

Infrastructure as Code with Terraform

Setting up a website in AWS with S3

Nora Schöner



Hi, I'm Nora

Senior Software Developer @ CodeCamp:N



current project



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Come by and say Hi 🙋



@wolkencode



@norchén



<https://wolkencode.de>



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Colleagues...

A new
cooperation is
coming.

We need the new
test set-up
by next week...

Yeah, let me
just click
through the
console...

Argh!
WHICH CONFIG
did I used last
time?

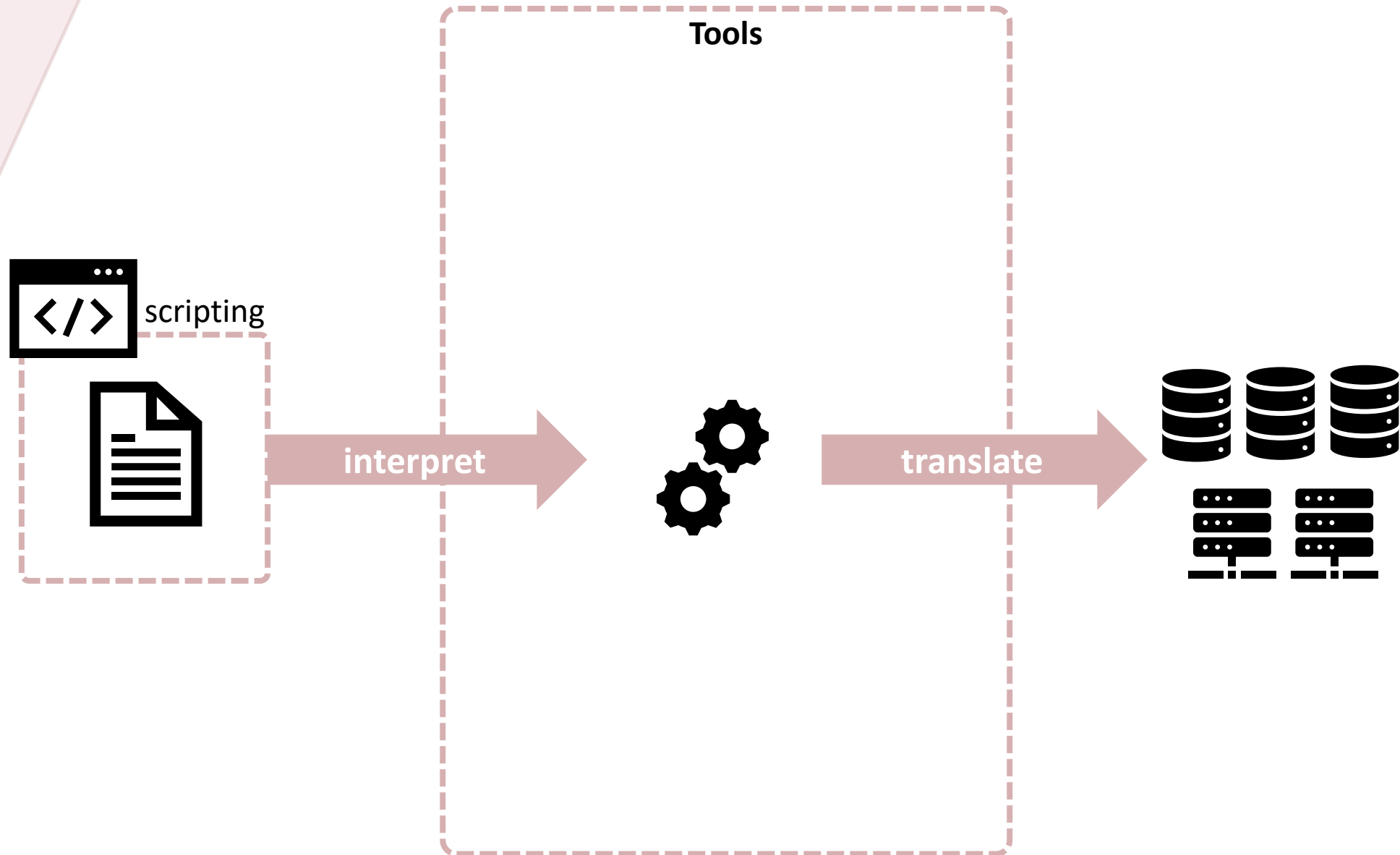
And **WHICH
RESOURCES ?**
I can't remember
...

This should
be working
AUTOMATICALLY
...

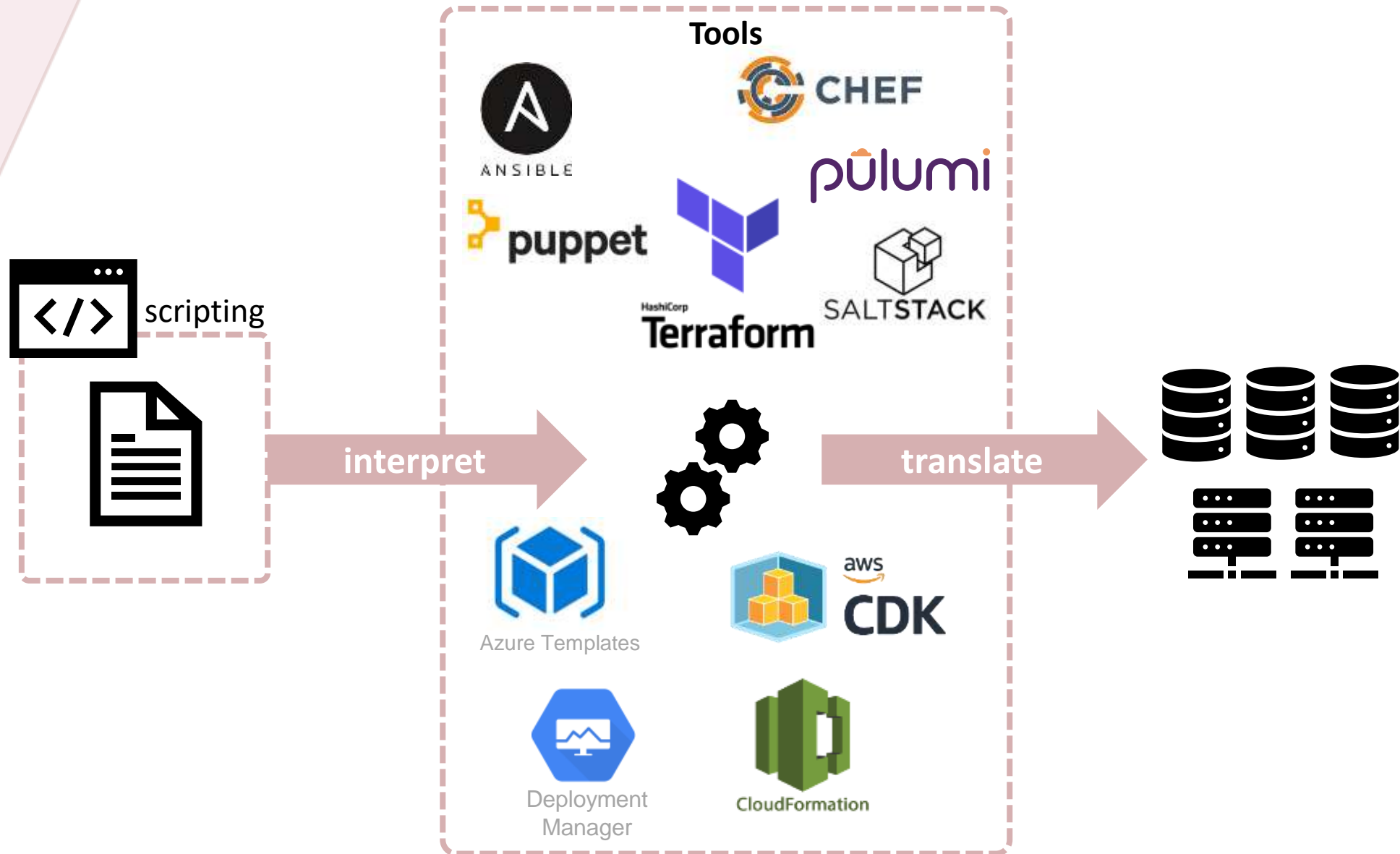


photo by CodeCamp:N GmbH

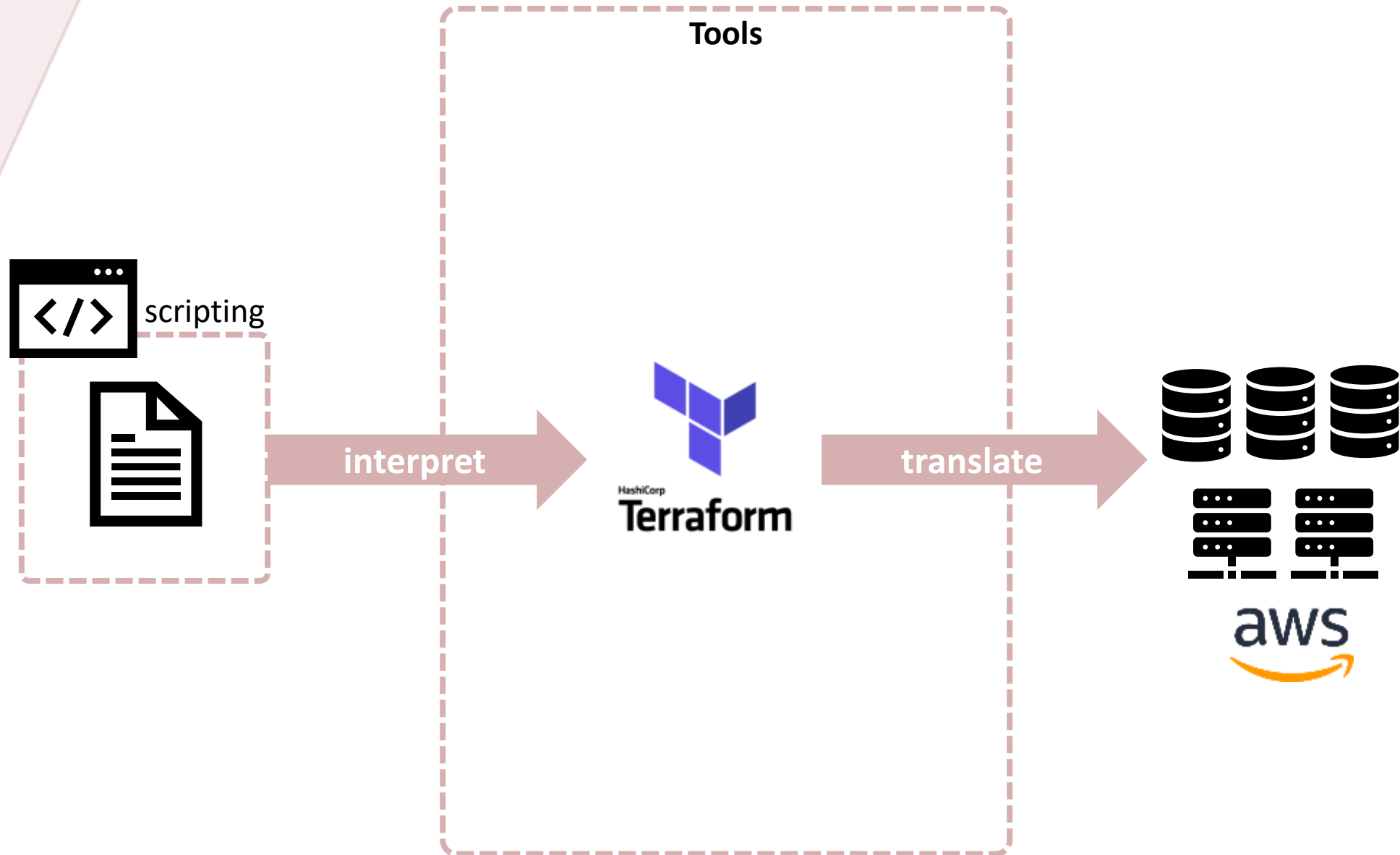
Infrastructure as Code



Infrastructure as Code



Infrastructure as Code



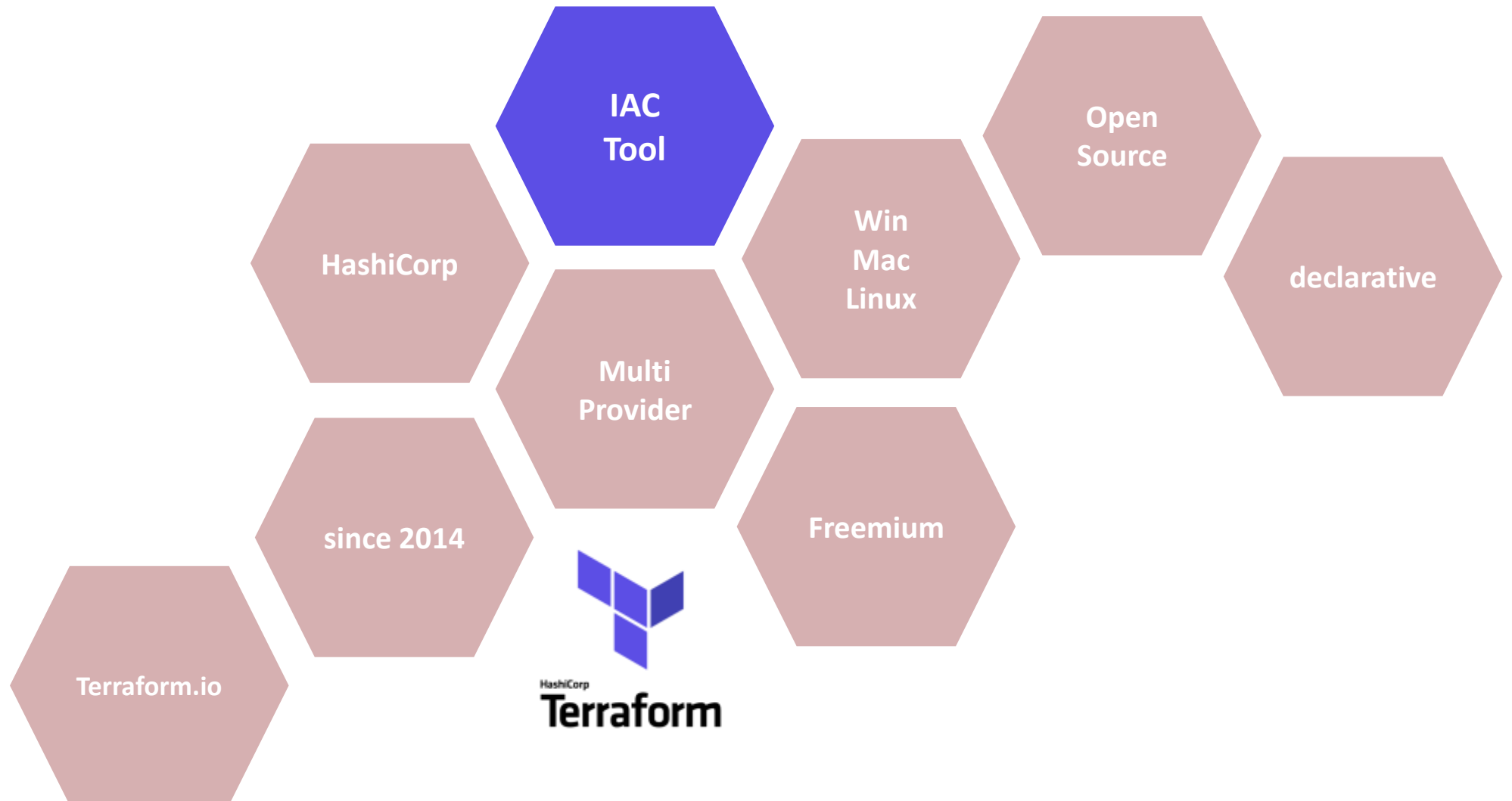
IaC Advantages



IaC Advantages



Terraform



Installation

```
1 # install terraform
2 # switch to temporary directory
3 cd tmp
4 # get latest terraform binaries for your system https://www.terraform.io/downloads.html
5 wget https://releases.hashicorp.com/terraform/0.14.4/terraform\_0.14.4\_linux\_amd64.zip
6 unzip terraform_0.14.4_linux_amd64.zip
7 # move terraform to an existing dir included in PATH
8 # (or add current dir to PATH)
9 mv terraform /usr/local/bin/
```

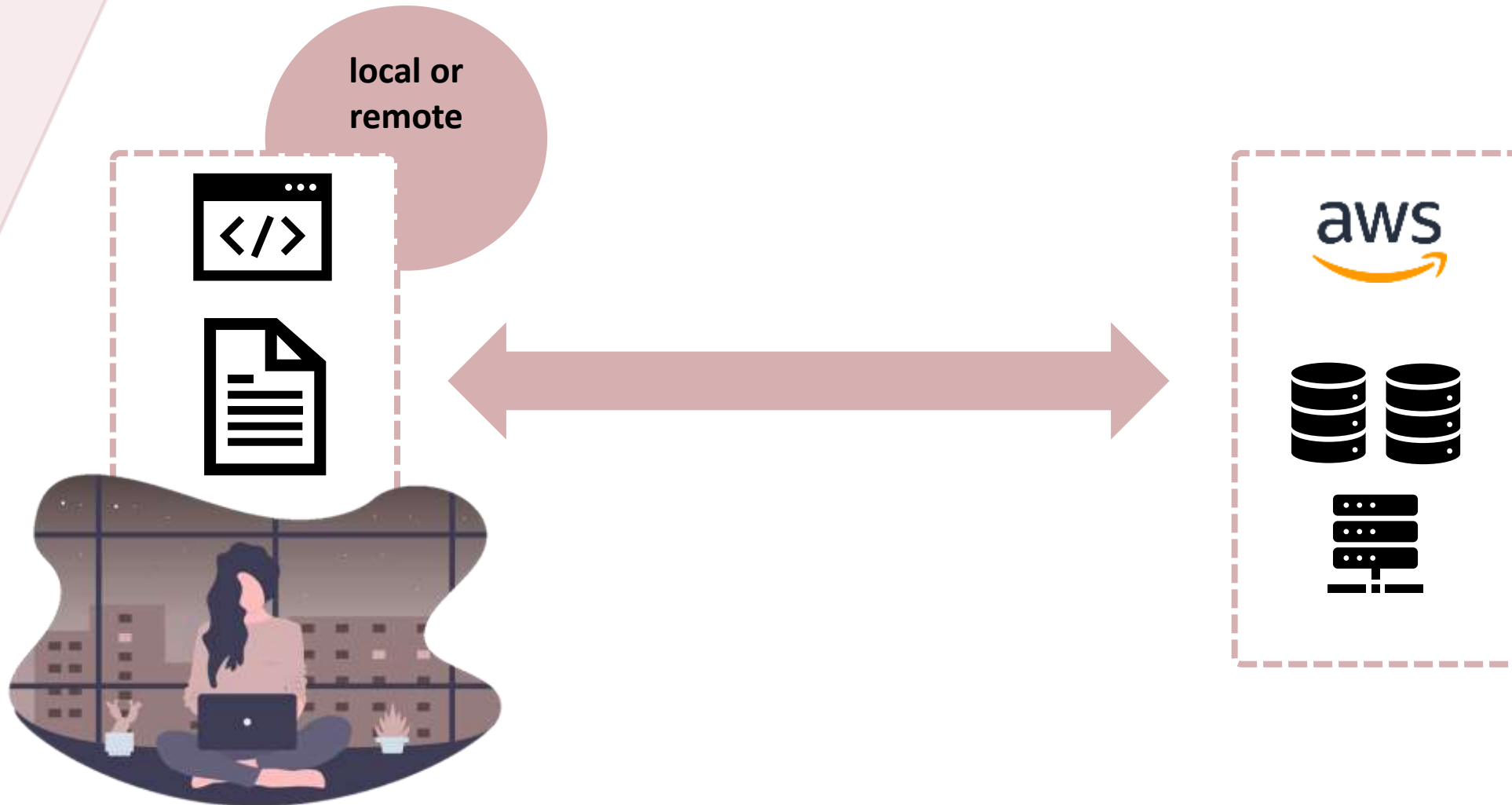
👉 <https://www.terraform.io/downloads.html>

📖 <https://learn.hashicorp.com/tutorials/terraform/install-cli>

Basic Workflow



States



```
1  # set provider
2  provider "aws" {
3    profile = "cyberland-s3-bucket-test"
4    region  = "us-east-1"
5  }
6
7  # set variables
8  variable "s3_bucket_name" {
9    description = "the bucket name for ou website bucket"
10   type        = string
11 }
12
13 # set resources
14 # s3 bucket
15 resource "aws_s3_bucket" "website" {
16   bucket = var.s3_bucket_name
17   acl    = "public-read"
18   policy = <<POLICY
19   {
20     "Version": "2012-10-17",
21     "Statement": [
22       {
23         "Sid": "PublicReadGetObject",
24         "Effect": "Allow",
25         "Principal": "*",
26         "Action": [
27           "s3:GetObject"
28         ],
29         "Resource": [
30           "arn:aws:s3:::${var.s3_bucket_name}/*"
31         ]
32       }
33     ]
34   }
35   POLICY
```

Terraform Advantages



easy and fast to learn



good documentation with a lots of examples



planning with state management



open-source & community-driven

Terraform Challenges



complex conditions are not trivial to implement



every provider has its own resource set

Alternatives & Next Steps



Colleagues...



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Wir suchen dich!

Java-Entwickler*in

FE/BE/Fullstack-Entwickler*in

Testmanagement
uvm.

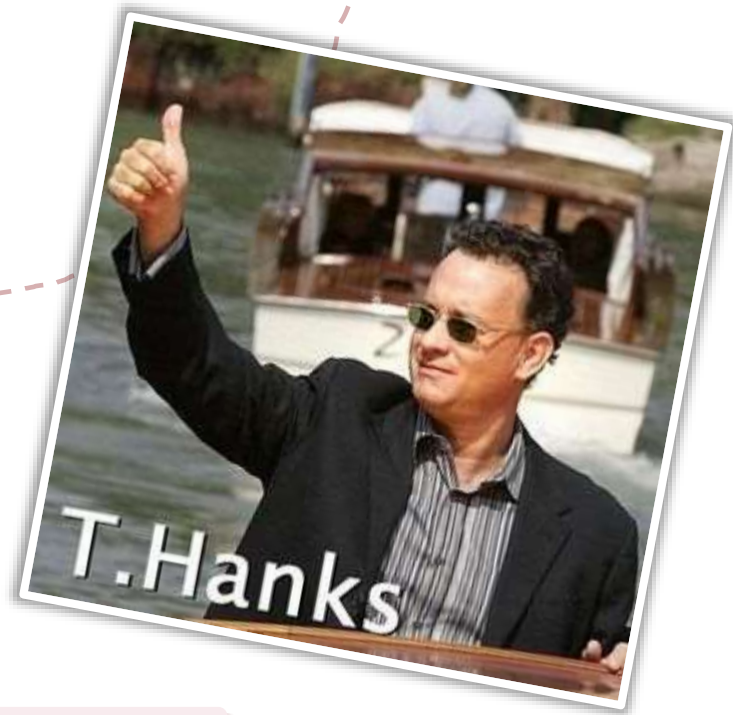
<https://codecampn-jobs.personio.de/>

oder meld dich
nora.schoener@codecamp-n.com

Wir stellen
ein trotz
Corona!

Hi, I'm Nora

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<https://wolkencode.de>



<https://wolkencode.de/posts/terraform-101/>



A close-up of Morpheus from the movie The Matrix, wearing his iconic black sunglasses. The reflection in the sunglasses shows a scene from the movie. The text is overlaid in a bold, white, sans-serif font with a black outline.

WHAT IF I TOLD YOU

**"THE CLOUD" IS JUST
SOMEONE ELSE'S COMPUTER.**

photos



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