

Serverless Code Deployments in AWS

Marko Tomic
marko@assignar.com
CTO @ Assignar
Sydney, Australia

Our Deployment Pipelines

- Automated Manifestation of your process for getting software from version control into the hands of customers
- They key to having an agile development team
- 16 Deployment Pipelines
- 2 AWS Regions (ap-southeast-2 and us-west-2)
- 3 Environments (Dev, Staging, Production)
- Total of 96 Deployment Pipelines

Name	Created	
admin-dashboard	Jul 12, 2017	V
apps-api	Jul 12, 2017	V
core-command-api	Jul 12, 2017	V
core-query-api	Jul 12, 2017	V
dashboard	Jul 13, 2017	V
dashboard-api	Jul 12, 2017	V
dashboard-beta	Aug 16, 2017	V
db-manager	Jul 12, 2017	V
public-signup	Jul 12, 2017	V
reporting-api	Jul 12, 2017	V
sls-admin-api	Jul 12, 2017	V
sls-auth	Jul 12, 2017	V
sls-core-api	Jul 13, 2017	V
sls-ops	Sep 5, 2017	V
sls-services	Jul 12, 2017	V
sls-signup-api	Jul 12, 2017	V

The Challenges

- We used Codeship
- 2 concurrent builds \$100 per month
- Needed 4 concurrent builds - \$300 per month
- Configuration management wasn't secure
- Managing configuration across multiple projects

Configure Your Environment

 Working with environment variables

Environment Variables

RDS_PORT

AWS_KEY

AWS_SECRET

AWS - Parameter Store

- Version-controlled parameter store with audit trail
- Secured with AWS KMS
- Accessible via AWS CLI
- Free!

<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	/production/dashboard/DATE_FORMAT_...	String
<input type="checkbox"/>	/production/dashboard/URL	String
<input type="checkbox"/>	/production/db-manager/DBPASS	SecureS
<input checked="" type="checkbox"/>	/production/db-manager/DBUSER	SecureS
<input type="checkbox"/>	/production/fieldworker/CFDISTRIBUTIONID	String

Parameter: /production/db-manager/DBUSER

Description

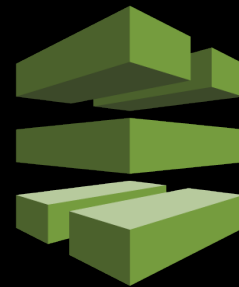
Tags

History

Name	/production/db-manager/DBUSER
Last Modified Date	August 23, 2017 at 6:1 AM UTC+2
Description	-
Value	***** Show

AWS - CodePipeline, CodeBuild, CodeDeploy!

- Secure configuration within AWS
- Unlimited concurrency
- Low cost - \$24 per month!
- Serverless!



CodePipeline



CodeBuild



CodeDeploy



CloudWatch

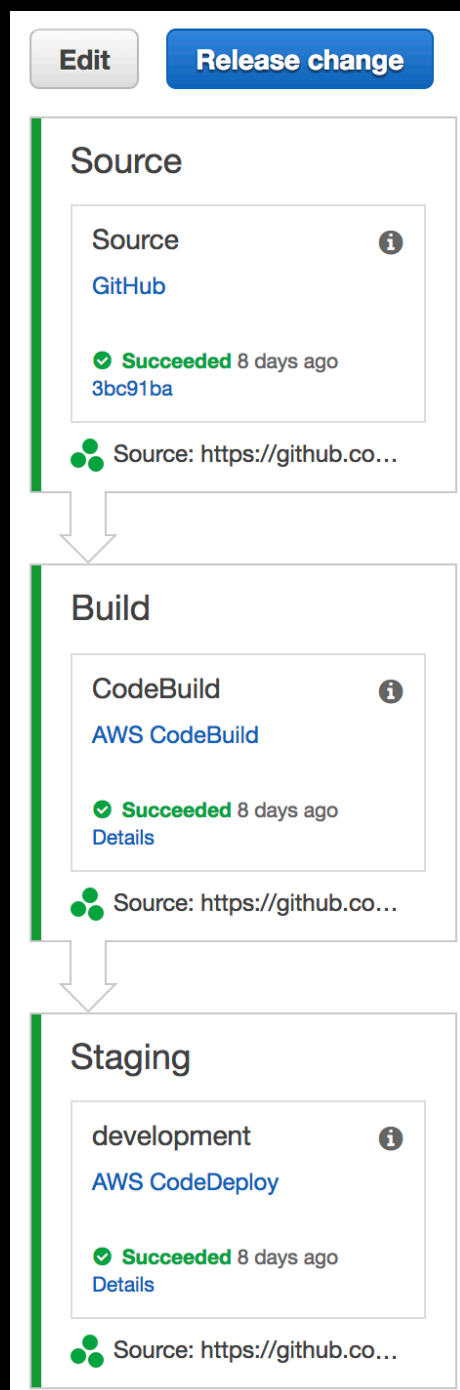


Lambda



Parameter
Store

AWS CodePipeline



This is a screenshot of the 'Add action' dialog box in the AWS CodePipeline console. The dialog has a title bar with a close button. The main content area is titled 'Add action' and contains the following elements:

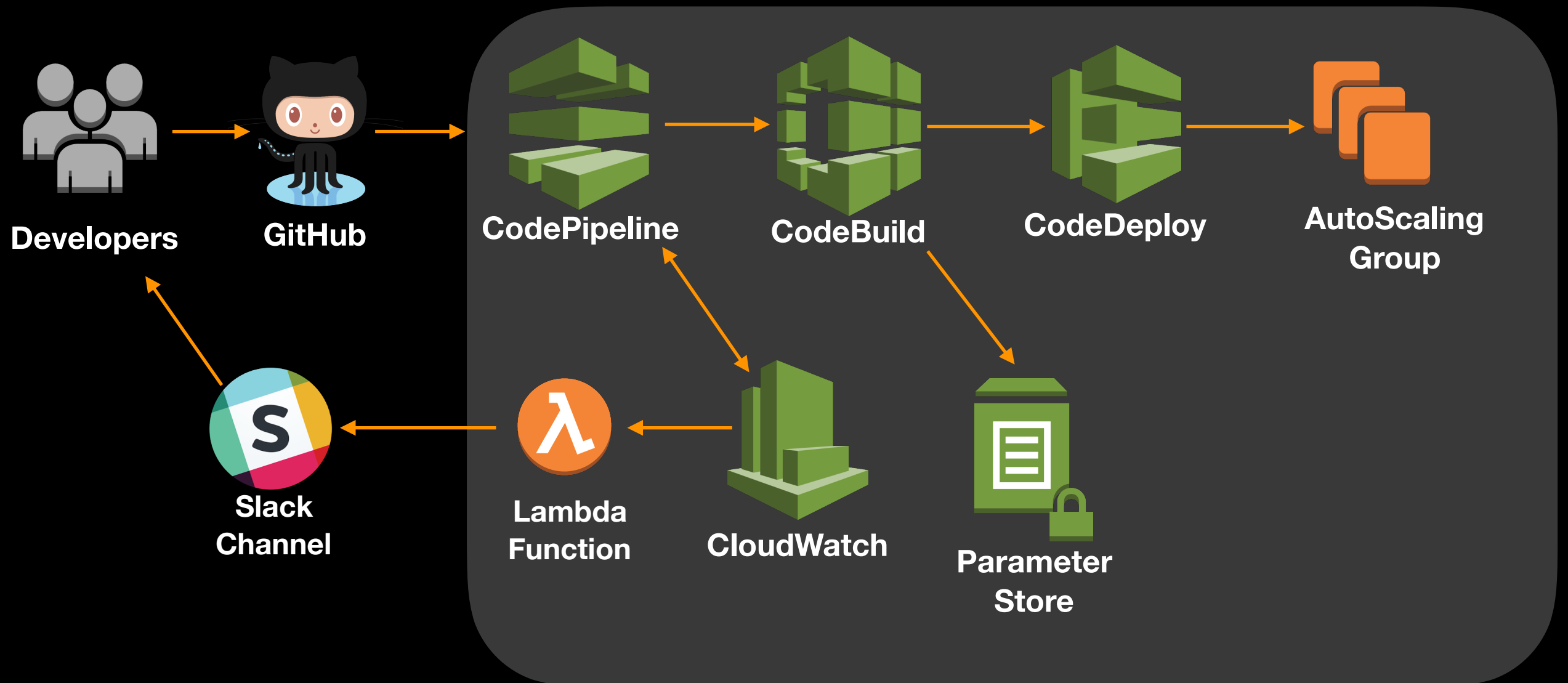
- Choose a parallel action from the action category list.**
- Action category***: A dropdown menu set to 'Test'. Below it, a subtitle reads 'Configure how your application is tested.'
- Test actions**: A section header with a help icon (?).
- Choose from a list of test actions.**
- Action name***: A text input field with the placeholder 'Type an action name (100 character limit)'.
- Test provider***: A dropdown menu with a checkmark icon. A list of providers is shown: Add Jenkins, Apica Loadtest, AWS CodeBuild, BlazeMeter, Ghost Inspector UI Testing (highlighted), HPE StormRunner Load, Nouvola, and Runscope API Monitoring.
- * Required**: A label at the bottom left.
- Cancel** and **Add action** buttons: Located at the bottom right.

This is a close-up of the 'Add action' dialog, focusing on the 'Action category*' dropdown. The dropdown menu is open, showing a list of categories: Approval, Source, Build, Test (selected with a blue highlight and a checkmark), Deploy, and Invoke.

Architecture Diagram

EC2 Auto Scaling Group

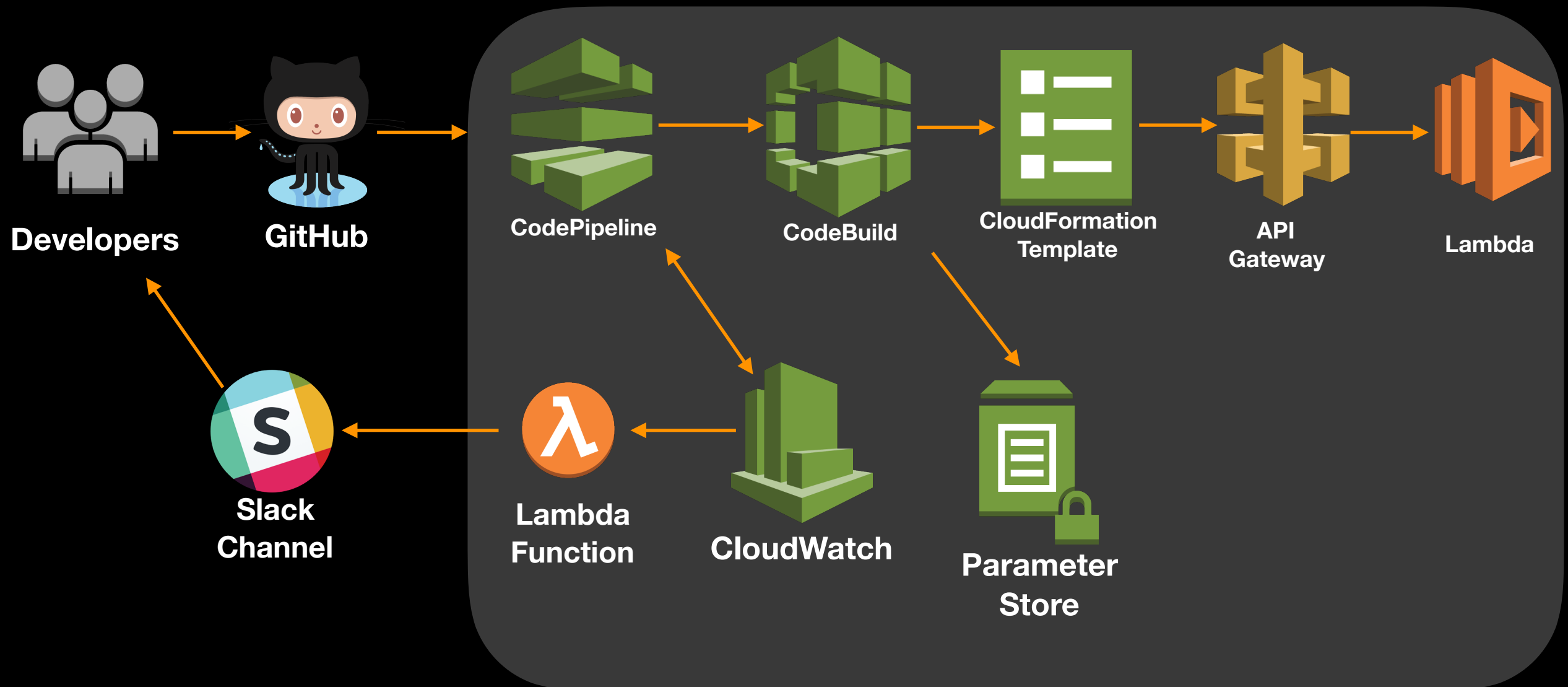
AWS Region



Architecture Diagram

Serverless

AWS Region



Thank You

marko@assignar.com

[linkedin.com/in/tomicmarko](https://www.linkedin.com/in/tomicmarko)