

How to build a turnkey private and hybrid cloud

By Garima Thockchom | Thursday, September 15 2011

CIOs and datacentre managers are hesitant to place important data and applications in the public cloud. As a result, turnkey, ready to go, cloud solutions have become very popular. Here are the three essential elements that should constitute any turnkey private and/or hybrid cloud solution.

The hype around cloud computing is hard to ignore and as each vendor is trying to put the word "cloud" in front of all its products, enterprises are finding it extremely difficult to sift through the noise and really find which products work best specifically for their data center.

While the ability to utilise the public cloud is extremely appealing due to the reduced infrastructure management needed in a public rather than private environment, CIOs and data center managers are hesitant to place important data and applications in the public cloud. With this cautious viewpoint, enterprises are turning to private and/or hybrid cloud solutions that will enable them to receive the benefits of a public cloud while keeping their infrastructure under their control and experience improved agility and infrastructure utilisation - leading to dramatic cost and time savings.

Therefore, the popularity in turnkey, ready to go, cloud solutions has skyrocketed over the past year as enterprises are on an active search for the simplest and quickest way to get their private cloud infrastructure up and running. A turnkey cloud promises some appealing benefits like simplicity, quick roll-out, and cost savings, but many organisations are still perplexed by how to evaluate a turnkey solution - or even what capabilities one should include - and how to integrate it with their existing network, compute and storage infrastructure.

To help enterprises evaluate here are the three essential elements that should constitute any turnkey private and/or hybrid cloud solution:

1. Intelligent and reliable automation features:

A turnkey cloud solution must be able to automatically provision configurations when needed and decommission devices when not needed. Additionally, it should be able to combine all known devices, discover new devices and compile them into a resource pool. With the introduction of hybrid cloud computing the importance for intelligent automation features significantly increases. Enterprises need to be able to reliably and securely burst into a public cloud when resources are not available in the private cloud.

One of the most important elements of ensuring the selection of the correct turnkey solution for an environment is selecting a solution that not only provisions virtualised resources but physical and public cloud resources as well. Today, when organisations think of cloud solutions they seem to jump right to technology that only handles virtualisation. However, this is only a partial solution as enterprises on average have only 50 percent of their applications virtualised. Therefore, when building a private cloud using a tool that provisions hardware is a necessity to gain the full benefits of a private cloud. The ability to provision and decommission entire hardware and virtualised topologies that include compute, network and storage is a crucial element of a turnkey solution. This feature is crucial to controlling resource sprawl and maximizing the utilisation of existing resources.

2. Out-of-the-box adaptors for existing infrastructure:

Seamless integration of a cloud management tool into an enterprise's existing infrastructure is extremely important as CIOs and data center managers are trying to get the most out of their existing infrastructure. All environments these days are heterogeneous with equipment from multiple systems, network and storage vendors. So, when enterprises bring in a private cloud solution it needs to be able to work across these multi-vendor devices.

If additional resources need to be added to a workload IT should not have to hesitate because they have a Dell system but would like an HP system. Similar to the frustration that arises if someone gets a flat tire and has a Goodyear right around the corner but all they can use is Michelin, a turnkey solution that is not able to provision a wide variety of devices can cause a lot of headaches for IT.

There are thousands of hardware devices and several virtualisation vendors that exist today and writing an adaptor for each of these resources is extremely time consuming which is why enterprises need to look for tools that have pre-built adaptors for most of the popular hardware devices and virtual resources from vendors including Dell, IBM, HP, NetApp, EMC, Cisco, Juniper, VMware, Citrix, Microsoft, Red Hat, etc. By creating a private cloud out of existing hardware it not only saves on time, but also creates significant CAPEX savings by re-utilising existing resources and spare capacity for new workloads instead of purchasing new equipment.

3. Predefined templates for commonly used compute, network and storage configurations:

It is important to first mention that without predefined templates a cloud solution cannot be turnkey. The initial starting point to ensure this requirement is met is looking for the library of predefined templates. The greatest expense for building a private cloud is in the designing and crafting of the templates for the topologies that will frequently be used. Additionally, with most cloud solutions one can build custom templates that need to take the existing environment in the data center into consideration.

When the turnkey cloud solution offered a pre-built library of templates for commonly used topologies then enterprises are able to significantly speed up the time it takes to get a private cloud up and running, thus accelerating their time to value. These predefined templates can deliver 50 to 90 percent of the design for an environment and all they require is IT making easy customizations to make the template fit their specific environment perfectly.

The purpose for a turnkey solution is to be able to quickly and reliably convert an existing static environment into a self-service dynamic environment. And in order for this environment to be successful the turnkey solution must contain the three elements discussed. These capabilities will be crucial for enterprises looking to deploy a turnkey private or hybrid cloud.

Garima Thockchom is VP of Marketing at Gale Technologies, a provider of infrastructure automation software solutions that power IT as a Service for labs, enterprises, and service providers.

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