Deploying Angular to AWS

bit.ly/
rockncoder-2018-rwx-ng-aws

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Agenda

- AWS
- Quick and Dirty
- Smart and Repeatable
- CodePipeline & CodeBuild
- A Few Tips

My Versions

app	command	my version
git	git —version	2.19.0
node.js	node -v	v11.3.0
npm	npm —v	6.4.1
angular cli	ng -v	7.1.0

What We Won't Cover

- CloudFront
- EC2, ECS, Elastic Beanstalk
- Elastic Load Balancing
- Or other AWS services

AWS Documentation Warning

- AWS moves faster than its documentation
- Features added faster than books, videos,
  - or online docs
- The current console may not match images


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Treat AWS Like Money

AWS Credentials are extremely valuable to hackers, bitcoin miners, and other nefarious evil-doers

You could owe a lot Fast

- P3 X-Large EC2 cost **$24.48** per hour
- You can spin up **20** of these per region
- There are **730** hours per month
- You could owe AWS **$357,408**

Your Password is Crap

- Use secure passwords, really secure ones
- If you can remember it, it ain’t secure
- Never use your root account
- Use MFA
- Set up billing alerts

Getting a new phone?

- Getting a new phone this holiday season?

- Deactivate MFA before getting rid of old phone

- According to AWS it possible to bypass MFA, but it doesn't sound fun

Quick and Dirty

The Dirty Steps

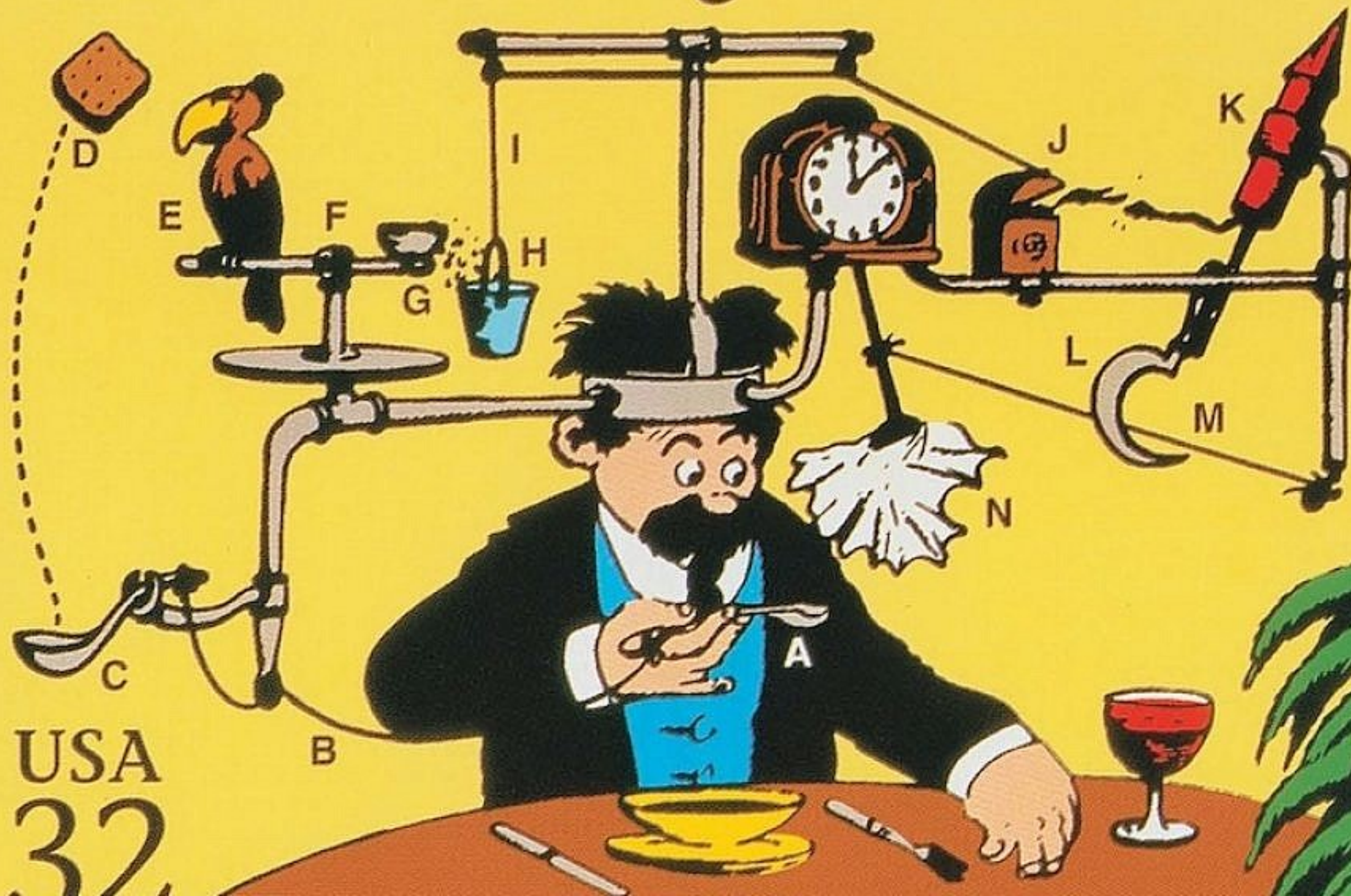
- Build app for production
- Create a bucket
- Make it a website
- Set index.html
- Upload the files from the ***dist*** folder
- Make files public

Q&D Demo

Even Faster

- Use AWS Route 53 as your DNS provider
- Set up AWS CloudFront as CDN
- Point CloudFront to your static site
- Point Route 53 to CloudFront

Rube Goldberg's Inventions



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Not Recommend

- Never manually push code to production
- It is too easy to make a mistake
- And finding your mistake can be a pain
- Not even recommend for toy sites

Smart and Repeatable

Code Deployment

- Deploying code should always be an automated process
- Write a code deploy early in the dev cycle
- Add tasks like linters and testers to it

Some CodeBuild Questions

- Where is the source code?
- Which build commands do you need to run and in what order?
- Which runtimes and tools do you need to run the build?
- Do you need AWS resources that aren't provided automatically by AWS CodeBuild?

CodePipeline

- The CodePipeline stages and actions are defined in a CloudFormation template.
- This includes CodePipeline's integration with CodeCommit, CodeBuild, and CloudFormation
- Think of it as a factory that builds your app

CodeBuild

- Think of CodeBuild as your build box
- It can run Linux, Windows, or Docker
- Remember the build box is ephemeral

CodeBuild Steps

- Create a buildspec.yml file in app root
- Create an output S3 bucket
- Go to AWS CodeBuild
- Follow the steps

AWS S3

- Simple Storage Service
- Cloud-based object storage
- Used to hold our site and data

Build Phases

phase	what
install	commands ran during installation
pre_build	commands ran before the build
build	commands ran during the build
post_build	commands ran after the build
artifacts	where build output is located

Where does CodeBuild run?

- CodeBuild uses Docker
- It spins up a server
- Install software on it
- Runs your build
- Moves the artifacts
- Destroys the server

Gotchas

- Don’t accidentally switch regions
- The AWS console will log you out after about 12 hours
- Keep asking yourself, how much does this cost?
- Permissions are a necessary evil

A Few Tips

- Create a Docker container as a build box
- Use a system to name things
- Use tools like CloudFormation or Terraform
- Use bash scripts to simulate code deploys
- Be very careful with your AWS credentials

Some useful links

- https://stelligent.com/2017/09/05/continuous-delivery-to-s3-via-codepipeline-and-codebuild/

- https://docs.aws.amazon.com/codebuild/latest/userguide/build-env-ref-available.html

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Questions?