



COMMUNITY DAY

AWS Cloud Development Kit

Infrastructure as Code – but less painful

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What is it?

If CloudFormation is “Infrastructure As Code” ...

...then CDK is Infrastructure As ~~REAL~~ Code

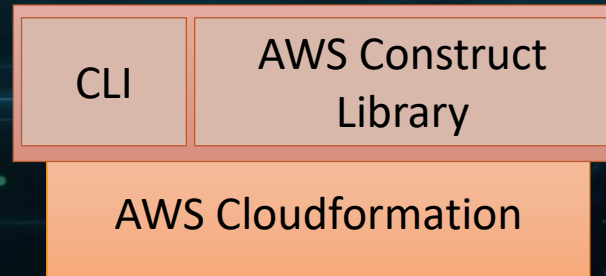
...Code **that**
supports type systems, structures, methods,
control of execution flow...

What is it?

Abstraction layer on top of AWS CloudFormation



What is it?



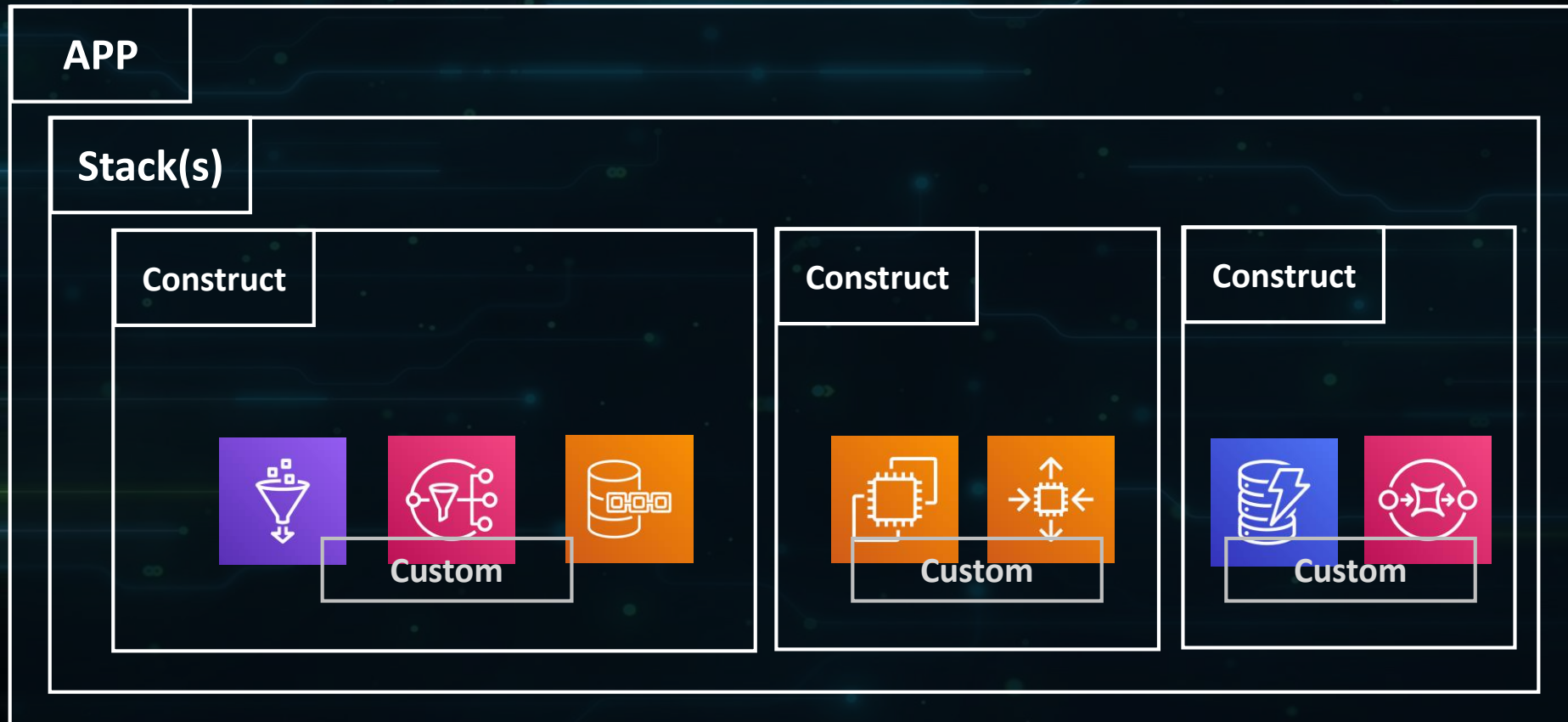
CDK CLI

- `cdk deploy`
- `cdk diff`
- `cdk synth`
- `cdk destroy`

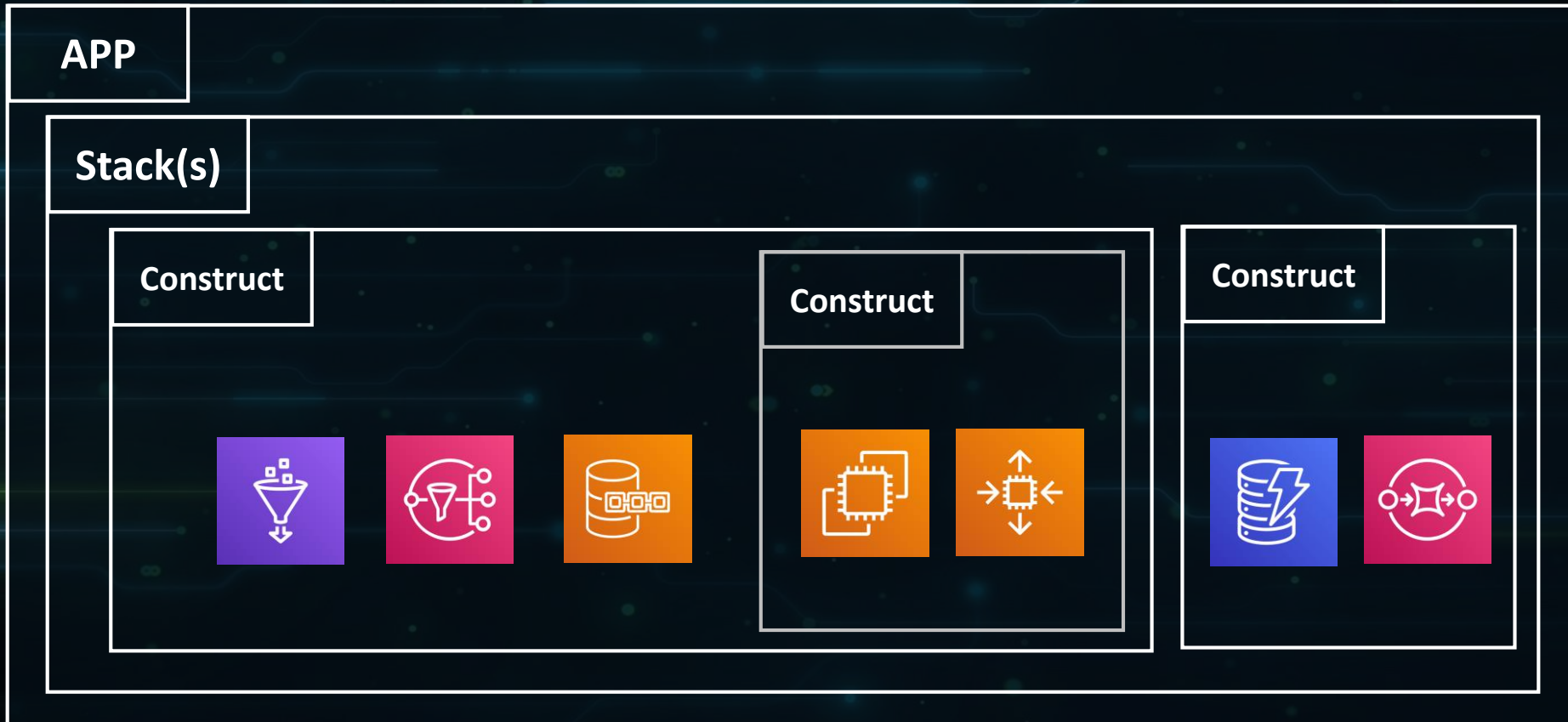
AWS Construct Library

= exposing definitions for AWS resources to be used in CDK apps

Building Blocks



Construct Nesting – Build Libraries!



Coding approach

Identical method signature for everything

Scope - Constructs/resources are defined within scope of another construct

ID – has to be unique within scope

```
new module.resource(this, 'id', {  
  prop1: 'val1',  
  prop2: val2,  
  ...  
});
```

Props - within context of the construct

CODE!

CODE!

Your Cloud Governance team

Folks,

We really need to **encrypt** our sh*t!

In transit and at rest!

Make sure you include that in your deployments!

Non-compliant resources will be **deleted** without further notice. You have 48 hours.

Cheers!

Your Governance team

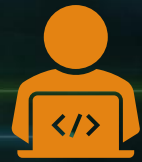
Example 5 – governance as a library

- Move boilerplate code into libraries.
- Keeps it simple and repeatable for engineers.



Example 5 – governance as a library

...the more you think about it...



Need a queue

...alarm through SNS



I'll get you one

Encrypt!

...have CW check for DLQ items

...but add a DLQ

...encrypted as well

Your Cloud Governance team

Folks,

For cost control / cost allocation purposes every resource has to be tagged with

- what service it belongs to
- who is the owner (team)

Make sure you include that in your deployments!

Non-compliant resources will be **deleted** without further notice. You have 48 hours.

Cheers!

Your (**really lovely**) Governance team

CI/CD

- CDK is relatively new
- CDK team is considering `cdk package` command, just like SAM
- CDK team and users are building CodeDeploy pipelines in CDK
 - So each app can essentially script and bring their own build process

Things to consider

- CDK => Cloudformation => same limitations
 - Supported resources
 - Service limits
- Ensure proper build/deploy automation
=> don't **cdk deploy** from your machine to higher environments!
- Really good chance for reusable infrastructure libraries => do it, share it!
- <https://docs.aws.amazon.com/cdk/>
- CDK team very active on AWSDevelopers slack and on Gitter
- **Stay right where you are and watch to Thorsten and Philipp dive deep on the CDK!**