


Contemporary Operations



Operation is all about Networking!



Tips!

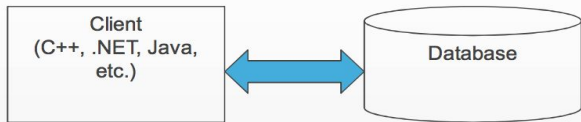


“Everything fails, all the time.”

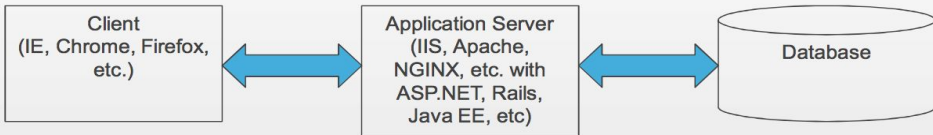
“Design for failure and nothing will fail”

- Werner Vogels (Amazon CTO)

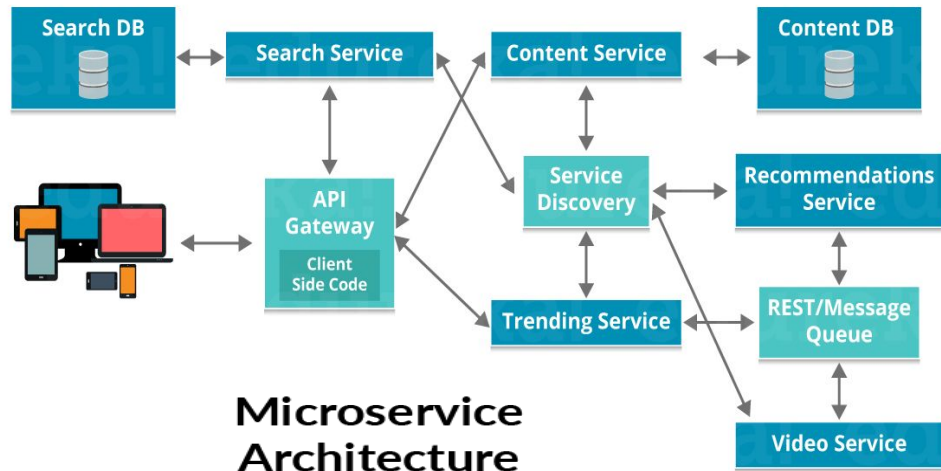
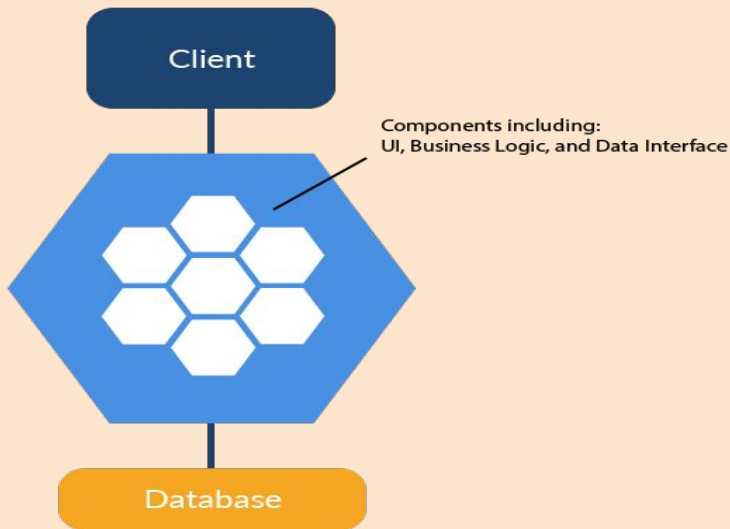
2-Tiered Architecture



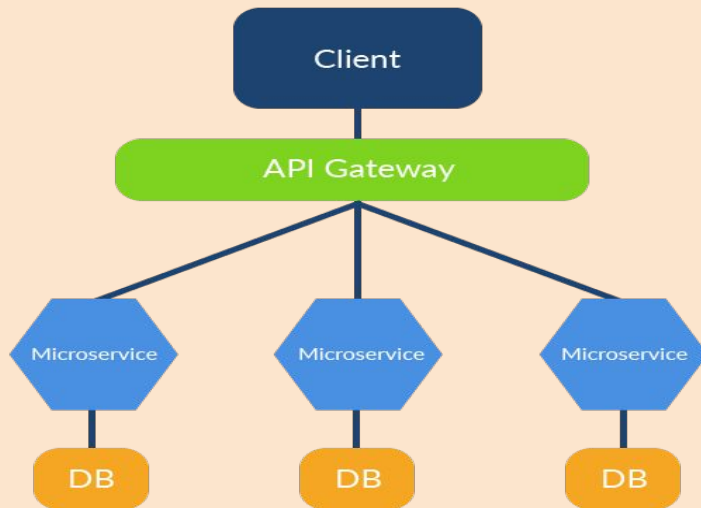
3-Tiered Architecture



Monolithic Architecture



Microservice Architecture



ARM and x86 (Computing Architecture)

- ARM (Raspberry Pi, mobile, smart watch, etc...)
- x86 (Servers, Desktop, Laptop, etc...)
- Generally ARM is lower energy consumption, and x86 is higher

<https://www.educba.com/arm-vs-x86>

Bare-metal Server

- Dell, IBM, UCS with Nexus, etc...
- Gotta treat like a baby



BSD (Kernel)



- Unix-like OS, free and open source
- Optimized TCP stack (Networking), security, stability (got problem with Hypervisor)
- Popular users (Cisco, Netflix, F5, Apple, etc...)
- Desktop environment GNOME, KDE, etc (GhostBSD, NomadBSD, Xfce, etc...)

<https://senioradmin.de/BenchmarkBSDLinux.html>

<https://openconnect.netflix.com/en/appliances>

Linux (Kernel)

- Unix-like OS, free and open source
- Used everywhere
- Desktop environment KDE, GNOME, etc (Mate, DDE, Xfce, etc), Arch based distros are really pretty
- Generally Linux is great!



Virtualization

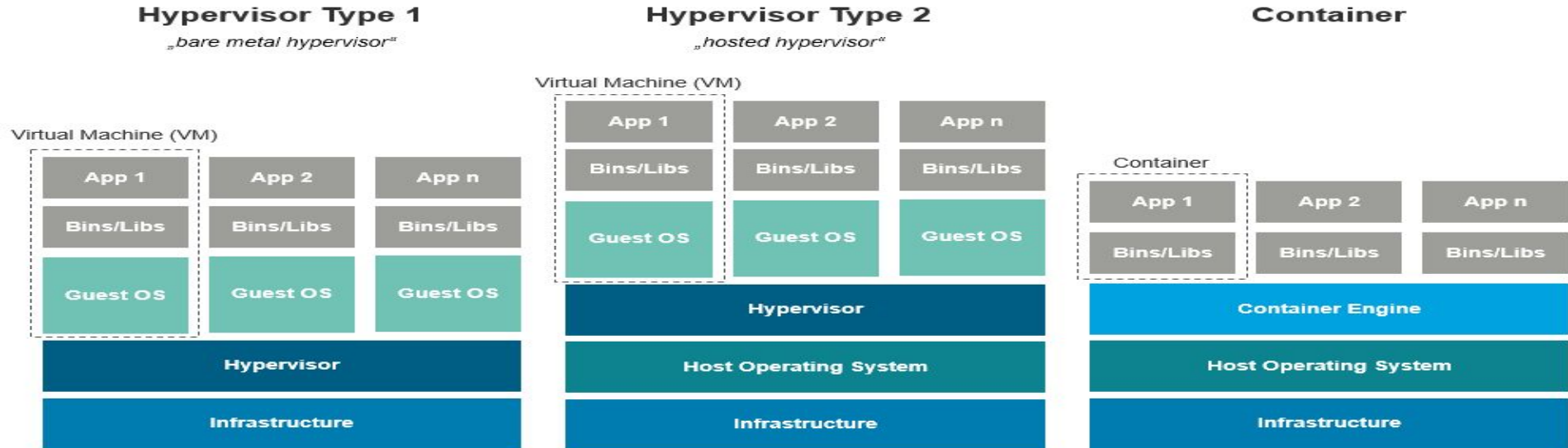
- Clustering nature
- Hypervisors like KVM, VMWare vSphere (ESXi), XenServer, etc...
- Popular is VMware
 - Always get ready DNS servers, VMDK, VMX, OVA, etc



**Virtualized Server
Architecture**

Container

- Process isolation
- Popular one is Docker so far



Kubernetes

- Datacenter OS
- Microservices Platform
- A bit complex but pretty cool
- Need richness tooling used
- Configurable and Extensible
- Make alive Cattle analogy



Pets vs Cattle



- Given a familiar name
- Taken to the vet when sick
- Hugged



C.I.A.



- Branded with an obscure, unpronounceable name
- Shot when sick
- Eaten/Recycled (sorry PETA)



D.I.E.

<https://www.youtube.com/watch?v=VaE3jLPB4zU>

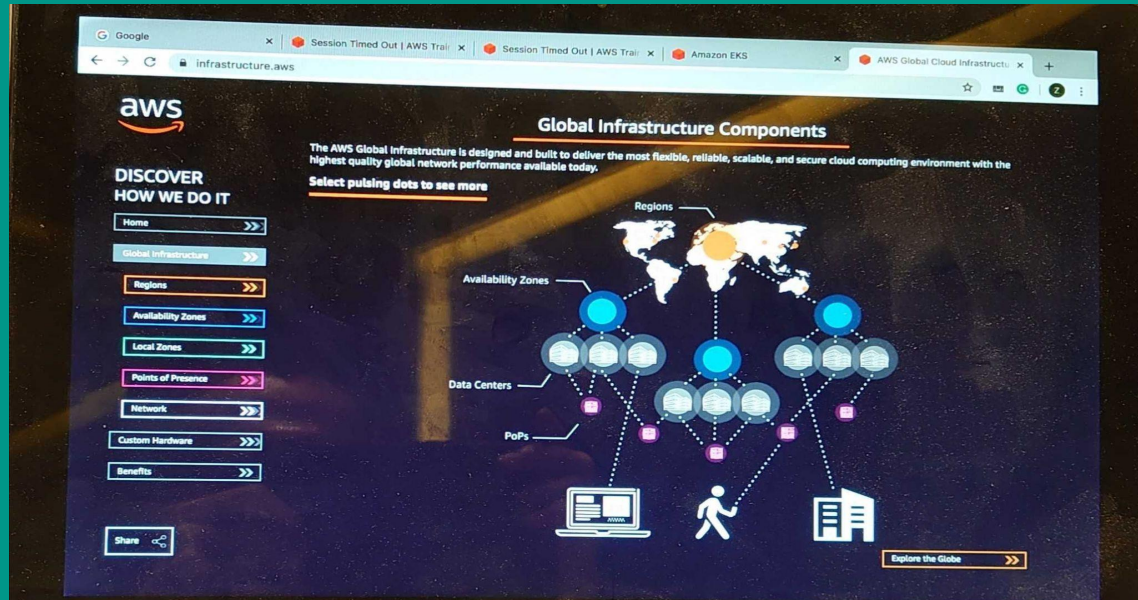
Cloud

<https://apps.kaonadn.net/5181491956940800/index.html>

<https://cloud.google.com/about/locations#network>

<https://infrastructuremap.microsoft.com>

<https://infrastructure.aws>



Automation

- Infrastructure/Configuration as Code (Terraform, Pulumi, Ansible, CFN, CDM, ARM, etc...)
- CI/CD (Jenkins, GitLab, GitHub, BitBucket, CircleCI, CodePipeline, CloudBuild, etc...)

Resourceful sharing

<https://www.youtube.com/channel/UCko1ZD9VbmVaTfVoec066bQ>

<https://www.youtube.com/c/YeLinAungOpenLab>

<https://www.facebook.com/thedopevs/videos>

<https://www.facebook.com/UbuntuMM/>

<https://www.youtube.com/c/HelloCloud>

<https://www.youtube.com/c/DevKTOps>

<https://ubuntu-mm.net/>