

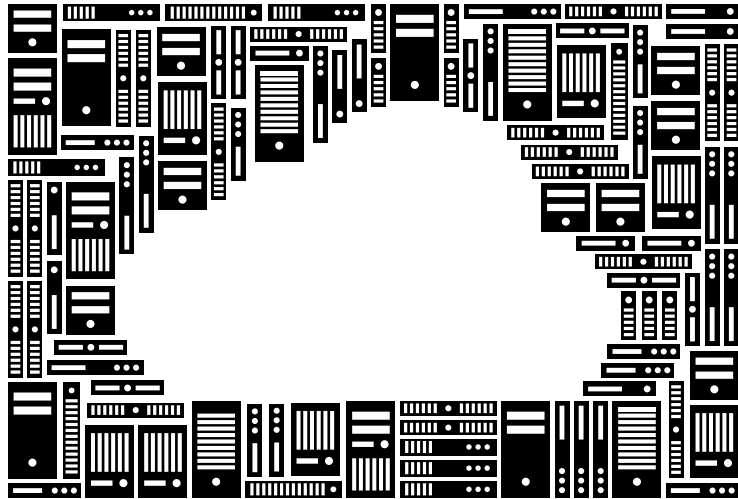
Cloud Computing

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What is it?



There is NO CLOUD, just other people's computers

[“FSFE There is no cloud postcard en.svg”](#) by [Markus Meier, FSFE](#) is licensed under [CC BY-SA 4.0](#)

- A silly catchphrase with a disheartening origin
- Technically it can be IaaS, SaaS, PaaS
- Is it new?
- Why virtualize? Why not just rent servers?

What's good about it?

Redundancy

Scalability

Co-Location

Lower Bandwidth Costs

Lower Building Costs

Lower Staffing Costs

What's bad about it?

Recurring Costs

Loss of Physical Control

Security Concerns

How does it work?

Virtual Machines

- VirtualBox, QEMU, VMware, [AWS Nitro](#) , etc.
- What are they?
- How do they work?
- Why use them?

Containers

- Docker, etc.
- What are they?
- How do they work?
- Why use them?

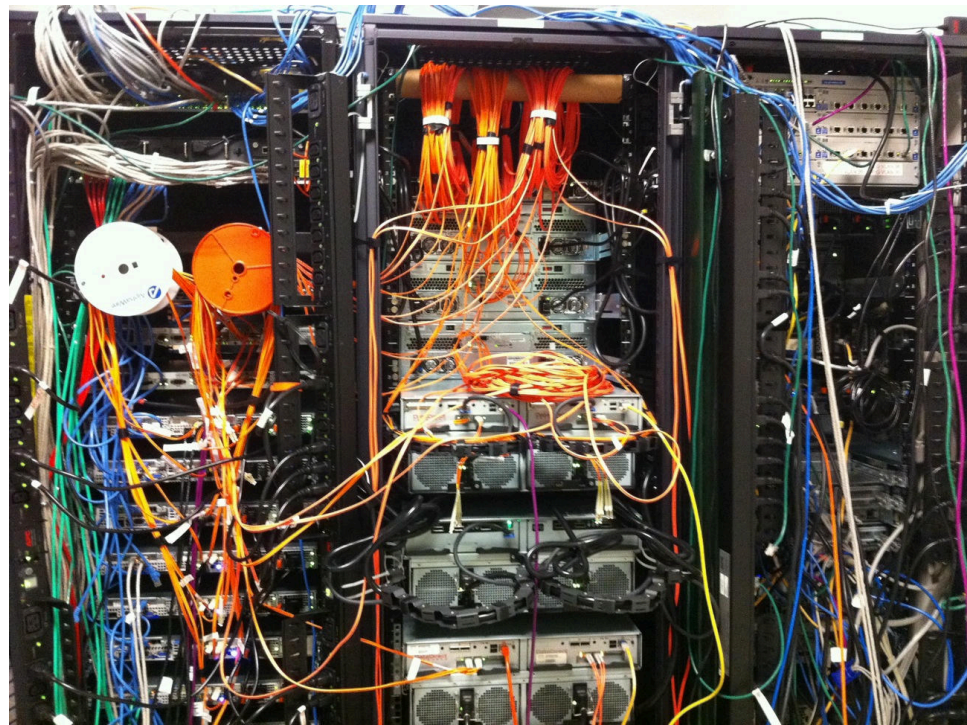
Who does it?

- [Amazon Web Services](#)
- [Microsoft Azure](#)
- [Google Compute Engine](#)
- Most PaaS and SaaS runs on one of these



Want to try it at home?

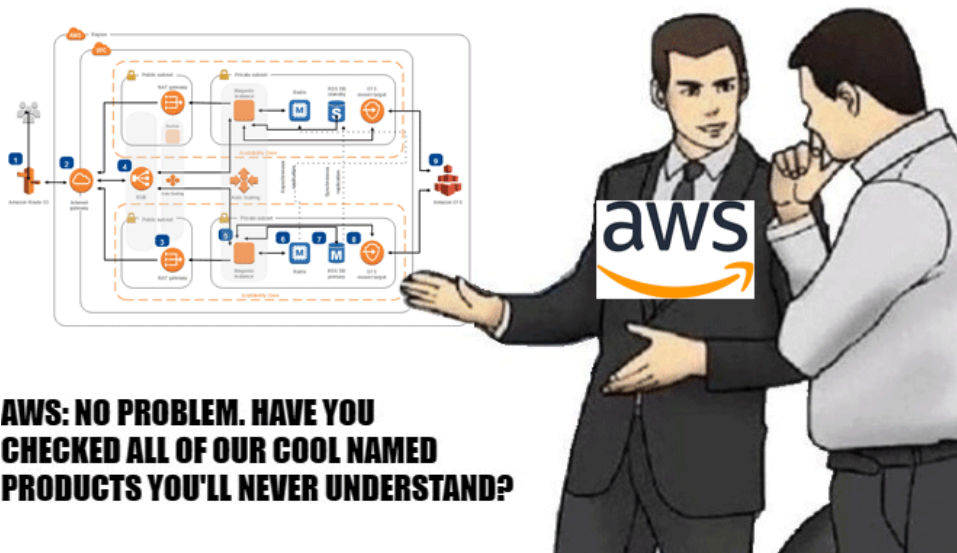
- [/r/homelab](#)
- Server hardware is [CHEAP](#) (data centers refresh often)
- Virtualization Platforms
 - [Proxmox](#)
 - [ESXi](#)
 - [XenServer](#)
- You will learn a lot
- You may also scare your family members and pets with loud noises and heavy computers!
- What is in the “bare metal” of a virtualization server? Memory and processor cores. The more the merrier.



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What can AWS do for you?

**ME: I JUST NEED TO HOST
'HELLO WORLD' ON THE CLOUD.**



**AWS: NO PROBLEM. HAVE YOU
CHECKED ALL OF OUR COOL NAMED
PRODUCTS YOU'LL NEVER UNDERSTAND?**

[AWS in a Nutshell](#) is used under fair use

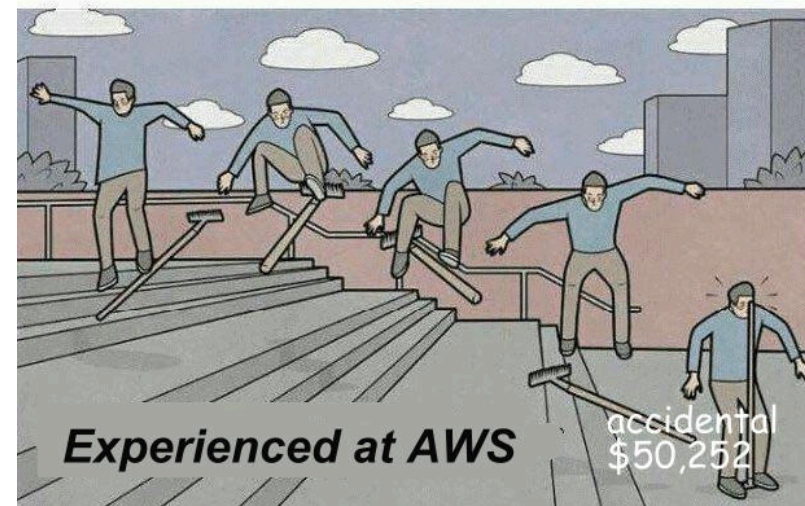
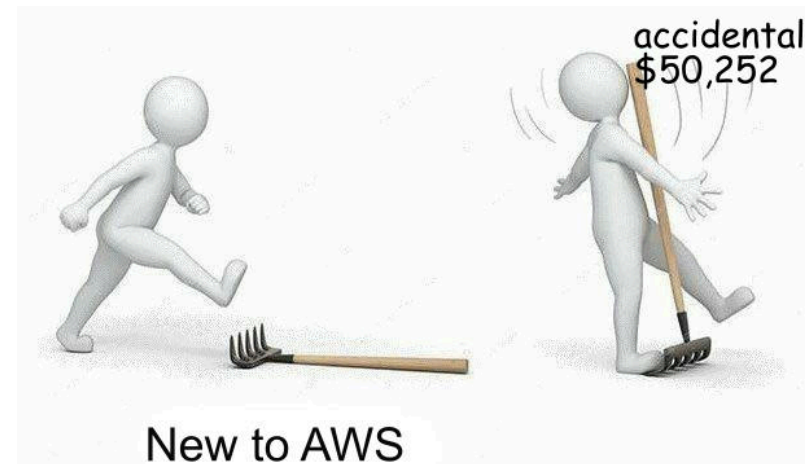
- Network architecture as code (subnets, VPCs, internet gateways, NAT gateways, load balancers, etc).
- Tons of services: S3 storage, RDS database, ECS containers, EC2 compute, IAM identity and access...
- Deploy *quickly*
- Scale *quickly*
- Unique products: spot instances, AMI sharing, mechanical turk 😊

How do you deploy to AWS?

From least favorite to most favorite:

1. AWS Web Console / Instance Management
2. AWS Command Line and scripts
3. AWS Command Line and Ansible/Vagrant
4. [Terraform](#) and Provisioning Scripts
5. Terraform and Ansible

[Terraform licensing issue?](#)



[Using AWS](#) is used under fair use