SHIPPING MY CODE AT AIRSHIP

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LAYOUT

JARGONS

Docker/"container"/"image"
It doesn't care what language your code is in! This container will hold your code.

GCR ("google container registry")
This is the repository of all the containers we create.

GCE ("google compute engine")
AKA "VM" or "instance". This is the main machine that executes the code.

IGM ("instance group manager")
We might have many VMs that run the same code. IGM manages them.

instance template
This is the recipe on how to spin up a VM for the IGM.

DM ("deployment manager")
The conductor of the deployment orchestra.

canary
See how your code does by deploying to just one VM! We call this VM canary.

You wrote the code, and it's ready to go out into the WORLD!

DEPLOY STEPS

0. Make sure the deployment manager knows about the service.
1. Create a docker container and put it in GCR via Jenkins.
2. Update the instance template so the recipe uses the new version via Spinnaker's "deploy" step. Secrets (like passwords) get added to the recipe too!
3. Spinnaker's "update" step makes the IGM pull the latest instance template to restart the VM.

Do these for canary first!
Check how it does before moving on!

CHECKING CANARY

One last step to check if the code changes are healthy! Overall,

- check logs for anomalies.
- execute the new code
- monitor dashboards

If the canary looks good, move on to deploying the code to the rest of the VMs.

CONFIRMING CODE DEPLOY

There are a few ways to check if the code really got deployed.

- check the instance template name. It's based on the epoch timestamp when it was created.
- check the config in the instance template. The 'custom metadata' field shows the container version.
- ssh into an instance and `docker ps` to see the container version that's running.

HOW TO ROLLBACK

Follow the same process as regular deploys but set the `tag` as the code version you'd like to revert to during the 'deploy" step in Spinnaker.