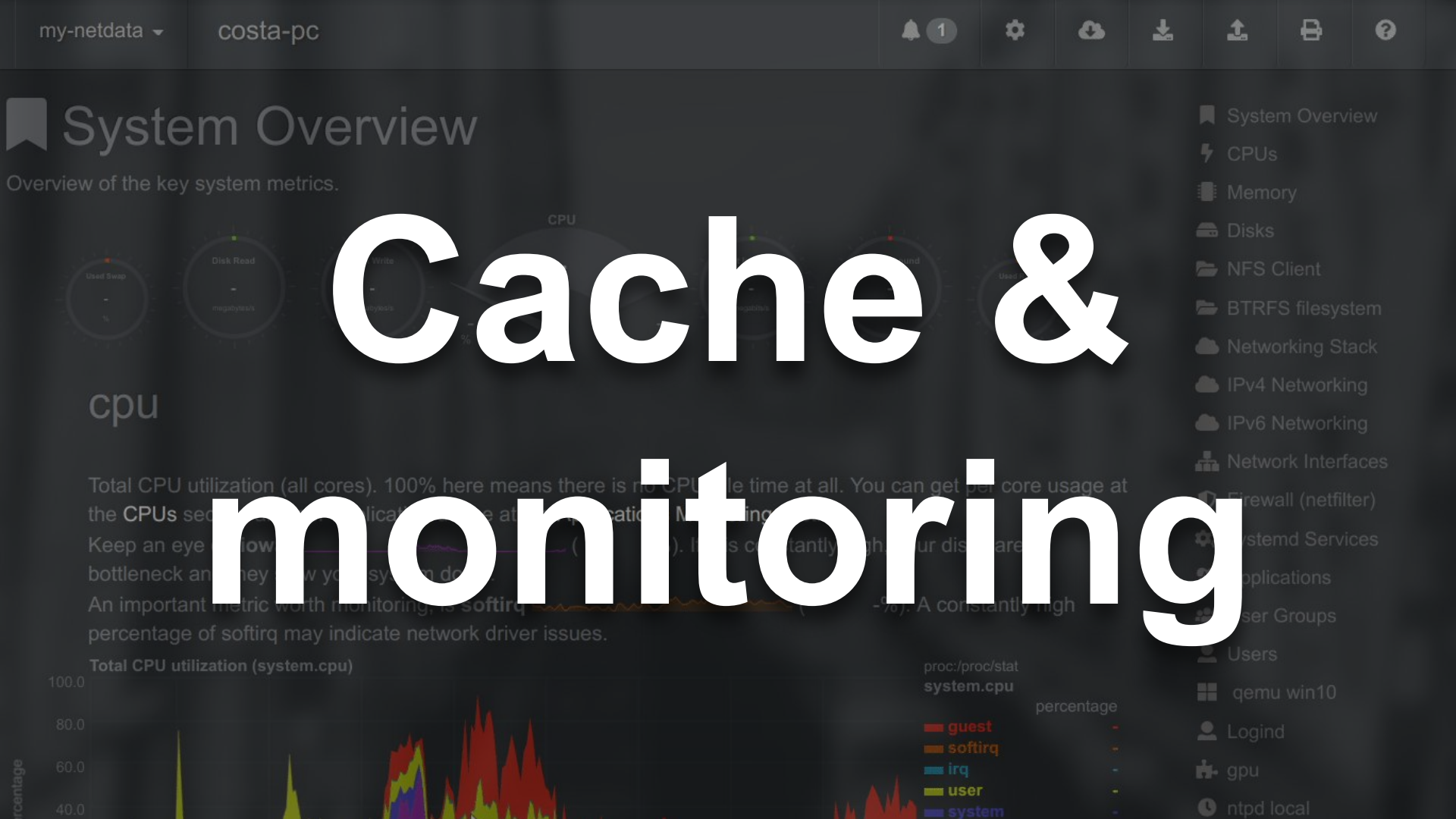
User notifications

Amazon SNS lets you send push notifications, mobile app text messages to mobile phone numbers, and plain-text email addresses. You can fan out messages with a topic, or publish to mobile endpoints directly. Learn more

Data follow up



Incremental switch



Cache & monitoring

Broken data
New
New
Pre
Old

Why

For developers
For business

How

To change
To test
Distributed systems

Future

Quality of architecture
Visitor engagement

Why

For developers
For business

How

Availability
Complexity
Data integrity

Future

Quality of architecture
Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Quality of architecture Visitor engagement

304 Not Modified

Languages | Edit

Jump to: Status | Specifications | Browser compatibility | Compatibility Notes | See also

Web technology for developers > HTTP >
HTTP response status codes >
304 Not Modified

Related Topics

HTTP

Guides:

- Resources and URIs
- HTTP guide
- HTTP security

HTTP access control (CORS)
HTTP authentication
HTTP caching
HTTP compression
HTTP conditional requests
HTTP content negotiation

The HTTP **`304 Not Modified`** client redirection response code indicates that there is no need to retransmit the requested resources. It is an implicit redirection to a cached resource. This happens when the request method is safe, like a `GET` or a `HEAD` request, or when the request is conditional and uses a `If-None-Match` or a `If-Modified-Since` header.

The ... `200` ... response would have included the ... `Cache-Control`, `Content-Location`, `Date`, `ETag`, `Expires` and `Vary`

> Many developer tools' network panels of browsers create extraneous requests leading to `304` responses, so that access to the local cache is visible to developers.

Status

```
304 Not Modified
```

Specifications

Distributed thinking

Updating Stacks Using Change Sets

When you need to update a stack, understanding how your changes will affect running resources before you implement them can help you update stacks with confidence. Change sets allow you to preview how proposed changes to a stack might impact your running resources, for example, whether your changes will delete or replace any critical resources, AWS CloudFormation makes the changes to your stack only when you decide to execute the change set, allowing you to decide whether to proceed with your proposed changes or explore other changes by creating another change set. You can create and manage change sets using the AWS CloudFormation console, AWS CLI, or AWS CloudFormation API.

Topics

- Creating a Change Set
- Viewing a Change Set
- Executing a Change Set
- Deleting a Change Set
- Example Change Sets

Important

Change sets don't indicate whether AWS CloudFormation will successfully update a stack. For example, a change set doesn't check whether you will pass an account limit, if you're updating a resource that doesn't support updates, or if you have insufficient permissions to modify a resource, all of which can cause a stack update to fail. If an update fails, AWS CloudFormation attempts to roll back your resources to their original state.

Change Set Overview

The following diagram summarizes how you use change sets to update a stack:

1. Create a change set by submitting changes for the stack that you want to update. You can submit a modified stack template or modified input parameter values. AWS

AWS CloudFormation
User Guide (API Version 2010-05-15)

Documentation - This Guide
Search

- What is AWS CloudFormation?
- Setting Up
- Getting Started
- Best Practices
- Continuous Delivery
- Working with Stacks
  - Using the Console
  - Using the AWS CLI
  - Stack Updates
    - Update Behaviors of Stack Resources
    - Modifying a Stack Template
    - Updating Stacks Using Change Sets
      - Creating a Change Set
      - Viewing a Change Set
      - Executing a Change Set
      - Deleting a Change Set
      - Example Change Sets
    - Updating Stacks Directly
    - Monitoring Progress
    - Canceling a Stack Update
    - Prevent Updates to Stack Resources
    - Continue Rolling Back an Update

Automating migration

Why	For developers For business
How	To change To test Wait during switch
Future	Few people to operate Visitor engagement

Why	For developers For business
How	To change To test Wait during switch
Future	Few people to operate Visitor engagement

Lessons from 6 software rewrite stories
A new take on the age-old question: Should you rewrite your application from scratch, or is that "the single worst strategic mistake that any software company can make"? Turns out there are more than
Let users
migrate

Service
Access level
Resource
Request condition
Allow (10 of 97 services)
Auto Scaling
All resources
None
DynamoDB
EC2
EFS
Elasticsearch Service
Full: List Limited: Read, Write
All resources
None
EMR
Full access
All resources
None
IAM
All resources
aws:SourceIp IP Address 192.0.0.8
Lambda
None
RDS
None
S3
Limited: List, Permissions management
arn:aws:s3:::DataTeam
s3:prefix string like Sales/*
Service
Access level
Resource
Request condition
Allow (10 of 94 services)
CloudFormation
CloudWatch Logs
EC2
Full: List Limited: Read
All resources
None
Serverless:
Grannual
security

Why	For developers For business
How	To change To test Wait during switch
Future	Few people to operate Infra-Personalization

Why

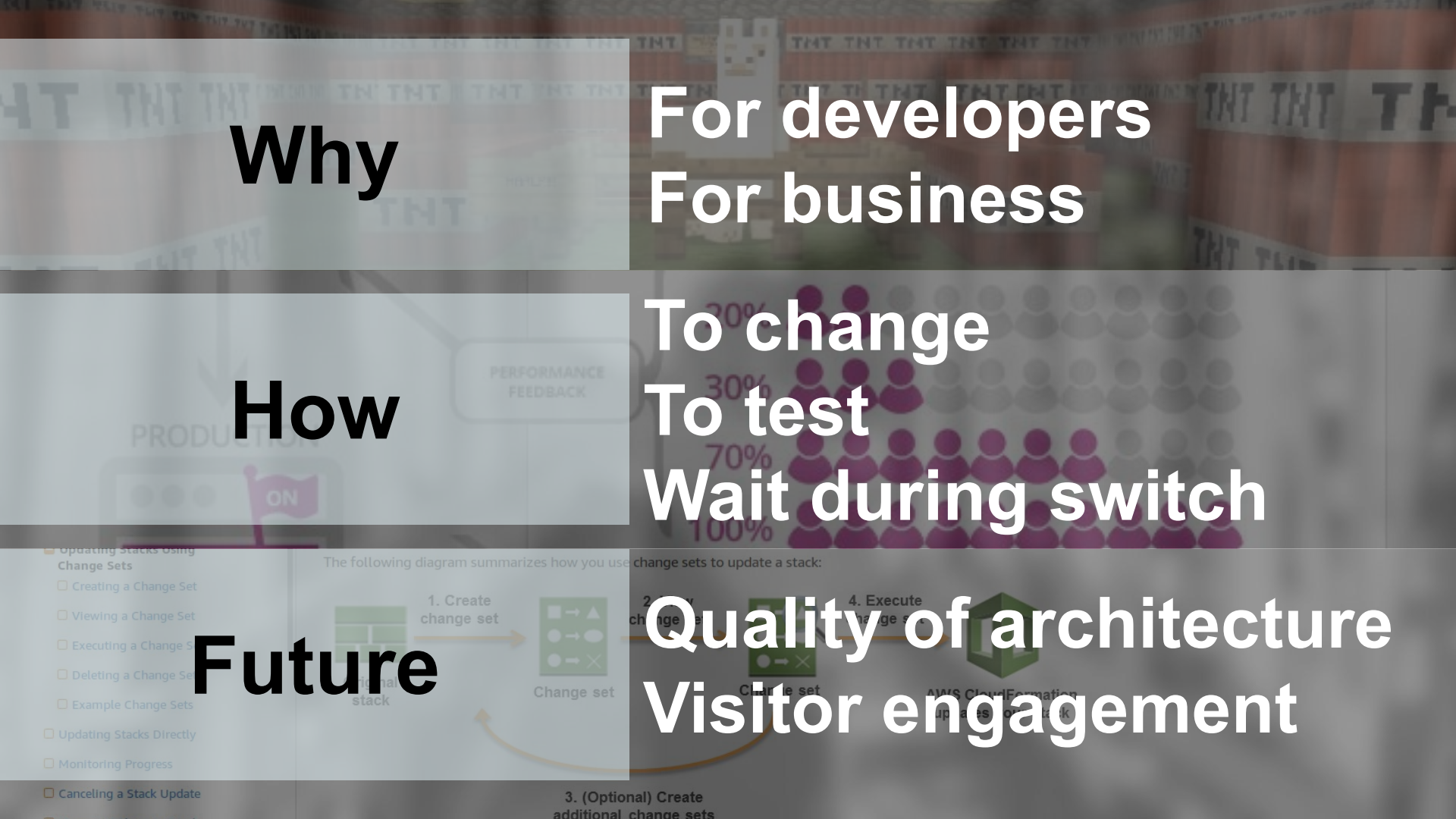
For developers
For business

How

To change
To test
Wait during switch

Future

Quality of architecture
Visitor engagement



Ease of migration
is the best metric
for your
architecture

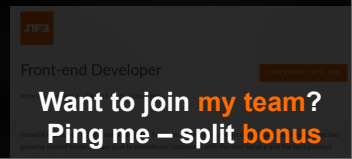
Migration: Hacks or architecture

Thank you

Questions?

Aurelijus Banelis

VilniusPHP
2019-07-04



Further reading/references

- https://medium.com/@herbcaudill/lessons-from-6-software-rewrite-stories-635e4c8f7c22
- https://github.com/tomnomnom/gron
- https://docs.aws.amazon.com/acm/latest/userguide/acm-certificate.html#wildcard
- https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Route_Tables.html#route-tables-nat
- https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/304