



Raising multi-cloud management **to the next level**

Agencies have the opportunity to mature their approach to deploying and funding cloud environments



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TECHNOLOGY IS NEVER **STATIC**, and that's especially true of cloud. Even as agencies

move into multi-cloud environments, products and services continue to change and improve. To keep up with all those advances, agencies need to take their management practices to the next level.

Many agencies are using cloud the way they used non-cloud data centers 15 or 20 years ago. But instead of customizing their cloud environments, they should use tools like Terraform, Juju or Pulumi to create, deploy and manage infrastructure as code on any cloud and then enable automation and

orchestration in their cloud platforms.

In addition to using predetermined, software-defined configurations for cloud deployments, agencies should develop a more strategic approach to funding their multi-cloud environments.

Public versus private virtualization

Many agencies go to a public cloud expecting the same level of efficiency they had with their previous data center purchases, but it's important to note that there are major differences between private and public clouds.

In the past, when agencies acquired the components of a network, they paid for the entirety of that system at acquisition time. In the early days of virtualization, they could buy a server and pack as many as 100 virtual machines into it – all for the cost of the server.

When agencies work with hyperscalers, they pay for a cloud instance, but even though that instance is using virtualization, the agencies do not receive the benefit of packing workloads into that resource. Say an agency buys a virtual machine through a subscription and it's running at 20% utilization. In a public cloud, the remaining

80% is not usable by anything but that instance. Those resources are captive and cannot be shared.

By contrast, in a private cloud, the agency is the provider, so it can take full advantage of the benefits of virtualization. With either approach, though, agencies need to understand and then right-size their cloud utilization.

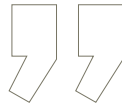
Making strategic choices about cloud funding

Agencies should also take a fresh look at their cloud funding models. Beyond the total cost of ownership, they need to reevaluate how they pay for cloud products and services. They can choose to treat that spending as a capital expenditure (CapEx), which typically has a higher cost of ownership, or as an operational expense (OpEx).





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An OpEx approach makes sense for many agencies because the initial cost of cloud adoption can be high. They get the most benefit from OpEx when they have a subscription and pay only for the services they use. However, in long-term environments, it would be better to designate that spending as CapEx if possible.

Furthermore, the funding model for multi-cloud environments should be a blend of OpEx and CapEx. I recommend that

agencies look at what they're spending year over year and try to move the well-known, long-running and predictable consumption of resources into CapEx while using OpEx for demands that are hard to forecast or have a high level of fluctuation, usually in response to the needs of end users or customers.

Dell Technologies is uniquely positioned to offer the same technology, services and resources under CapEx, OpEx or a combination of the two. We can do that

blend however it's needed because we're not changing the technology. Our approach also helps agencies better understand and forecast their costs.

By reconsidering their approach to building and funding multi-cloud environments, agencies can mature the way they manage a technology that is becoming foundational for government operations. ■

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