Cloud Strategy

A Few Observations

Multi-cloud Antipattern

Before we get to how to go to cloud, let's start with opposite; the number #1 anti-pattern many companies jump into: multi-cloud.

- Most companies and organizations today go gaga over multi-cloud. Many are not comfortable in one cloud environment yet but they want to go to another one. The idea seems to be if 1 cloud is good, surely 3 must be better.
- I think this is a mistake. Yes, many companies do this, but I never found a god reason for it anywhere. This seems to be an example of a standard IT practice across the industry without any proper justification and any thought given to this practice.
- Cloud is technical infrastructure; it's not a financial strategy were spreading the risk across different financial instruments is just about the most basic strategy available.
- Cloud infrastructure should be based on a "pick one" strategy. When you build your data center you pick one brand for a hardware type (Dell or IBM servers) and software type (MSSQL or MySQL as a database) etc.
- If you are buying a SaaS service and it's only available from a cloud that is different from yours that's fine. This however doesn't invalidate the main objective which should be to use a single vendor whenever possible.
- In general, all 3 major cloud providers (AWS, Azure, GPC) are more alike than different selecting all of them is like buying 3 identical bicycles in different colors except worse.

Why Is Multi-cloud a Bad Strategy

- The basic problem is that by using 3 different vendors at the same time we are introducing more complexity to the environment which goes against a basic enterprise architecture principle
- More complexity inevitably means higher costs in the future and possibly extended time-lines for projects which itself will translate into higher costs
- Here are specific reasons why using vendors that are more-or-less identical is bad for business

No Value

- They provide the same core services
- Their services are priced about the same
- The risk of a provider ceasing to operate is minimal

Additional Skills

- 3 different skill sets will be needed for IT development and operations teams
- To maintain 3 core skillsets even per team is costly and currently hard-to-find

Bad Strategy

- Solution architects and developers will have to choose from one of the 3, assuming that's the purpose of the whole exercise
- This is not a good enterprise strategy

Technical Complexity

- All 3 vendors operate as competitors so there is no easy way to integrate their private clouds
- This will almost certainly be required if our systems are spread across 2 or 3 clouds

Simple Comprehensive Cloud Strategy

Cloud Commitment

- **To say that we are moving to the cloud is not enough**; everybody is. It needs to be more specific and tangible.
- One of the possible approaches would be to have a new architecture principle that states, "**Cloud first strategy for each and every new project**".
- Rationale for the cloud would seem to be obvious but it actually isn't and **needs to be spelled out clearly for people to buy into it**, see page # 5

Cloud Vendor Selection

- **A cloud strategy as a buffet where users pick-and-choose** which one they want is not a good idea for many reasons which were already stated.
- **But the top reason to select one primary vendor is simply to reduce costs**. All vendors work on a principle that gives their clients savings based on usage, therefore one needs to maximize usage with a single vendor to get the most savings. And since the costs are about the same across the vendors, simply sticking with one vendor should give the most savings, in theory. In practice it's a lot more complicated but the general point still stands.

Cloud Methodology

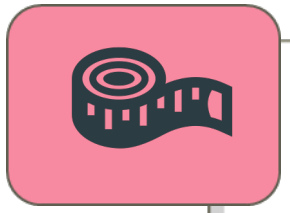
- **Once the primary vendor has been selected then, the job is not over. It's only the start.**
- Ultimately the **cloud strategy will only be successful if the cloud practice is more secure, more efficient, faster,** more automated and cheaper than the current practice.

The Benefits of the Cloud

Superfast resource provisioning. Computing resources can be provisioned in minutes: CPU, storage, network

It's easier to follow best practices in the cloud than it's possible on-prem simply because all the tools are already available there

Cloud can be more secure than on-prem if the best practices are followed



The resources can be highly customized based on client needs and costs.

The vendors offer numerous resources to assist their clients to manage their cloud from migration to security, billing, costs, governance etc.

Ultimately the cloud is primarily about the cost reduction. The reduction can be significant, but it's not guaranteed, it must be achieved

How To Get the Cloud Payoff

- The simple rule is “manage your cloud presence” primarily by sticking to the best practices that the vendor recommends at the minimum. Or suffer the consequences.
- Some of the principles of well managed cloud presence (based on AWS) are :
  - central account and user management
  - central resource access management
  - central cost and billing management
  - central logging, monitoring and auditing
  - central network management
- As importantly, to take full advantage of the could promise, the right solution architecture must be promoted.
- This architecture is very simple, and it’s called SAM (Serverless Architecture Method). This is arguably the true cloud-native architecture rather than the containerized service architecture which is commonly described as cloud-native.
- SAM is not only about simplicity where a whole layer of infrastructure is made obsolete (the servers). It can and should be a huge cost reducer. Anecdotal evidence I have heard from the owner of cloudguru.com website was that by using AWS SAM architecture their server usage which would be up-to a 100K a month was replaced by Lambda (serverless function) costs that were a few hundred dollars per month. Think about that.