Capgemini

The Soft, the Hard and the Virtual

Infrastructure turns virtual, software- driven and automated, delivered as easy-to-consume services

What do you do in an intense standoff with IT infrastructure that gets more complicated and unmanageable by the day - while it's trying to steal all your money? Well, send in the Navy. Virtualization is key to standardize, hide complexity and render deployment invisible. Software transforms hardware and everything else infrastructure-related into flexible, editable code. Automation weaves it all together, bypassing tedious, replicable and error-prone human activities, delivering infrastructure services in an instant. Together, they make the unbeatable foundation for a business that moves even faster than its shadow.

in

Ajith NC
Expert in Residence

read the full report here ››

WHAT

- Infrastructure is categorized as a utility-based capability, where compute, network, storage and security features are easily contracted, used, modified and deleted without manual intervention or exposure to technical details.
- Virtualizing infrastructure capabilities is a de facto approach, optimizing the use of available resources as well as the benefits from various cloud deployment options, including compute, network and storage.
- With a new base foundation formed from this 'infrastructure platform' paradigm, application development teams can provide succinct and functional business solutions and services.
- Galvanized by the evolution of infrastructure engineering to platform engineering, this closely aligns modern infrastructure provision to the continuous delivery in 'Gitops' approaches.
- Declarative platforms are based on 'soft-coding' components rather than point-to-point configuration and integration of actual hardware. Combined with API, infrastructure is truly programmable.
- Orchestration and automation tools enable repetitive infrastructure platform tasks to be executed consistently time and again, using consumable, managed and monitored scripts, without risk of human error.

USE

- The National Australia Bank (NAB) migrated its NAB Connect platform to the Amazon Web Services (AWS) Cloud. To provide secure and scalable compute capacity to drive a platform for multiple account users, Elastic Compute Cloud (EC2) enabled uncapped payment transfers using PayID, international payments and foreign exchange services.
- Once a very traditional, complex and manual infrastructure environment, a UK-based public sector organization has moved to a fully IaaS-based one, reducing build and service times significantly.
- Replacing a legacy infrastructure that was no longer fit for purpose, the British Army partnered with VMware to deliver a software system enabling the super-speedy development and deployment of applications.

IMPACT

- Increased business agility and time to market.
- Reduced complexity and costs, minimizing technology options and integration issues.
- Infrastructure platform services aligned in real time with business needs
- Diversity of technology and components enables a more elastic approach towards resiliency and scalability, whilst eliminating configuration drift and mitigating risk.

TECH

- Industry standards: OpenFlow, Cisco Opflex, OpenStack, OpenShift
- Virtualization Tools: Hyper-V, VMWare vSphere, Red Hat Virtualization, Citrix Hypervisor, Oracle VM Server, AWS EC2, IBM PowerVM, SuSE Linux Enterprise Server
- Automation & Orchestrations Tools: Ansible Tower, CFEngine, Otter, Puppet, Saltstack, TerraformChef, Red Hat Ansible, vRealize Orchestrator, BMC Cloud Lifecycle, IBM Tivoli Provisioning, IBM Cloud Orchestrator, Microfocus Orchestration, HPE Cloud Service
- Cyber Security related: Akamai Kona, Arena ITI, AWS Security Hub, Azure Information Protection, Black Duck, GCP Command Center, IBM QRadar Advisor with Watson, Symantec