Capgemini

TECHNO VISION Change Making 2021
BE LIKE WATER

Ceci n'est pas une **Infrastructure**

Continuously build and deploy the next generation of software services, without even noticing infrastructure

Sounds like a pipedream. But the ultimately invisible 'no' infrastructure is there. Goodbye server room, hello asset-free business. Infrastructure as code, radical automation, software containers, microservices and serverless computing are all paving the way towards retail-style consumption of infrastructure, without being bothered by complexity. With software being continuously developed and deployed on an infrastructure that automatically adjusts and scales, IT infrastructure can finally become the powerful utility it was destined to be; always available, just unperceivable. C'est tout.

Thomas de Vita
Expert in Residence

WHAT

- Virtualization, software-defined networking and data centers, cloud, APIs and software containers are transforming IT infrastructure into a commodity that can be easily orchestrated and procured from a catalog of platform services.
- Infrastructure as code and platform engineering practices put the reigns in the hands of the developer; enabling rightsized, just-in-time provisioned platform services for application and data deployment within 'invisible' infrastructure activities.
- Serverless abstracts hardware from software, allowing the build, construction, deployment and operations of containers, server, storage and network landscapes, without the need to access or manage anything.
- Evolving further into 'NoOps' computing, modern event-driven application solutions are driving the adoption of 'Functions as a Service', where microservices are deployed on fleeting, cloud-based platforms, hidden from the developers and paid for per actual use. The actual infrastructure services no longer matter, nor are they noticed.

USE

- Fujifilm leverages Azure Durable Functions – part of the Azure Functions (serverless) solution stack – along with Face API and Azure AI, to drive unprecedented 'image to name' tagging in sports.
- New Zealand renewable electricity company, Mercury used AWS Lambda and AWS Step Functions to cut customer onboarding times from 20 minutes to 30 seconds, reducing their expected costs to just $20 USD per 10-thousand orders.
- Chicago-based company, Relativity developed a solution using a serverless architecture based on Microsoft Azure, saving weeks of developmental time versus traditional methods, representing a drastic improvement in its ability to solve business-critical problems and focus developer talent where it was most needed.
- AWS Lambda allows Thomson Reuters to load and process hundreds of digital streaming data services and products costs effectively and without needing to provision or manage any servers.
- Google Cloud Platform services like Cloud Pub/Sub, Cloud Dataflow, and BigQuery enable Travlytix to build and run their customer data and personalization engine platform for global airline customers without having to manage hardware or spend weeks on deployments.

IMPACT

- Reducing application delivery complexity, making it simpler to establish and construct full application environments.
- Allowing for little to no upfront IT infrastructure investments, options are noticeably limitless.
- Enabling a more application-centric security construct, enhancing cyber security and enforcing cloud security innovations.
- Open Compute allows re-use, saving time, energy and cost.

TECH

- Open Standards: Open Compute Project Data Center, Open Compute Project Servers
- Serverless computing: AWS Lambda, Google Cloud Functions, Microsoft Azure Functions, IBM Cloud Functions

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