

INFRASTRUCTURE AS CODE USING AMAZON WEBSERVICES

PEOPLE

~~Technologies~~ run businesses.
We know that. You know that.



Abas. Weil Menschen Geschäfte (AUS-)machen



<http://abas-erp.com/de/it-karriere>

Who are we ?

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Live Demo and presentation:

<https://github.com/abassoftware/aws-softwerkskammer>

Agenda

- AWS
 - Short Introduction to AWS
- The most important services (for us)
- Live Demo
- Business Software in the cloud

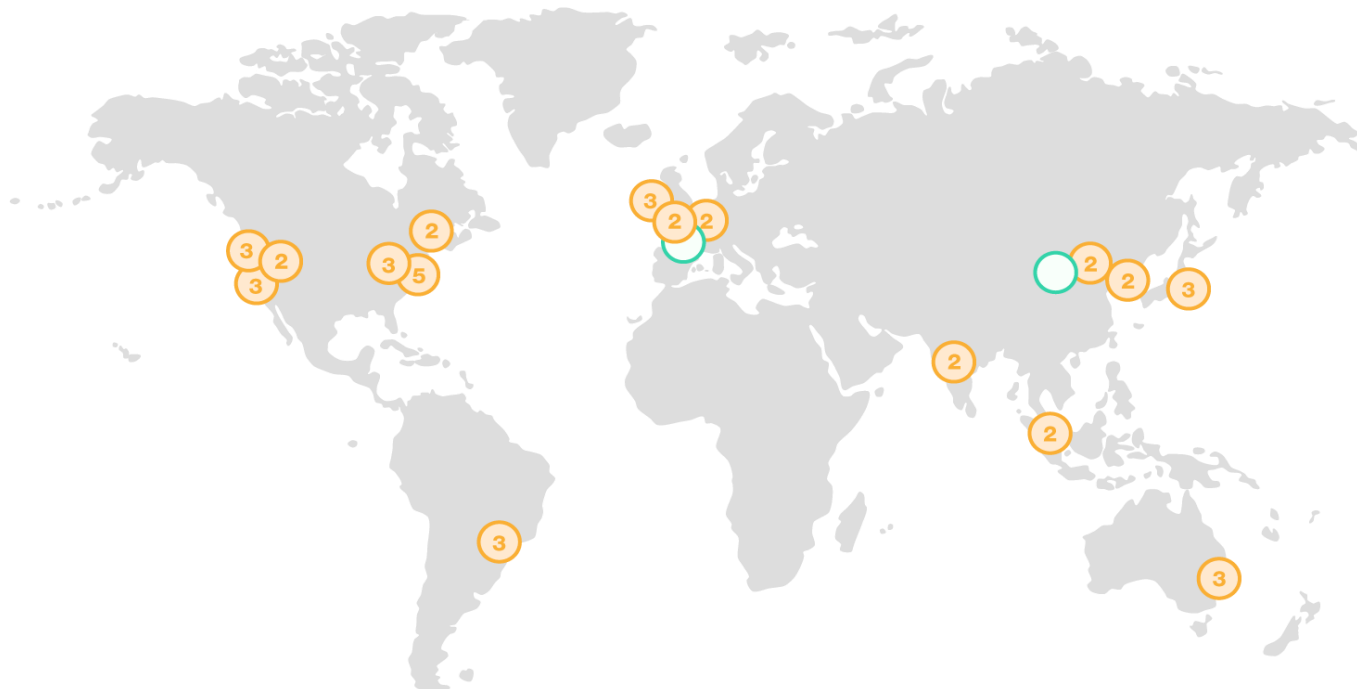
Amazon Web Services

- Cloud services platform from Amazon
 - compute power, database storage, content delivery and other functionality

Amazon Web Services

- Infrastructure as a Service
 - compute power, storage, OS
- Software as a Service
 - centralized logging, distributed tracing
- pay-as-you-go pricing
 - per request, per MB, per CPU Hour

Regions and Availability Zones



[fig.] <https://aws.amazon.com/about-aws/global-infrastructure/>

- **Simple Storage Service - S3**
 - web service interface to store and retrieve data
 - access control - who can access data within aws
 - authentication process - identity of a user
 - Pricing: STORAGE: \$0.023 pro GB

- **Elastic Compute Cloud - EC2**
 - Scalable computing capacity
 - EC2 Instances are virtual computing environments
 - Amazon Machine Image (AMI)
 - Different Instance Types

- **Elastic Compute Cloud - EC2**

- Pricing (On-Demand in us-east-1)

- t2.nano (1 vCPU, 0,5 GB RAM) : \$0.0059 per hour, ca. \$4,40 per month
 - t2.xlarge (4 vCPU, 16 GB RAM): \$0.188 per hour, ca. \$140 per month
 - m4.4xlarge (16 vCPU, 64GB RAM): \$0.862 per Hour, ca \$600 per month

- Reserved Instances

- Spot Instances

- **EC2 Container Service – ECS**
 - (Docker) Container management service
 - Start / Stop container based applications (called Tasks)
 - Create a cluster to automatically spin up new tasks if needed

- **CloudWatch**
 - Monitoring and centralized logging Service for AWS Resources
 - For AWS Resources and Applications Running on AWS
 - Metrics and Alarms

- **CloudFormation**

- A template is a yaml text file that describes all AWS resources needed
 - VPC, EC2 Instances, SecurityGroups (Firewall) ...
- When deploying a template it's called a stack
- When updating a stack resources can have three behaviors
 - Update with no interruption, Update with some interruption, Replacement

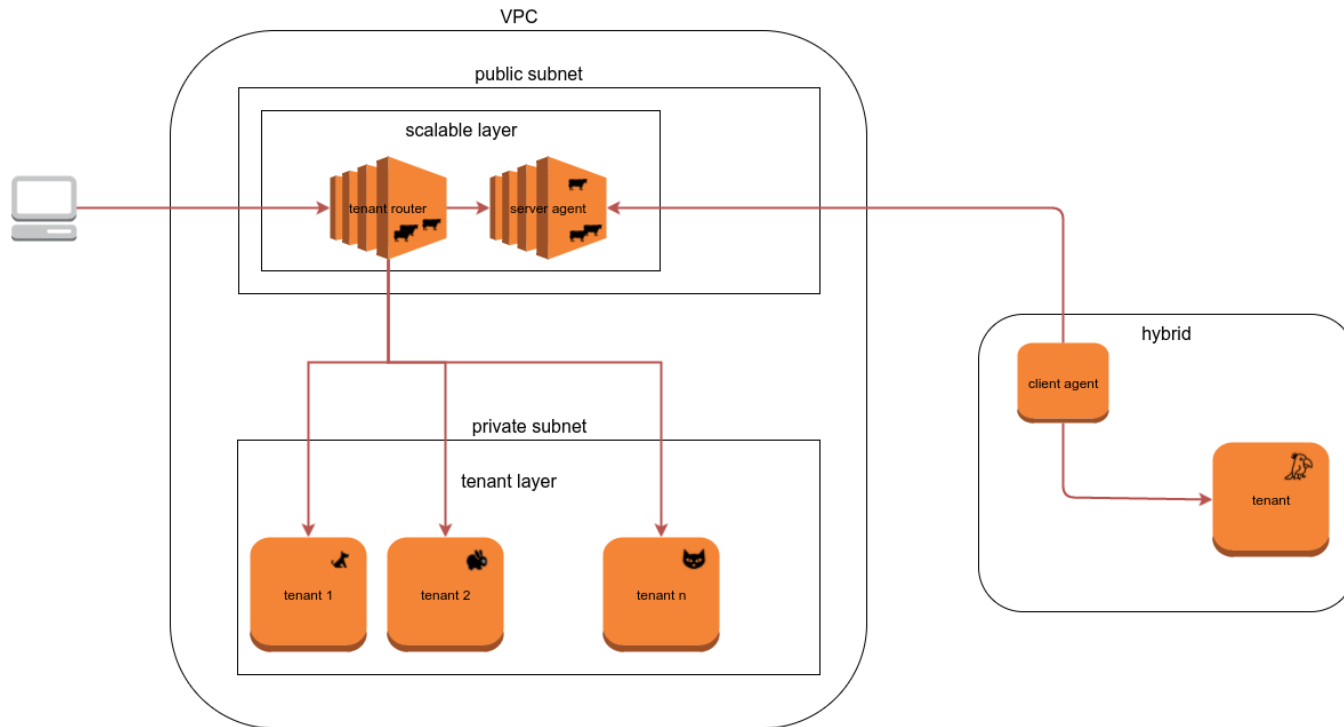
LIVE DEMO

<https://github.com/abassoftware/aws-softwerkskammer>

Our software in the cloud

- Software that wasn't designed to be scalable
- Separate services, that can be put into a scalable layer
- leave the rest in tenant layer, one for each customer
- hybrid customers, use the scalable layer, but the tenant layer is on premise

Our software in the cloud



Problems

- Vendor lock-in
- Not all services in all regions
- CloudFront
- Lambdas too slow

Who are we ? Again !

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