Hosting Controller
Hybrid Cloud Automation

VMware Business Case

VMware ESXi is a purpose built bare-metal hypervisor that effectively partitions hardware. As a bare-metal hypervisor, it installs directly onto the physical server with direct access to the underlying resources without the need to install an operating system. ESXi forms part of the vSphere product suite.

Overview

Hosting Controller VMware module simply extends a more powerful web interface to the provisioning of virtual machines in VMware ESXi. Although VMware provides its own HTML 5 based vSphere Client that lets administrators manage the essential functions of vSphere from any browser, Hosting Controller extends extra benefits that are not available out of the box with ESXi. Here we intend to highlight all those extra benefits.

Business Case

Why use Hosting Controller VMware Module ?

Executive Summary

VMware ESXi is a purpose built bare-metal hypervisor that effectively partitions hardware. As a bare-metal hypervisor, it installs directly onto the physical server with direct access to the underlying resources without the need to install an operating system. This direct access to hardware allows it to perform better and run faster. In addition bare-metal hypervisors are extremely secure since they are isolated from the attack-prone operating system. ESXi forms part of the vSphere product suite.

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Problem

Although VMware vCenter Server furnishes a centralized platform for controlling vSphere environments and a single console for providing clear visibility across all virtual machines, it does not include a comprehensive quota management system where all virtual machine resources such as the number of virtual machines, CPU cores, RAM size, VHD size etc are offered neatly to customers in quota delimited service packages. Quota management is an essential feature of the service provider and data center industry. It signifies the "enforcement factor" within self-serve. It makes sure that any requests for provisioning are within the bounds, set by the plans purchased by the customers and within the quotas extended to them against their subscriptions. It has to be flexible enough to fall inline with varying business and product management needs of the data center.

Benefits

Why should Hosting Controller be used for creating and managing ESXi virtual machines? The following points provide justification and rationale for using Hosting Controller:

Quota Management

The foremost benefit of using Hosting Controller is its quota management feature. Hosting Controller provides a full quota manager that enforces limits in real or near real-time. VMware ESXi virtual machine resources such as CPU cores, RAM size and VHD size can be packaged into priced service plans and sold downstream to the customer base. The customers will not be able to overstep their limits while provisioning virtual machines. Plan management is not something that is available out of the box with vCenter and this is where Hosting Controller comes in.

Self-Service

End users should be able to manage and control their own resources, without admin intervention. Hosting Controller furnishes exclusive interfaces to end customers for the management of ESXi virtual machines. Though VMware provides its own HTML 5 vSphere Client for the administration of the entire vSphere infrastructure from a single location, the client is essentially for administrators. Hosting Controller on the other hand also provides zero touch, self-care exclusively for end customers.

Segregation

The requirement for data centers is to be able to share the same hardware among multiple customers, but in such a manner that customers are not able to view resources of other customers. By default the vSphere infrastructure does not come segregated. Hosting Controller provides the required layer of segregation which allows multiple customers to share the same infrastructure without being able to view or use resources of other customers.

Management of Other Services

Another important benefit of using Hosting Controller is the management of varied services under one roof. Enterprises may want to manage other services besides ESXi, through a single interface. HC offers enterprises the unique opportunity to manage other services (MS Exchange, MS SharePoint, Hyper-V, Website Hosting etc.) besides ESXi, through the same interface.

A list of all services offered by Hosting Controller can be seen here

HC VMware Features

Configuration Features

- **vCenter Management:** Add, Update, Associate VMware servers to vCenter.

Admin Features

- **VMware Servers:** Add, Edit, Delete, Dedicate and Check Health of VMware servers.
- **Base OS Management:** Choose from a wide range of Windows/ Linux base OS types. Edit, Disable, Make a copy of base OS types.
- **Repository Management:** Maintain virtual hard disks (.vmdk) files on a separate central location and fetch these files from the central repository.
- **OS Templates:** Add, Edit, Delete and Inspect Disks of VPS templates.
- **Public IP Addresses:** Add, Assign and Delete range of logical public IP addresses to and from the VMware server.
- **Private IP Addresses:** Add and Delete range of logical private IP addresses to and from the VMware server.
- **VM Import:** Import existing virtual machines from the ESXi host.

Benefits

Pre-configured OS Templates

An OS template is a master copy image of a virtual machine that includes the guest OS, VM disks, virtual devices, and settings. An OS template can be used as a basic template for creating many consistent and standardized virtual machines. Hosting Controller enables administrators to use pre-configured and customized OS templates for creating virtual machines in VMware ESXi.

End User Features

- **VM Creation:** Create a virtual machine.
- **VM Deletion:** Delete a virtual machine.
- **VM Search:** Search virtual machine by name.
- **VM Listing:** View list of virtual machines.
- **VM Details:** View virtual machine CPU/memory/storage size.
- **Change Details:** Change virtual machine CPU/memory/storage size.
- **VM State:** Start, Pause, Shut down and Reboot virtual machine.
- **Change Password:** Change virtual machine administrator password.
- **Snapshots:** Take virtual machine snapshot and view its date taken. Apply and remove snapshot.
- **Public IP Assignment:** Assign and Delete public IP addresses to and from the virtual machine.
- **Private IP Assignment:** Assign and Delete private IP addresses to and from the virtual machine.
- **Web Console:** Access virtual machine through a secure https connection, on the web.

Admin Features

- **Plan Management:** Add, Sell, Edit and Delete service plans and composite resources with IaaS (virtualization) resources.
- **Network Information:** Indicate settings for external and internal networks.
- **Data Storage Folder:** Specify the logical storage containers for virtual machine files.
- **Summary Email Management:** Send out summary emails for the creation, transfer and import of virtual machines.
- **DVD Drive:** Allow DVD drive in media on virtual machines.
- **API Availability:** Integrate with external applications and interfaces through a firm API.
- **Static MAC Addresses:** Associate static MAC addresses with public IPs.
- **Migration:** Migrate VM from one ESXi node to another in VCenter.

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