



AWS CodeDeploy

自动化你的软件部署

蒙维

亚马逊AWS解决方案架构师

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议程

- 我们为什么要开发CodeDeploy?
- 什么是CodeDeploy?
- 如何开始使用CodeDeploy?
- 功能演示
- 问题解答

我们为什么要开发 **CodeDeploy**?

CodeDeploy的来源: Amazon Apollo Project

- 亚马逊内部使用了敏捷开发模式
- 软件架构采用了面向服务的架构（SOA）
- 开发了一系列工具来协助软件开发和部署

部分AWS客户面临的挑战

- 自动化部署
- 去除手工操作
- 最小化停机时间
- 当基础设施扩展后，同时更新软件部署

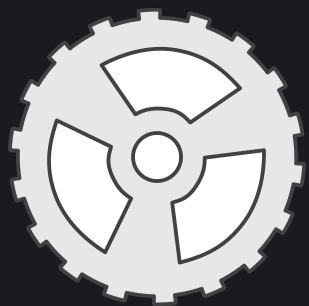


什么是 CodeDeploy?

定义

- AWS CodeDeploy 是一项可以将代码自动部署到任意实例中的服务。

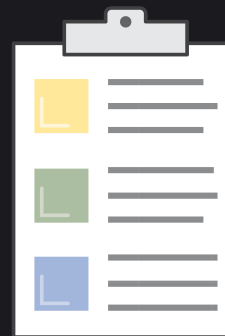
优势



自动部署



最小化停机时间

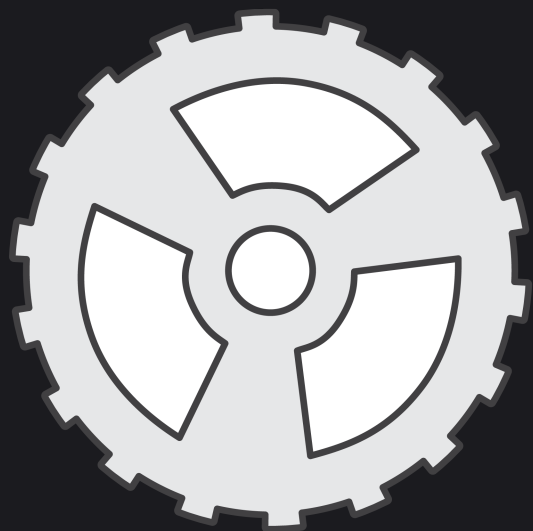


集中控制



便于使用

自动部署



- 在开发、测试和生产环境间一致性部署应用程序版本
- 与Auto Scaling集成
- 可随着你的基础设施一起扩展；可部署一台或数千台EC2

最小化停机时间



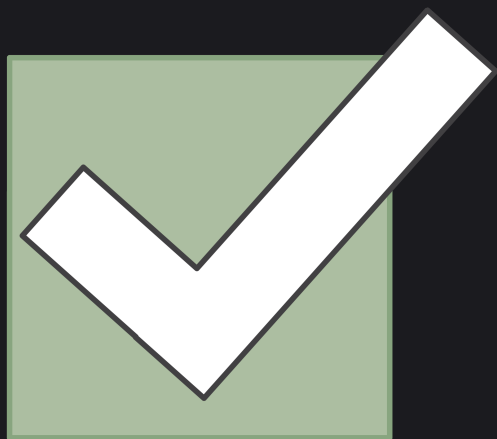
- 对EC2实例执行轮流更新
- 跟踪被部署应用的健康状况
- 部署过程能够被停止或回退

集中控制



- 可从AWS管理控制台、CLI、SDK和API启动、控制和监控部署
- 以部署组的方式组织管理你的测试或生产环境
- 跟踪查看部署历史

便于使用



- 可部署任何类型应用并且重用已有的安装代码
- 与你现有的软件交付工具链集成使用
- 可使用AWS合作伙伴提供的预集成方案

常用案例

- 软件部署
- 持续交付
- 混合架构

如何开始使用CodeDeploy?



如何工作？

如何工作？

AWS CodeDeploy



Amazon S3



Amazon EC2



如何工作?

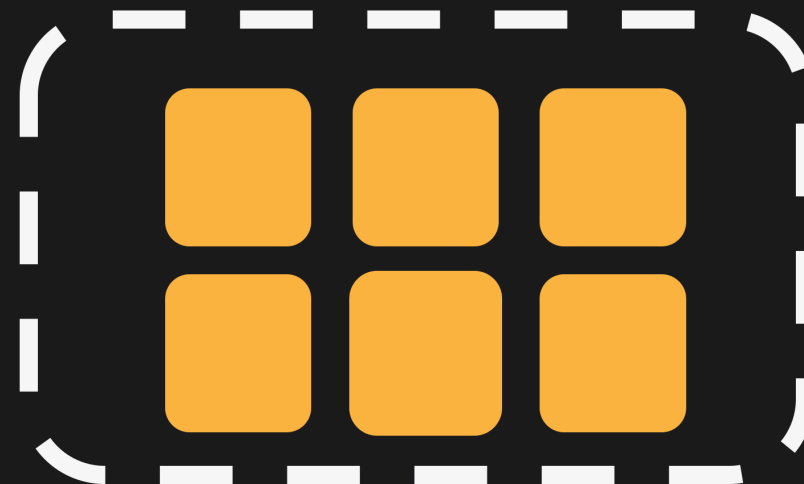
AWS CodeDeploy



Amazon S3



Amazon EC2



如何工作?

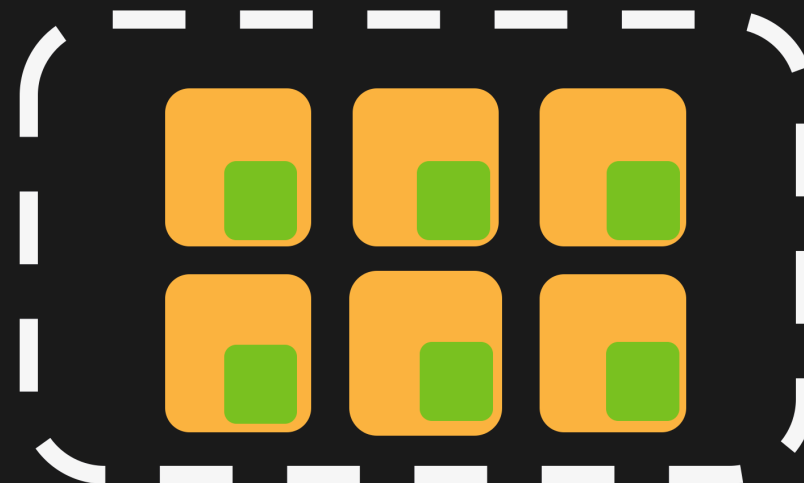
AWS CodeDeploy



Amazon S3



Amazon EC2



如何工作?

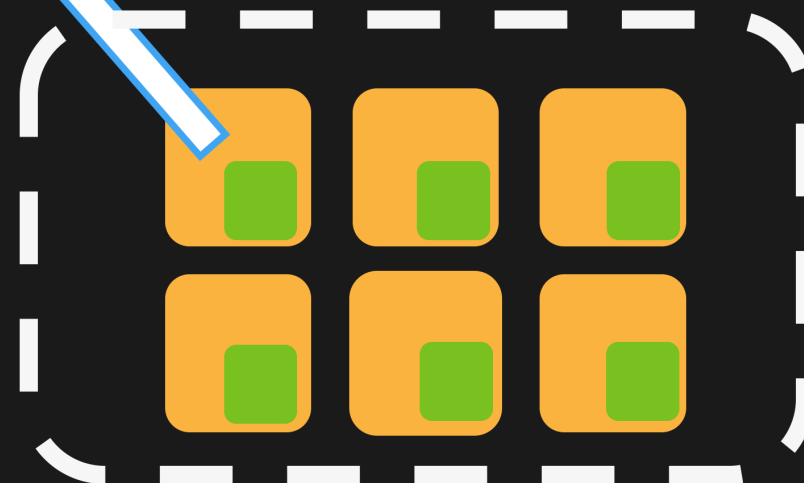
AWS CodeDeploy



Amazon S3



Amazon EC2



如何工作？

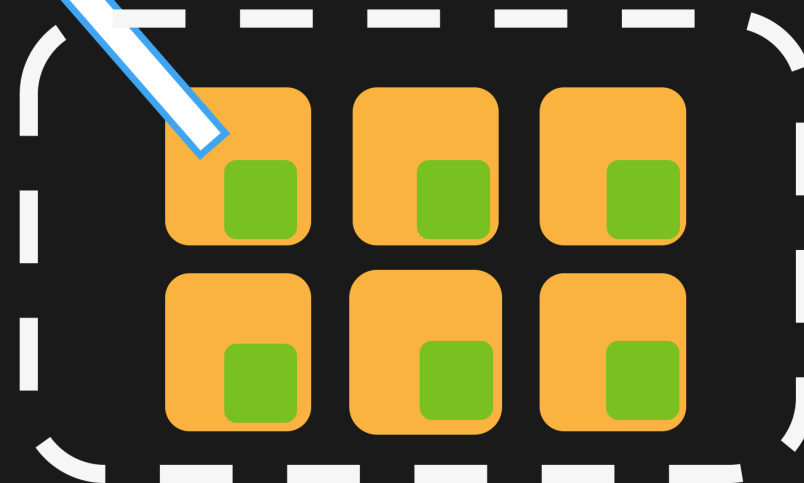
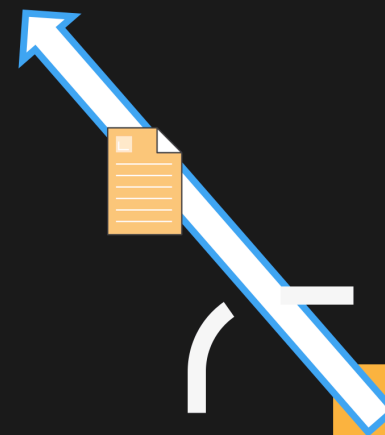
AWS CodeDeploy



Amazon S3



Amazon EC2

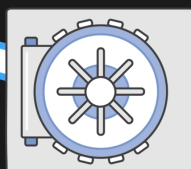
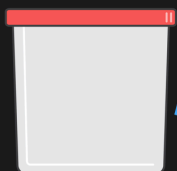


如何工作?

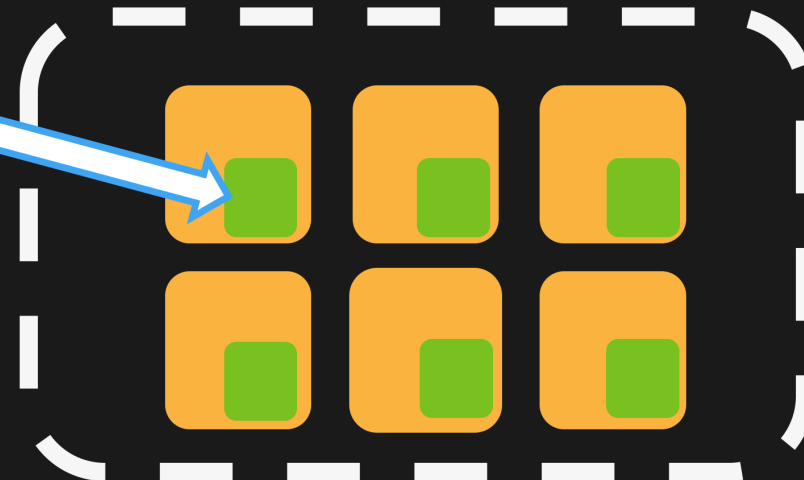
AWS CodeDeploy



Amazon S3



Amazon EC2

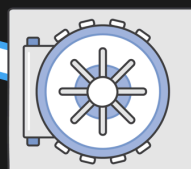


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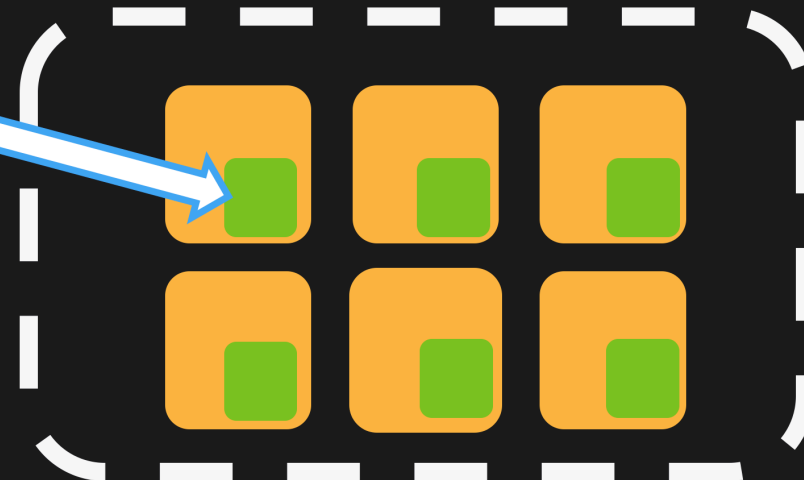
AWS CodeDeploy



Github



Amazon EC2



如何工作?

AWS CodeDeploy

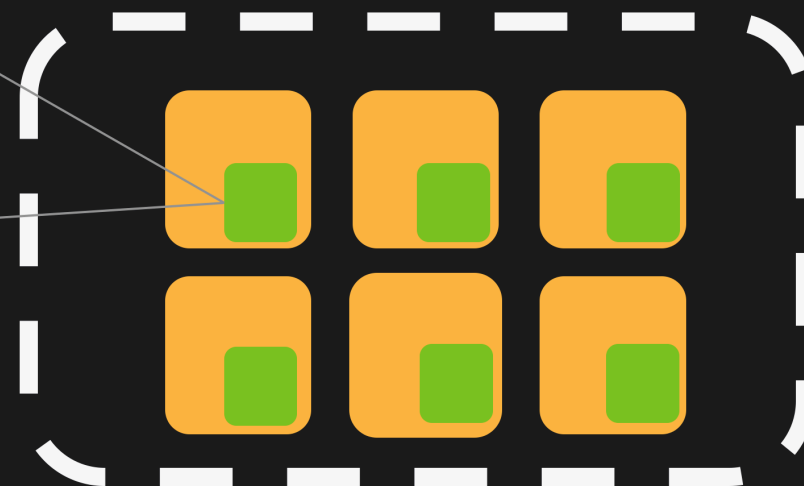


Github



1. foo.sh
2. bar.exe
3. baz
- ... etc.

Amazon EC2



如何工作？

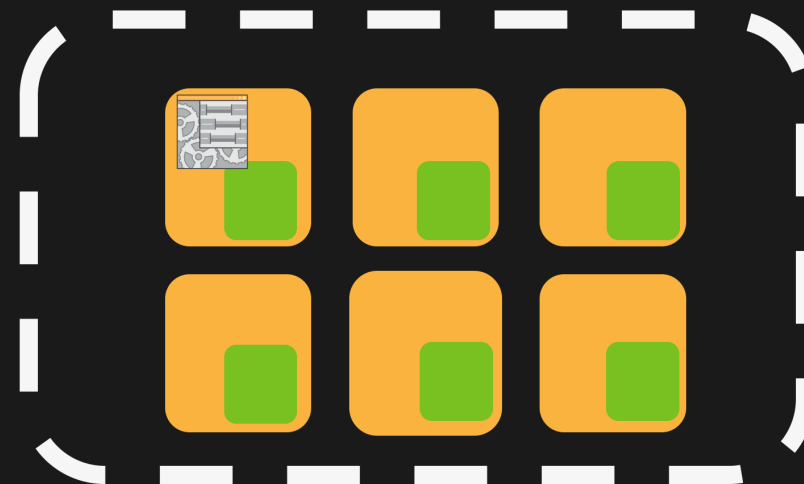
AWS CodeDeploy



Github



Amazon EC2



如何工作?

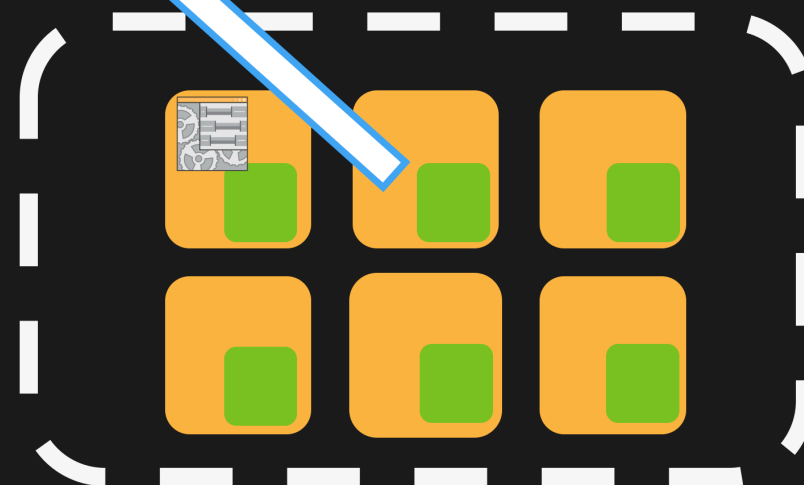
Github



AWS CodeDeploy



Amazon EC2



如何工作?

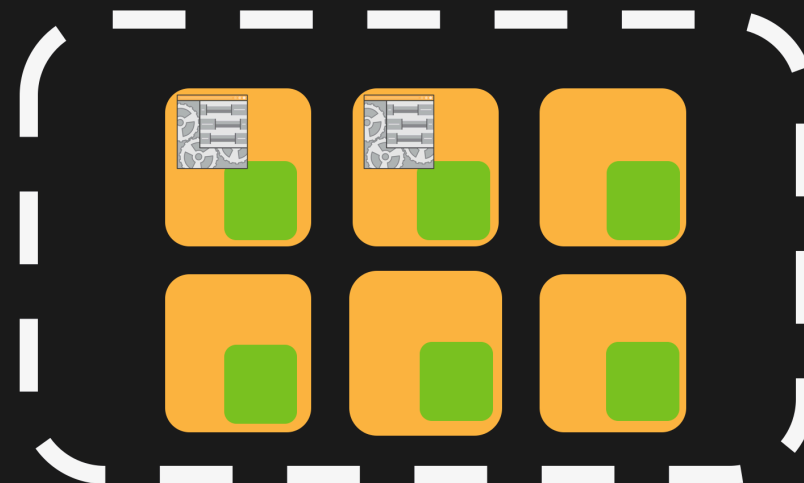
AWS CodeDeploy



Github



Amazon EC2



如何工作？

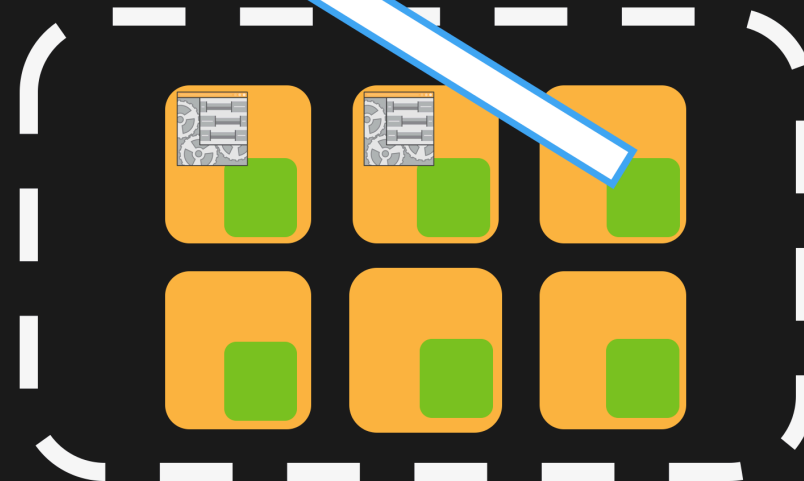
Github



AWS CodeDeploy



Amazon EC2



如何工作?

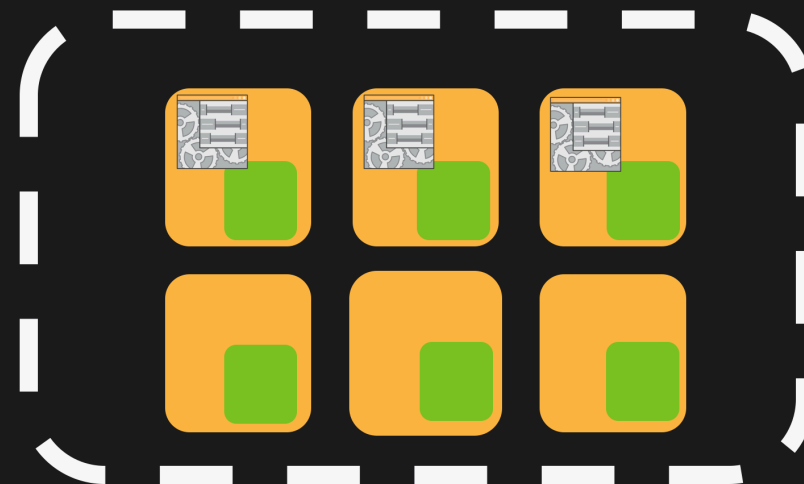
AWS CodeDeploy



Github



Amazon EC2



如何工作?

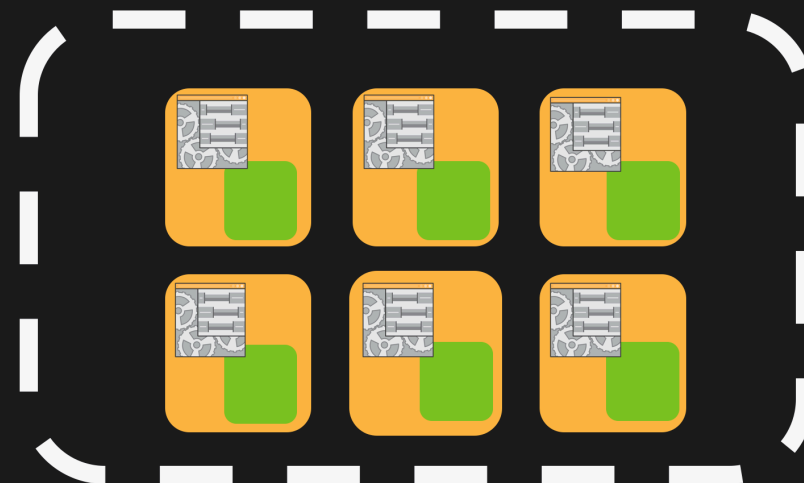
AWS CodeDeploy



Github



Amazon EC2



术语



术语

Application

部署什么?

Revision #1

Revision #2

Revision #3

如何部署?

Revision #1

EC2实例

EC2实例

EC2实例

术语

Application

部署什么?

Revision #1

Revision #2

Revision #3

如何部署?

Revision #1

Deployment Group

EC2实例

Auto-Scaling Group

EC2实例

EC2实例

术语

Application

部署什么?

Revision #1

Revision #2

Revision #3

如何部署?

Revision #1

部署到哪里?

Deployment Group

EC2实例

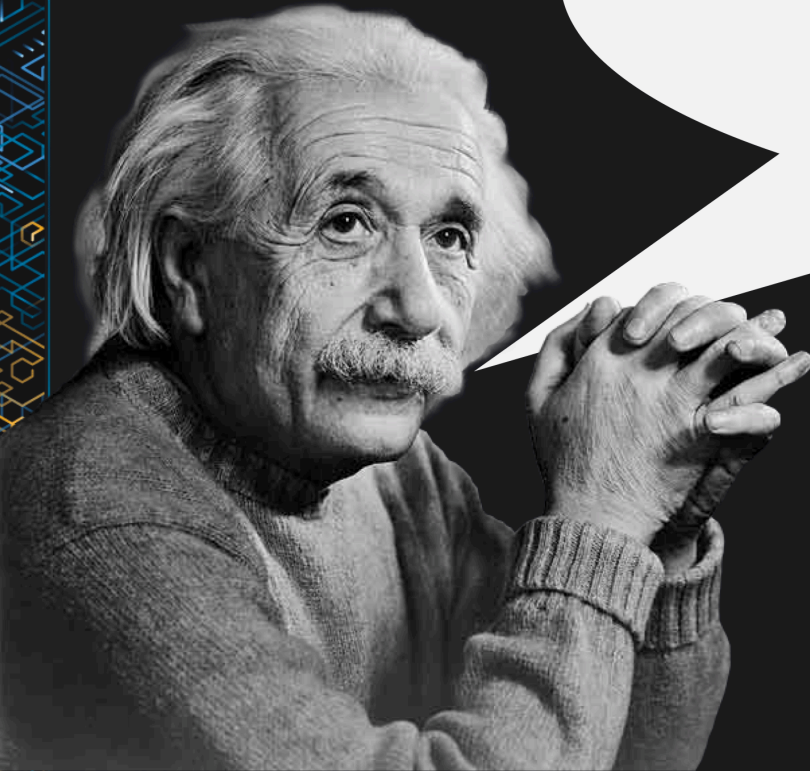
Auto-Scaling Group

EC2实例

EC2实例



Application



“你希望在一次部署中发布到你的服务器中的任何内容集合”



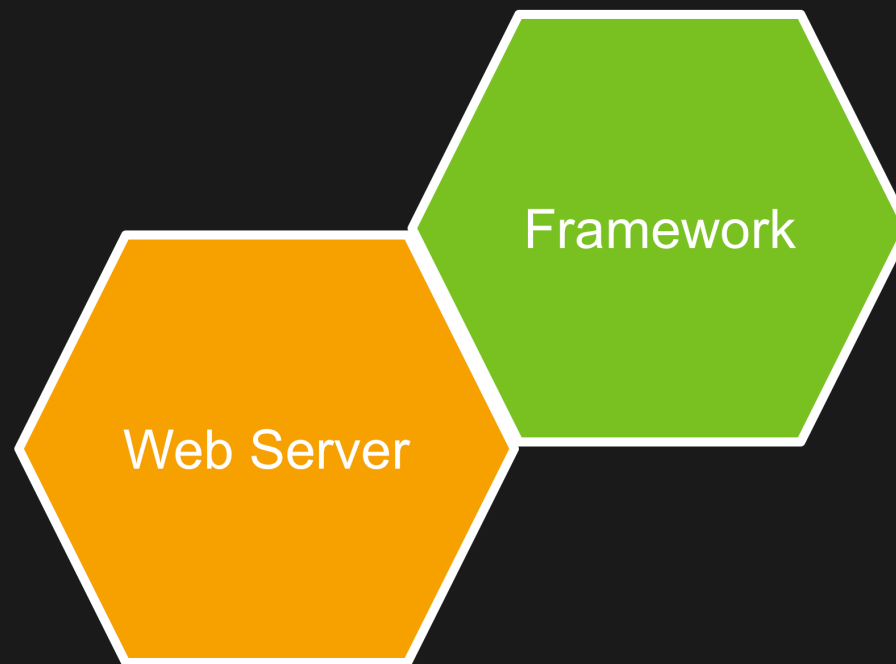
Application

Application

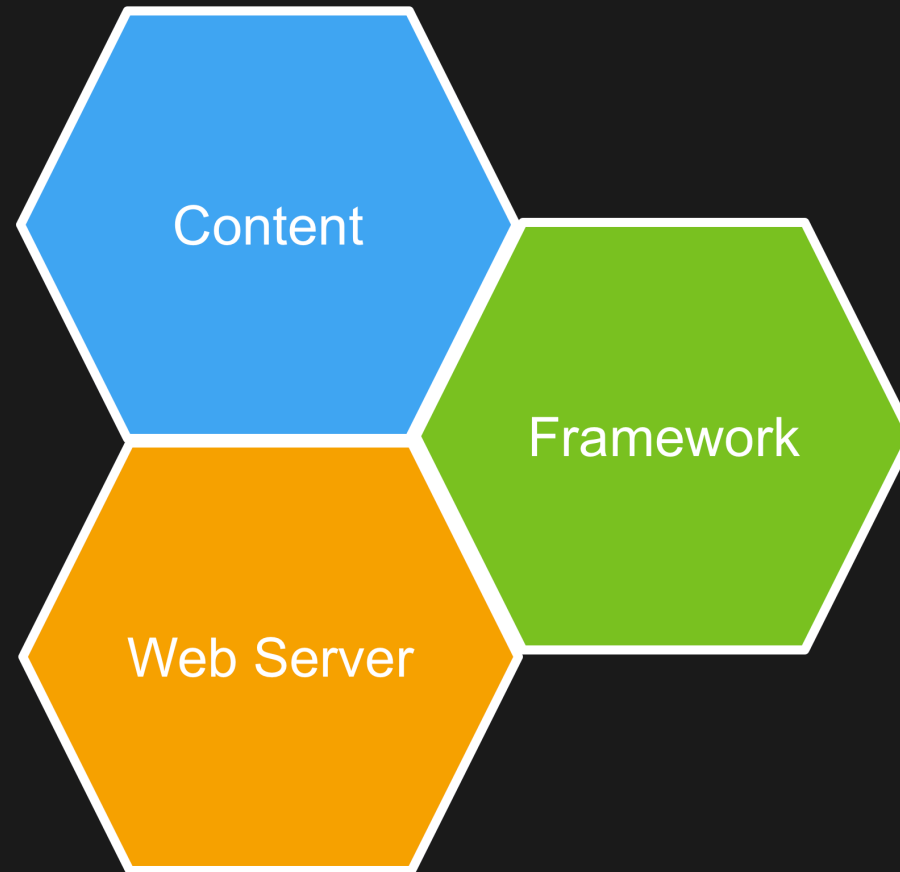
A large orange hexagon with a white border, centered on a dark gray background. The text "Web Server" is written in white inside the hexagon.

Web Server

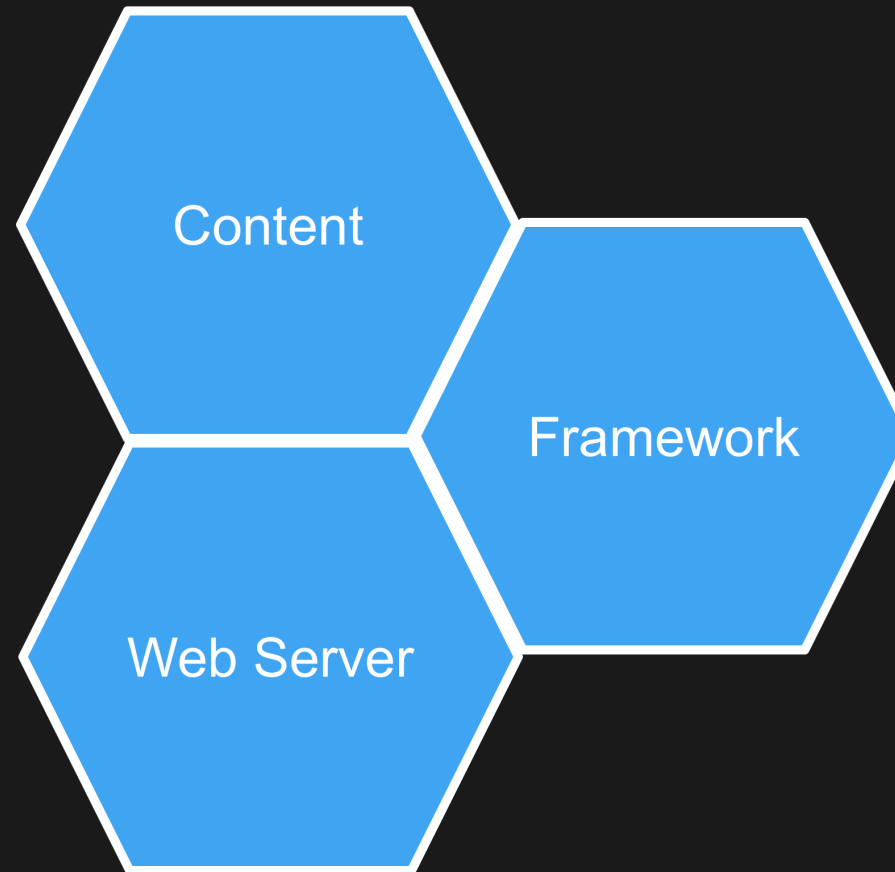
Application



Application



Application



Deployment Group

“你希望同时部署一致版本的一组 EC2实例”

v2.0

v1.2

v2.0

v1.2

v1.1

v2.0

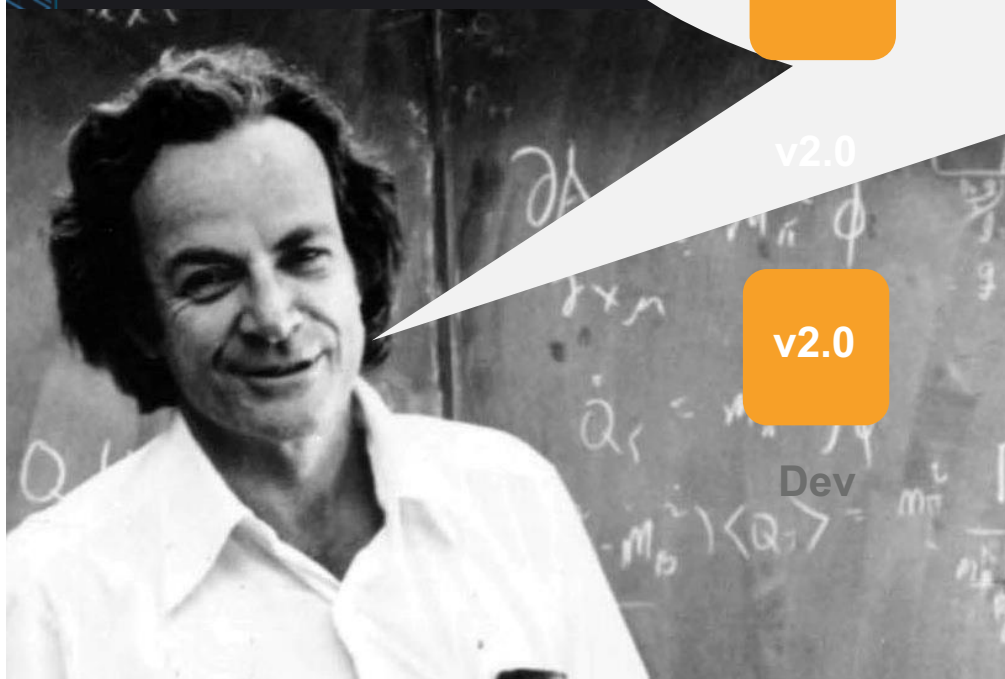
v1.2

v1.1

Dev

Test

Prod



AppSpec file

os: linux

files:

- source: Config/config.txt
destination: webapps/Config
- source: Service
destination: /webapps/DogSuit

hooks:

ApplicationStop:

- location: Scripts/Deactivate_Service

BeforeInstall:

- location: Scripts/Flush_Logs.sh

AfterInstall:

- location: Scripts/Decrypt_Secrets.sh

ApplicationStart:

- location: Scripts/Start_Pooch_Style_Service.sh
timeout: 3600

ValidateService:

- location: Scripts/Check_Dogs_Barking.sh
runas: codedeployuser

AppSpec file

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ApplicationStop

Start



```
os: linux
```

```
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destination: /webapps/DogSuit

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hooks:
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ApplicationStop:
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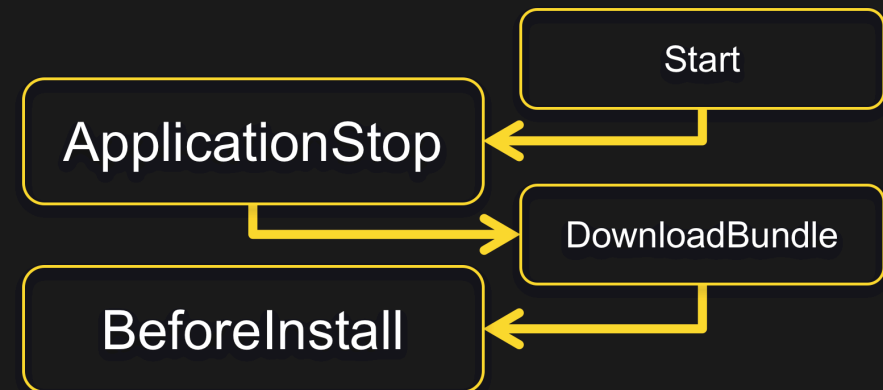
```
ApplicationStart:
```

- location: Scripts/Start_Pooch_Service.sh
timeout: 3600

```
ValidateService:
```

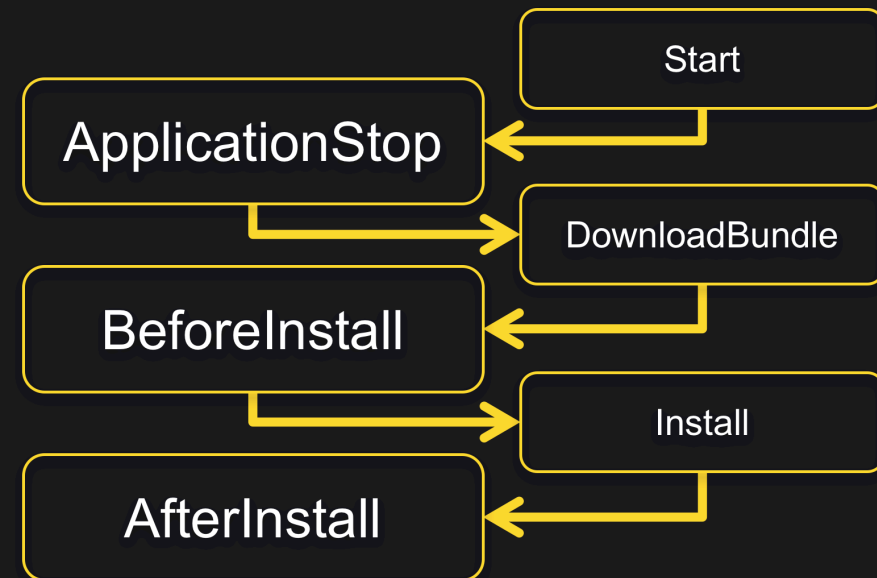
- location: Scripts/Check_Dogs_Barking.sh
runas: codedeployuser

AppSpec file



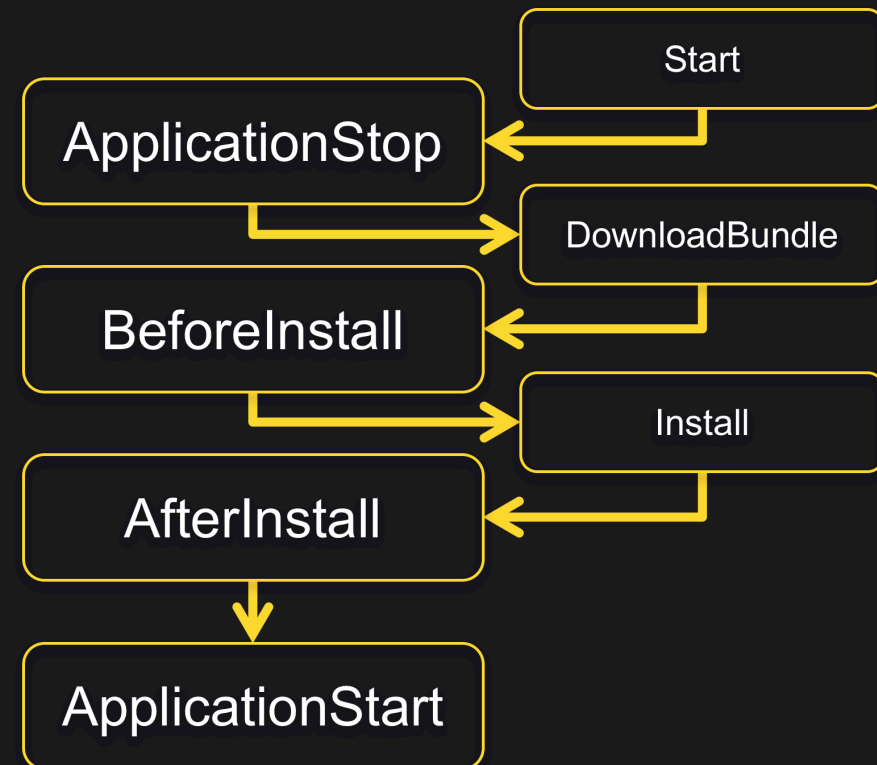
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AppSpec file



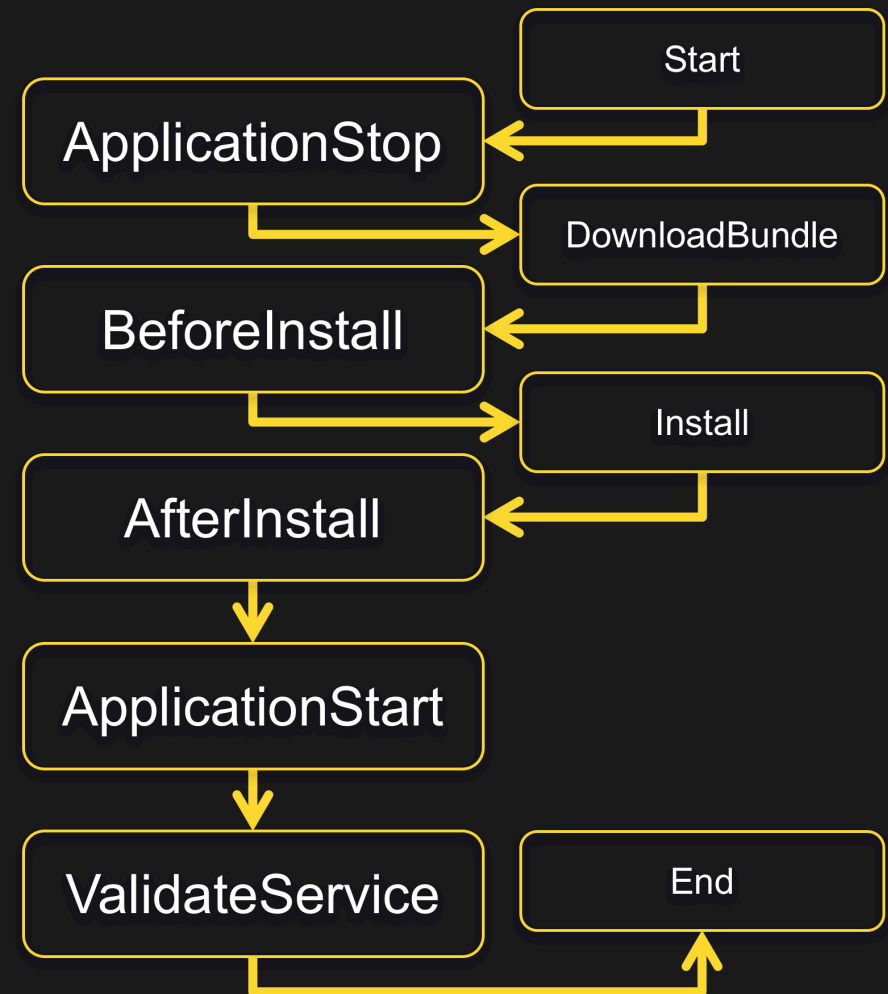
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AppSpec file



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```

AppSpec file



Deployment Config

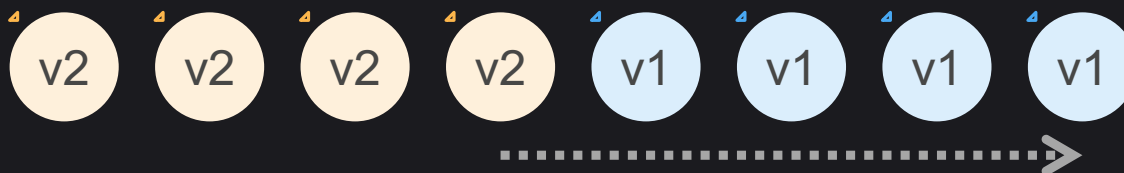
一次一个

Min. healthy hosts = 99%



一次一半

Min. healthy hosts = 50%



全部更新

Min. healthy hosts = 0



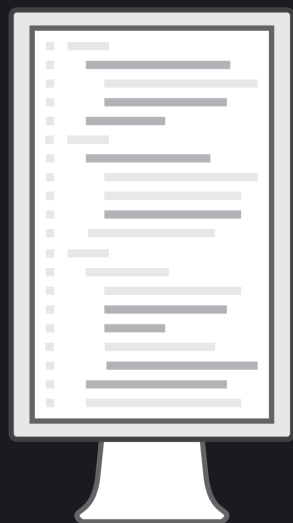
[自定义]

Min. healthy hosts = 75%



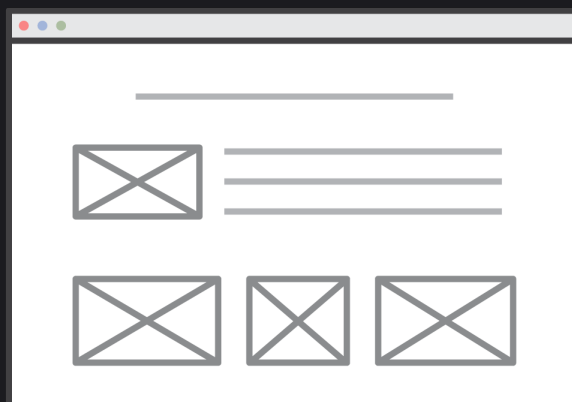
软件开发过程各个阶段有不同的部署需求

开发



- 最小化资源分配
- 快速启动
- 很少或没有自动化测试

测试



- 资源分配需要支持性能测试
- 调试信息显示
- 自动化测试

生产



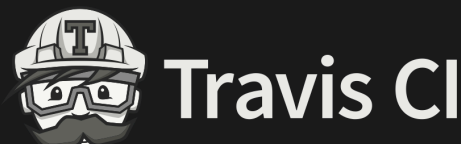
- 根据业务变化自动扩展
- 日志文件
- 健康检查

我们使用CodeDeploy还可以做什么？



自动化部署

我们使用CodeDeploy还可以做什么？

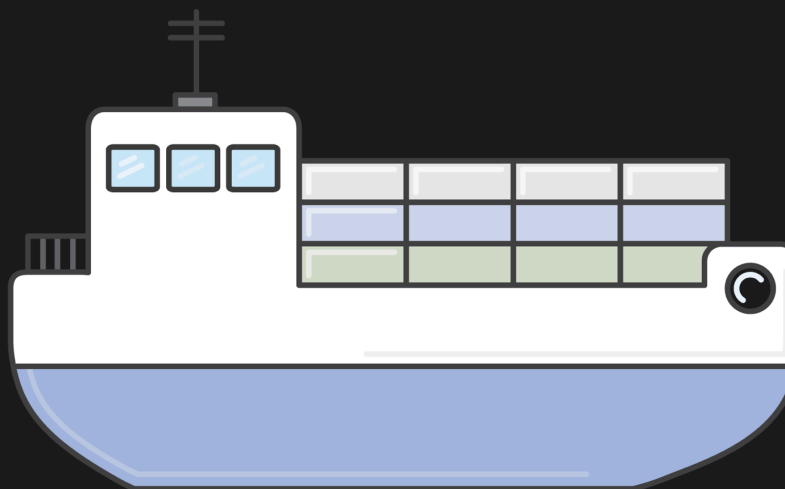


ANSIBLE

使用合作伙伴方案与已有CI/CD过程集成



我们使用CodeDeploy还可以做什么？



多平台部署

我们使用CodeDeploy还可以做什么？



与CloudFormation集成



功能演示



问题解答



谢谢大家！

参考链接

- <https://aws.amazon.com/cn/codedeploy/>
- <https://aws.amazon.com/cn/codedeploy/details/>
- <https://aws.amazon.com/cn/codedeploy/getting-started/>
- <https://aws.amazon.com/cn/codedeploy/faqs/>
- http://docs.aws.amazon.com/zh_cn/codedeploy/latest/userguide/welcome.html