



How to **kick-start** your **AWS Cloud Journey**

The why, what and how to get started in AWS



Nora Schöner



@wolkencode @superluminario

What's in it for you today?

- What is the cloud and why it is useful?
- Getting to know **AWS** and its services
- Taking a look in mindset shifts
- How to begin and getting started 💪

we are

superluminar



Hi, I'm Nora 🙌



初めまして、よろしくお願ひします。

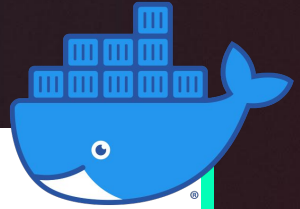


@wolkencode

How it started?



GitLab

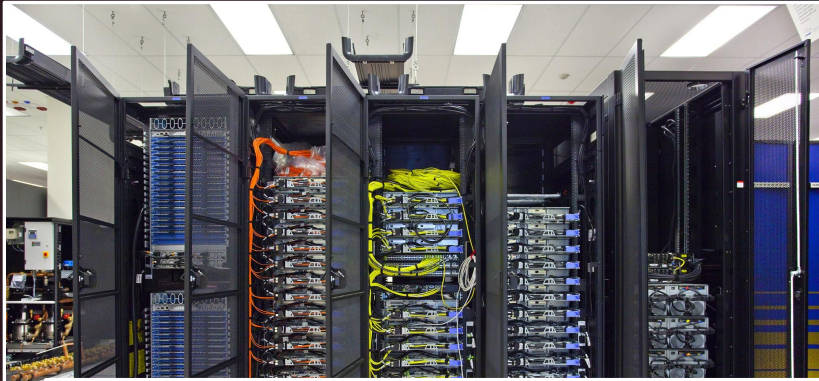


A close-up, high-angle shot of Morpheus from the movie The Matrix. He is bald, has a serious expression, and is wearing dark sunglasses. The reflection in the sunglasses shows two figures in a dark environment. The background is a blurred greenish-grey.

WHAT IF I TOLD YOU

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

What does classical hosting look(ed) like?



```
Processes: 722 total, 3 running, 719 sleeping, 3442 threads
Load Avg: 1.86, 2.27, 2.35 CPU usage: 4.40% user, 2.82% sys, 92.77% idle SharedLibs: 565M resident, 100M data, 147M linkedit.
MemRegions: 415483 total, 4704M resident, 127M private, 106 shared. PhysMem: 32G used (4176M wired), 87M unused.
VM: 5681G vszize, 2318M framework vszize, 11389084(0) swaptins, 13294545(0) swaptouts.
Networks: packets: 24475776/18G in, 35844478/21G out. Disks: 5578573/144G read, 6861434/133G written.
```

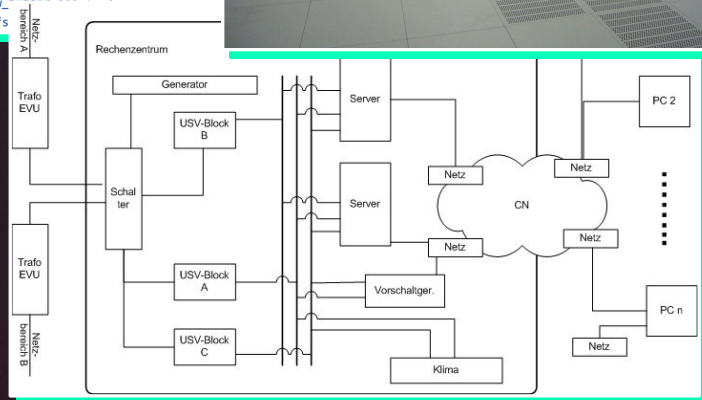
PID	COMMAND	%CPU	TIME	#TH	#WQ	#PORTS	MEM	PURG	CMPRS	PGRP	PPID	STATE	BOOSTS	%CPU_ME
60942	Google Chrom	40.2	13:21:39	31	1	283	366M-0B	126M-	1648	1648	0	sleeping	*0[5]	0.00000
141	WindowServer	22.0	07:20:09	15	6	5339-	1663M-2944K	144M	141	1	sleeping	*0[1]	0.03710	
26294	top	9.0	00:04:70	1/1	0	35	12M-0B	0B	80	26294	2415	running	*0[1]	0.00000
440	sysmond	5.8	25:10:90	3	2	22+	1664K+0B	484K	440	1	sleeping	*0[302]	0.00000	
8035	com.docker.h	5.7	04:10:15	17	0	41	14G-0B	857M	7983	8027	0	sleeping	*0[1]	0.00000
26306	screencaptur	4.2	00:00:55	3	1	154	5084K	620K	0B	1662	1662	sleeping	*0[567+]	0.13460
65048	vector-wrapp	4.8	25:35:43	17	0	29	5192K-0B	2108K	65048	65045	0	sleeping	*0[1]	0.00000
1658	Activity Mon	4.6	35:15:77	5	3	1241	123M-0B	53M	1658	1	sleeping	*0[987]	5.98003	
0	kernel_task	4.6	03:05:21	297/16	0	0	214M-0B	0B	0	0	0	running	*0[0]	0.00000
4451	Signal Helpe	2.8	01:54:30	27	1	1440	211M-0B	111M-	1653	1653	0	sleeping	*0[32]	0.00000
17667	Microsoft Te	2.7	04:02:32	22	1	300	383M-0B	74M	17658	17658	0	sleeping	*0[1]	0.00000
5736	Google Chrom	2.3	04:05:33	19	1	278	265M-0B	127M	1648	1648	0	sleeping	*0[8]	0.00000
2543	gamecontroll	1.5	11:54:66	4/1	3	95	2976K-0B	1092K	2543	1	running	*0[2105514+]	0.00000	
1051	Terminal	1.2	71:31:72	8	2	821-	3493M-27M	1429M	1651	1	sleeping	*0[34138]	0.13002	
17658	Teams	1.1	03:10:16	38	3	846	197M-0B	99M	17658	1	sleeping	*0[211263+]	0.00000	
122	bluetoothd	1.0	39:12:82	6	4	314	14M-0B	3124K-	122	1	sleeping	*0[1]	0.14432	
17663	Microsoft Te	0.6	00:56:73	9	2	106	17M-0B	8880K	17658	17658	0	sleeping	*0[1]	0.00000
26307	screencaptur	0.5	00:00:19	3	1	186	12M-0B	0B	0B	26307	1	sleeping	*0[355+]	0.00000
20262	Microsoft Te	0.5	01:12:69	14	1	132	17M+0B	14M	17658	17658	0	sleeping	*0[1]	0.00000
80874	Microsoft.Py	0.5	07:34:36	15	0	42	46M-0B	34M	80677	80677	0	sleeping	*0[1]	0.00000
77986	Microsoft.Py	0.5	08:47:77	15	0	43	353M-0B	340M	77834	77834	0	sleeping	*0[1]	0.00000

```

    Determine the input stream encoding by checking the BOM
    and, the UTF-8 encoding is assumed. Return 1 on success.
    yam_parser_determine_encoding(parser *yam_parser_t)
    // Ensure that we had enough bytes in the raw buff
    for (!parser.eof && len(parser.raw_buffer)-parser.i
        if !yam_parser_update_raw_buffer(parser)
            return false
    }

// Determine the encoding.
buf := parser.raw_buffer
pos := parser.raw_buffer_pos
avail := len(buf) - pos
if avail >= 2 && buf[pos] == bom_UTF16LE[0] && buf
    parser.encoding = yam_UTF16LE_ENCODING
    parser.raw_...
    parser.off5

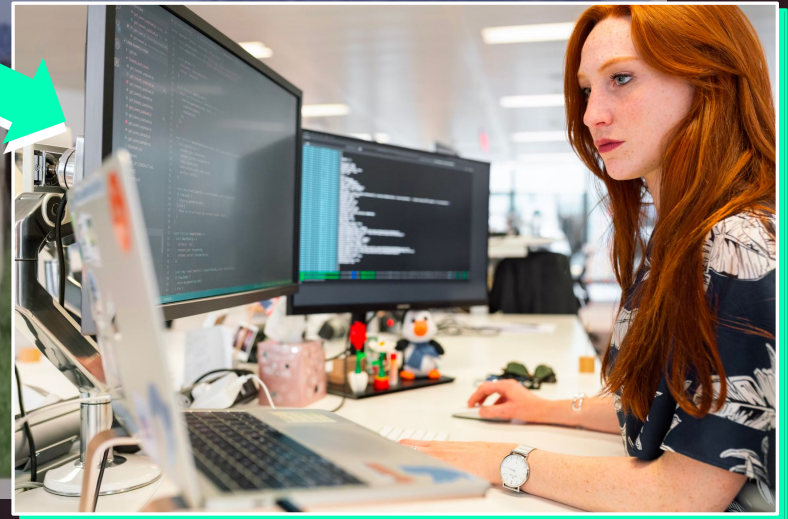
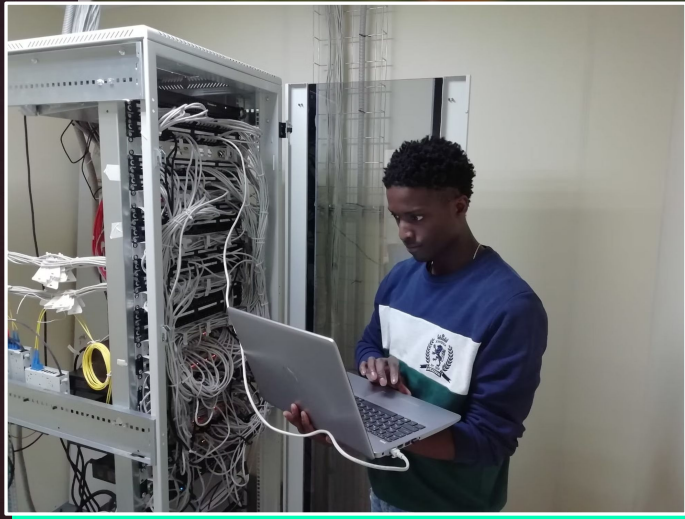
```



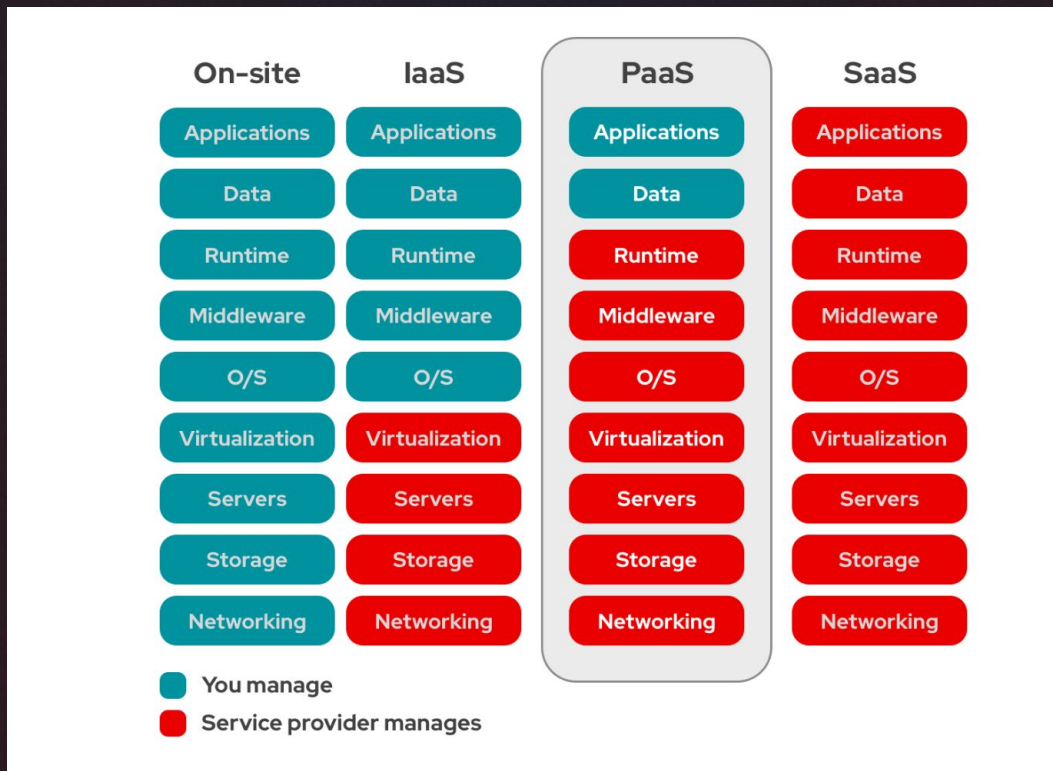
Shift of Attitude



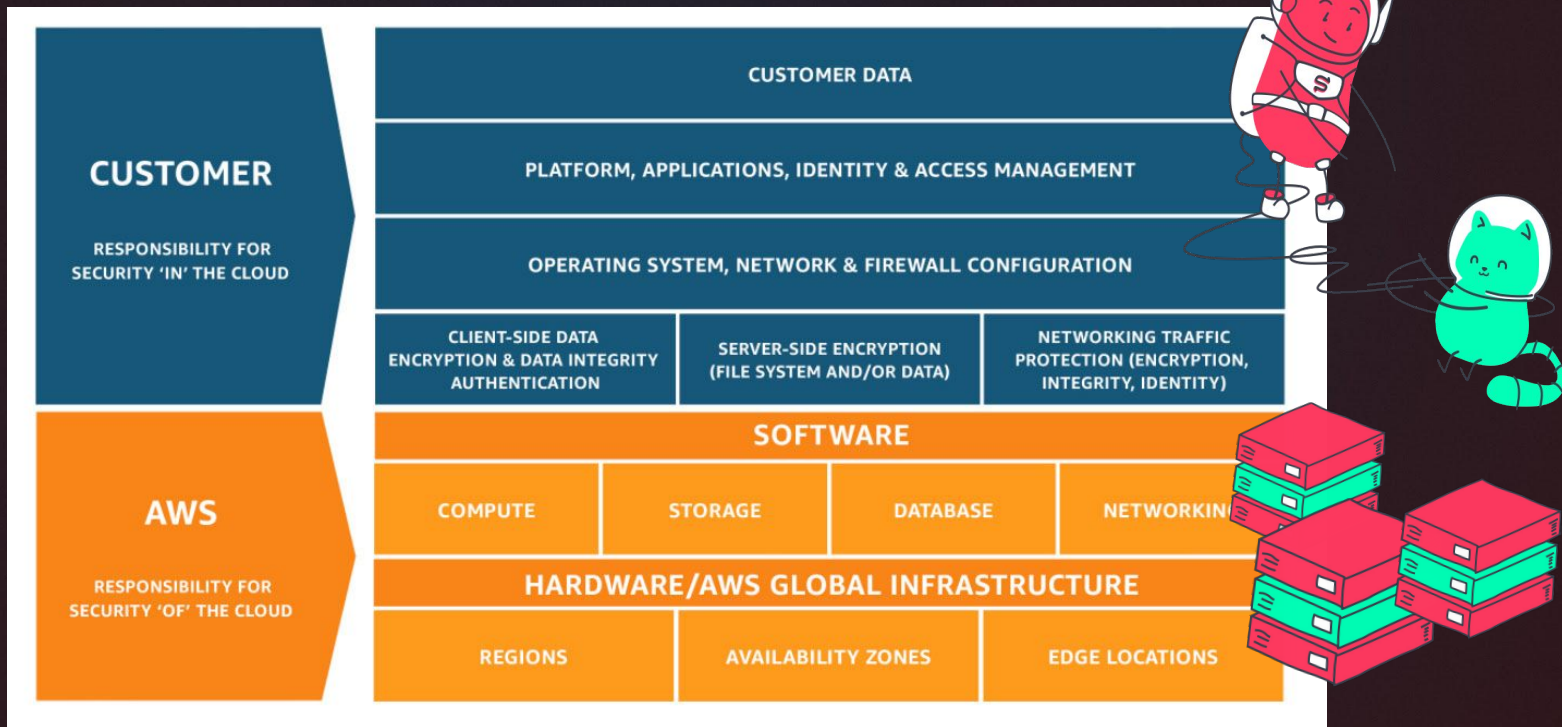
Shift of Attitude



Hello {*}aaS 🙌

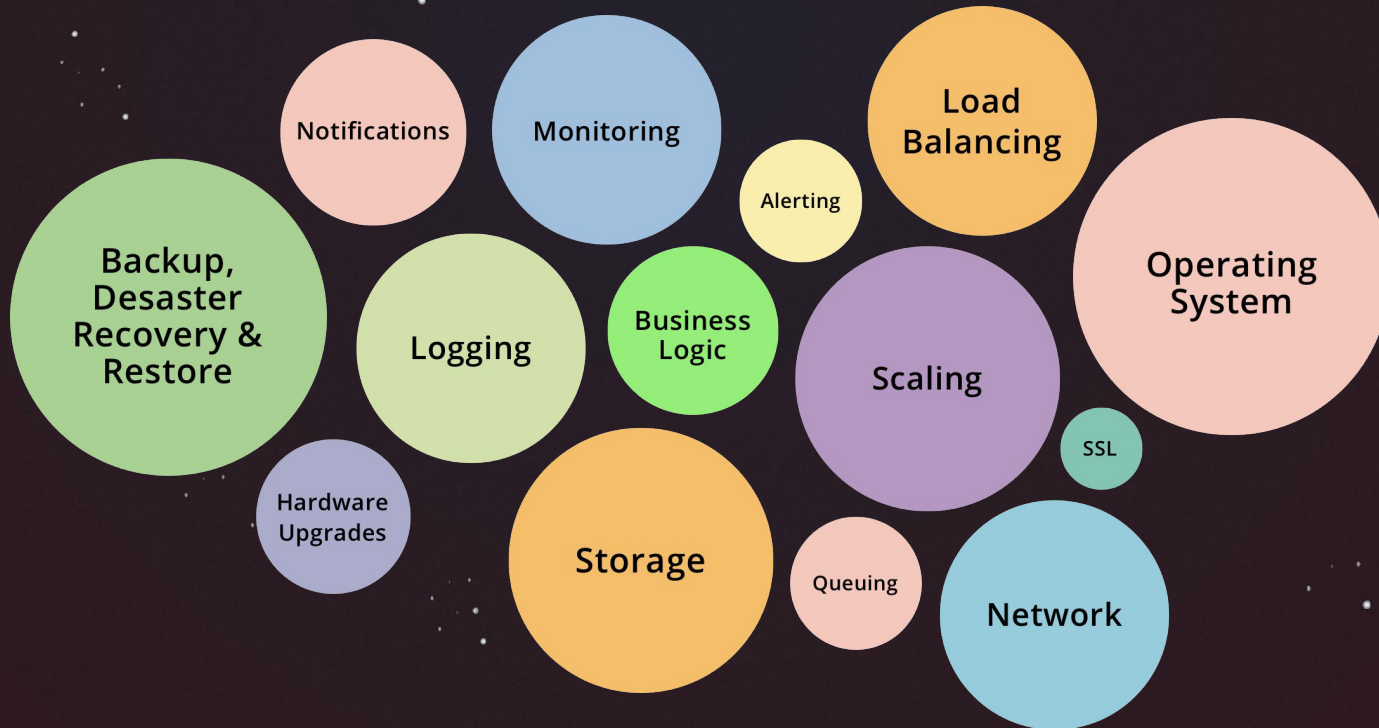


AWS Shared Responsibility Model

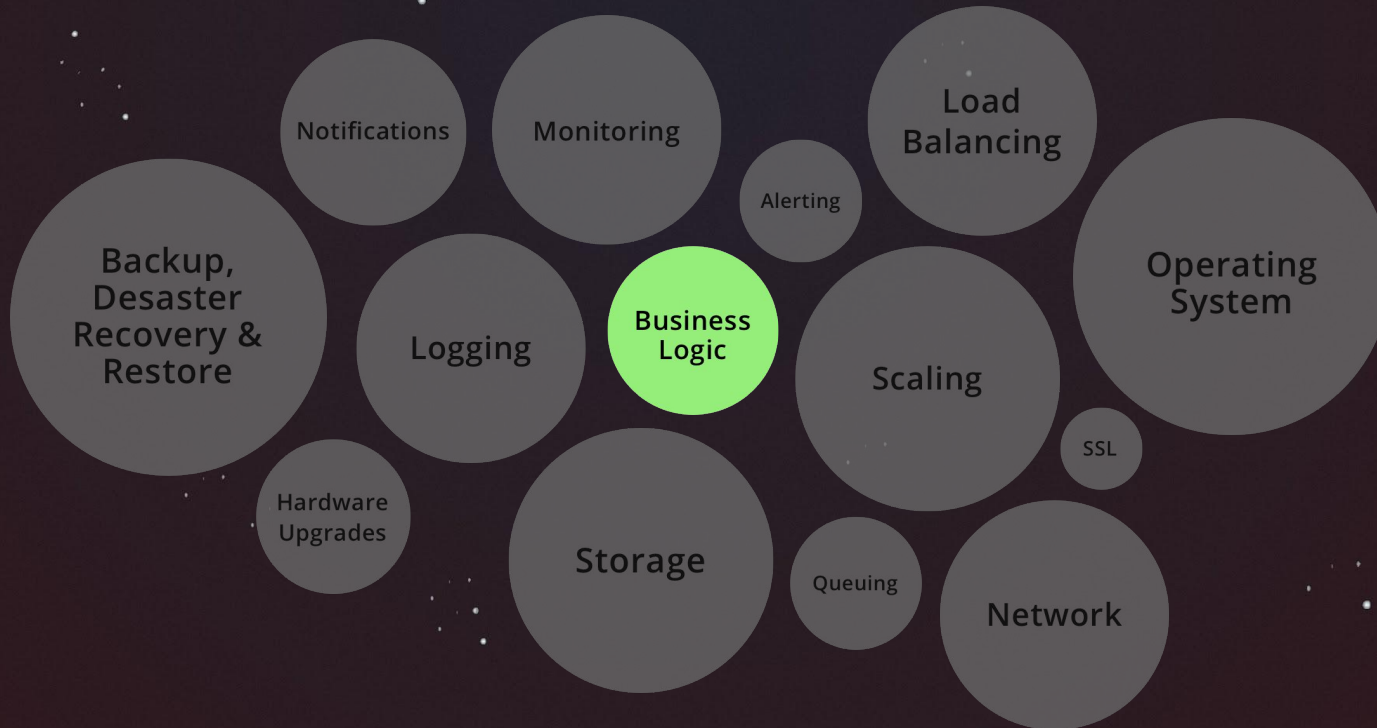


<https://aws.amazon.com/compliance/shared-responsibility-model/>

Things to take care of...



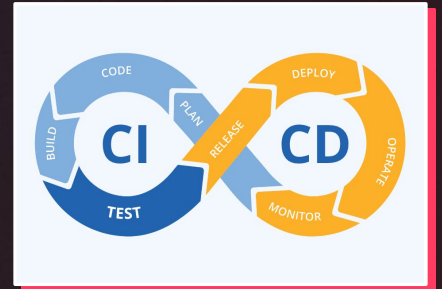
Where is the value?



Shift of development



```
31 def __init__(self, settings):
32     self.file = None
33     self.fingerprints = {}
34     self.logname = 'f'
35     self.debug = debug
36     self.logger = logging.getLogger(__name__)
37     if paths:
38         self.file = os.path.join(paths, 'requests.log')
39         self.file_exists()
40         self.fingerprints.update({self.file: {}})
41
42 @classmethod
43 def from_settings(cls, settings):
44     debug = settings.getbool('debug', False)
45     return cls(job_dir(settings), debug)
46
47 def request_seen(self, request):
48     fp = self.request_fingerprint(request)
49     return True
50     self.fingerprints.add(fp)
51     if self.files:
52         self.file.write(fp + os.linesep)
53
54 def request_fingerprint(self, request):
55     return request_fingerprint(request)
56
```



Shift of costs

fix costs



pay on-demand



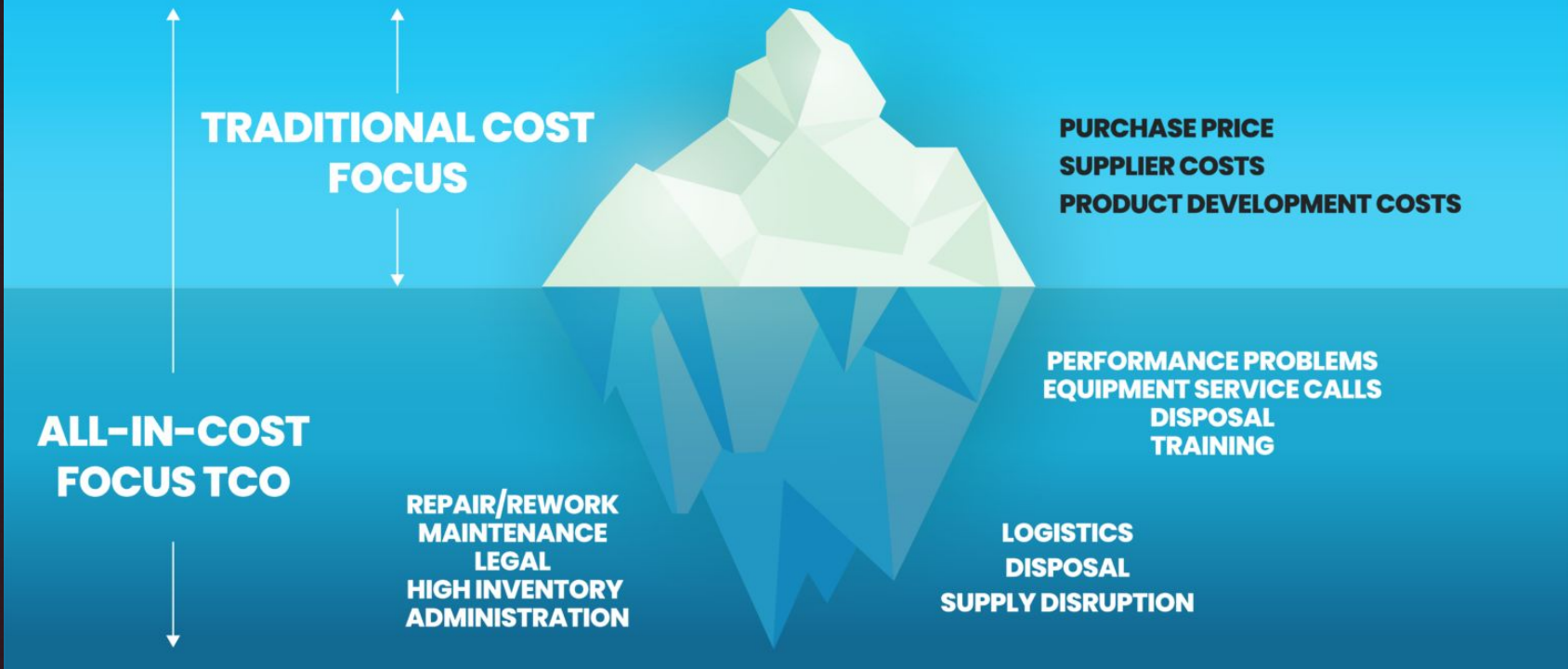
build



buy

TOTAL COST OF OWNERSHIP

TCO ICEBERG MODEL



Shift of Thinking

Vendor Lock-in

**fear of
dependencies**



**Public Cloud
as driver**

Shift of Thinking

Self Hosting/Building

**fulfill my
specific needs**



**Is there a
service for it?**

Shift of Thinking

Ownership of Assets

**strategic
advantage**



necessary evil

So, Cloud has something for everybody



AWS Services

Compute

Amazon EC2
Amazon Elastic Container Service
Amazon Elastic Container Service for Kubernetes
Amazon Elastic Container Registry
Amazon Lightsail
AWS Batch
AWS Elastic Beanstalk
AWS Fargate
AWS Lambda
AWS Serverless Application Repository
Auto Scaling
Elastic Load Balancing
VMware Cloud on AWS

Storage

Amazon Simple Storage Service (S3)
Amazon Elastic Block Storage (EBS)
Amazon Elastic File System (EFS)
Amazon Glacier
AWS Storage Gateway
AWS Snowball
AWS Snowball Edge
AWS Snowmobile

Database

Amazon Aurora
Amazon RDS
Amazon DynamoDB
Amazon ElastiCache
Amazon Redshift
Amazon Neptune
AWS Database Migration Service

Migration

AWS Migration Hub
AWS Application Discovery Service
AWS Database Migration Service
AWS Server Migration Service

Networking & Content Delivery

Amazon VPC
Amazon CloudFront
Amazon Route 53
Amazon API Gateway
AWS Direct Connect
Elastic Load Balancing

Developer Tools

AWS CodeStar
AWS CodeCommit
AWS CodeBuild
AWS CodeDeploy
AWS CodePipeline
AWS Cloud9
AWS X-Ray
AWS Tools & SDKs

Management Tools

Amazon CloudWatch
AWS CloudFormation
AWS CloudTrail
AWS Config
AWS OpsWorks
AWS Service Catalog
AWS Systems Manager
AWS Trusted Advisor
AWS Personal Health Dashboard
AWS Command Line Interface
AWS Management Console
AWS Managed Services

Media Services

Amazon Elastic Transcoder
Amazon Kinesis Video Streams
AWS Elemental MediaConvert
AWS Elemental MediaLive
AWS Elemental MediaPackage
AWS Elemental MediaStore

Machine Learning

Amazon SageMaker
Amazon Comprehend
Amazon Lex
Amazon Polly
Amazon Rekognition
Amazon Machine Learning
Amazon Translate
Amazon Transcribe
AWS DeepLens
AWS Deep Learning AMIs
Apache MXNet on AWS
TensorFlow on AWS

Analytics

Amazon Athena
Amazon EMR
Amazon CloudSearch
Amazon Elasticsearch Service
Amazon Kinesis
Amazon Redshift
Amazon QuickSight
AWS Data Pipeline
AWS Glue

Security, Identity & Compliance

AWS Identity and Access Management (IAM)
Amazon Cloud Directory
Amazon Cognito
Amazon GuardDuty
Amazon Inspector
Amazon Macie
AWS Certificate Manager
AWS CloudHSM
AWS Directory Service
AWS Key Management Service
AWS Organizations
AWS Single Sign-On

AR & VR

Amazon Sumerian

Application Integration

Amazon MQ
Amazon Simple Queue Service (SQS)
Amazon Simple Notification Service (SNS)
AWS AppSync
AWS Step Functions

Customer Engagement

Amazon Connect
Amazon Pinpoint
Amazon Simple Email Service (SES)

Business Productivity

Alexa for Business
Amazon Chime
Amazon WorkDocs
Amazon WorkMail

Desktop & App Streaming

Amazon WorkSpaces
Amazon AppStream 2.0

Internet of Things

AWS IoT Core
Amazon FreeRTOS
AWS Greengrass
AWS IoT 1-Click
AWS IoT Analytics
AWS IoT Button
AWS IoT Device Defender
AWS IoT Device Management

Game Development

Amazon GameLift
Amazon Lumberyard

Software

This is a lot...



Work with something you are motivated about



Get to know the bare basics



AWS IAM



**Amazon
CloudWatch**

AWS CloudTrail

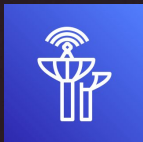


AWS Cost Explorer

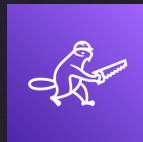


Amazon VPC

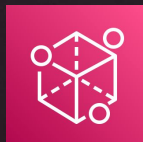
Some funny ones...



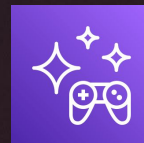
AWS Ground Station



Amazon Lumberyard



Amazon Sumerian

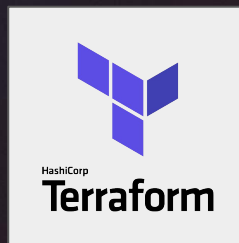
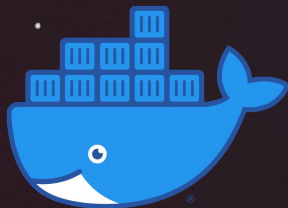


Amazon GameSparks

Let's take a closer look



Tooling is everything!



Search for a learning path

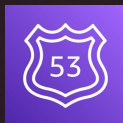
roadmap.sh



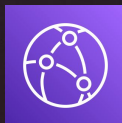
An example



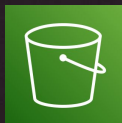
Cert
Manager



Route53



Cloud
Front



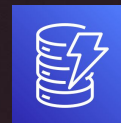
S3



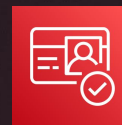
API
Gateway



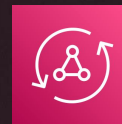
Lambda



DynamoDB



Amazon
Cognito

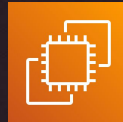


GraphQL
AppSync

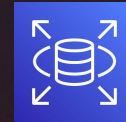
Another example



Amazon VPC



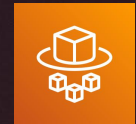
Amazon EC2



Amazon RDS




Amazon EKS



AWS Fargate

Tools and little Helpers

- using a **Infrastructure as Code** tool   
CloudFormation
- using **ramp up** tools (e.g. Amplify, Copilot,...)
- learn about **Well Architected Framework**
- attending **meetups** and **conferences** 🤗



Thank you.



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@wolkencode



@wolkencode

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aws partner
network

Advanced
Consulting
Partner

Well Architected
Program

Immersion Day
Program

AWS Public Sector
Partner