

IBM Workload Deployer

VMware vCenter Server Integration



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This presentation covers VMware vCenter integration with the IBM Workload Deployer Appliance.

Agenda

- VMware VirtualCenter (vCenter) Server overview
- Integration with IBM Workload Deployer
- Configuring VMware VirtualCenter (vCenter) Server in IBM Workload Deployer

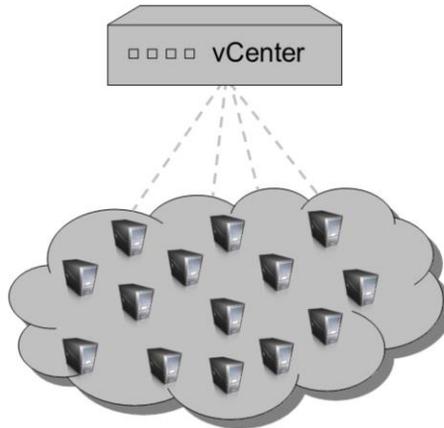
After a brief overview of VMWare vCenter, you will see how it integrates with the IBM Workload Deployer Appliance and the configuration needed to accomplish this.

vCenter overview

This section will give a brief overview of the VMware vCenter Server.

VMware vCenter Server overview

- Centralized management of ESX Servers



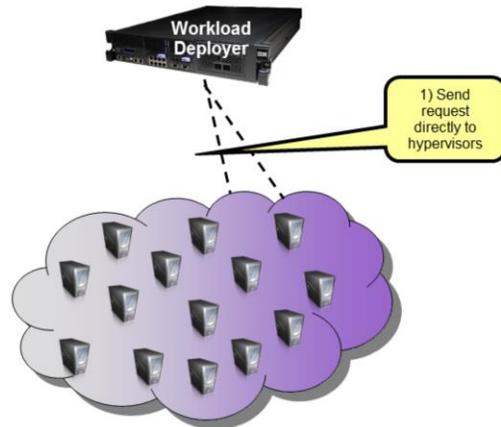
vCenter is a management piece of software that allows you to centrally manage your entire VMware-based virtualized IT infrastructure. Instead of managing each hypervisor directly administrators manage all of the hypervisors in one central location. vCenter goes above and beyond just giving you the capability to centrally manage your environment. vCenter is the foundation of a suite of add-on products and features that give capabilities such as failover, high availability and live migration.

Integration with IBM Workload Deployer

This section covers how VMware vCenter integrates with IBM Workload Deployer.

VMware ESX integration

- Each hypervisor individually managed by IBM Workload Deployer
- IBM Workload Deployer takes care of placement and deployment

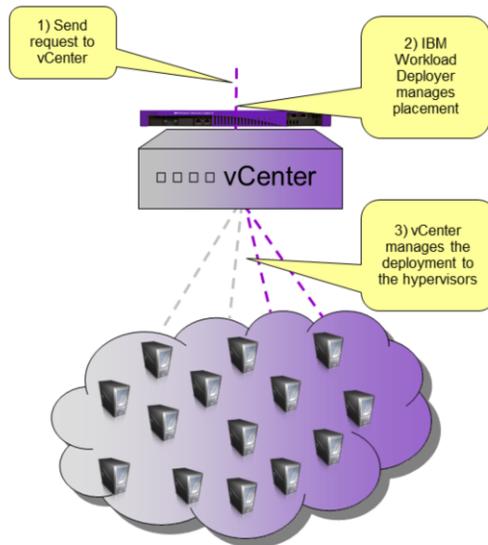


There are two ways in which IBM Workload Deployer can manage your ESX hypervisors. They can be managed directly by IBM Workload Deployer, as shown in this slide, or they can be managed through vCenter which is covered in the remaining slides. When IBM Workload Deployer is configured to directly manage the hypervisors, it will manage placement and deploy directly to the hypervisor using the hypervisor's API.

ESX hypervisors can either be part of a custom cloud or they can be managed by VMware vCenter. If the hypervisors are managed by VMware vCenter, then they are discovered as part of the managed end point.

VMware vCenter integration

- IBM Workload Deployer interfaces with vCenter, which in turn manages the hypervisors
- vCenter manages the deployment
- IBM Workload Deployer manages placement
- Does not support
 - Storage VMotion
 - Distributed Resource Scheduling



IBM Workload Deployer supports VMware ESX with vMotion by allowing movements when a virtual machine that is created by the appliance is moved. Storage VMotion and Distributed Resource Scheduling (DRS) are not supported. If you are going to configure IBM Workload Deployer to work with vCenter you will need to make sure that you disable those features.

Configuring IBM Workload Deployer

This section covers adding vCenter and performing a simple deployment using vCenter as your target.

Create cloud group (basic information)

- Navigate to **Cloud > Cloud Groups**, click the plus icon 
- Fill in the required fields
 - Name – Any unique name
 - Hypervisor type – Choose **ESX**

Describe the cloud you want to create.

* Name:

Description:

* Hypervisor type: 

Group type:  Managed by a Virtual Center

You configure vCenter differently than you configure an individual ESX hypervisor. First you navigate to Cloud>Cloud Groups and click the green plus icon. This will bring up the cloud group creation panel. Enter a unique name and choose “ESX” as your hypervisor type.

Create cloud group (vCenter information)

- Select **Managed by a Virtual Center**
- Enter connection information of the VMware vCenter server
- Click the **Create** button

Describe the cloud you want to create.

* Name:

Description:

* Hypervisor type:

Group type: Managed by a Virtual Center

Provide the credentials for Virtual Center

* Host name:

* User name:

* Password:

* Verify password:

Choose the “Managed by a Virtual Center” check box and fill in the host name, user name and password of vCenter. This user needs to have administrative privileges. Once all information has been entered, click the “Create” button to complete the cloud group setup.

Verify your vCenter cloud group

- Remove any hypervisors that you do not want managed by IBM Workload Deployer
- IBM Workload Deployer requires **exclusive** use of the hypervisor

Cloud group 1 ⚙️ 🌐 ✖️

Type: 🌐 Managed by a Virtual Center

Version: VMware vCenter Server 4.1.0 build-258902

Current status: ⚠️ You must start at least one hypervisor to create virtual systems.

Updated on: Jan 27, 2012 4:17:59 PM

Hypervisor type: ESX

Use linked clones: Enable Disable

Overcommit storage by: % You must specify a value greater than zero to overcommit storage.

CPU allocation: % The specified CPU will be allocated for deployments.

Cloud memory allocation: % The specified memory will be allocated for deployments.

Hardware PVUs: 1200

URL: <https://9.3.75.71/sdk>

Security certificate: 🌐 Accepted [\[remove\]](#)

☰ Cloud hardware 3 hypervisors: 3 maintenance mode

Status	Hypervisors	CPU	Memory	Storage (MB)	Shared network
🌐	9.3.75.125 [remove]	<input type="text" value=""/>	<input type="text" value=""/>	<div style="width: 42%;"><div style="background-color: green; height: 10px;"></div></div> 42%	None
🌐	9.3.75.127 [remove]	<input type="text" value=""/>	<input type="text" value=""/>	<div style="width: 39%;"><div style="background-color: green; height: 10px;"></div></div> 39%	None
🌐	9.3.75.124 [remove]	<input type="text" value=""/>	<input type="text" value=""/>	<div style="width: 51%;"><div style="background-color: green; height: 10px;"></div></div> 51%	None

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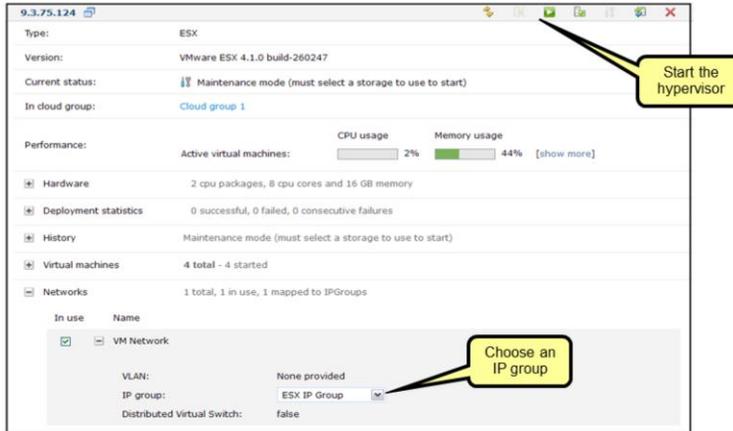
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After the cloud group has been created, it will have a list of all hypervisors managed by vCenter. Remove any hypervisors that you do not want managed by IBM Workload Deployer by way of vCenter. Any hypervisors that remain can be used as a target during pattern deployment. Remember that IBM Workload Deployer requires exclusive use of the hypervisor.

Configure hypervisors

- Navigate to **Cloud > Hypervisors > your_hv**
- Expand **Networks > VM Network** and choose an IP group
- Start the hypervisor



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Next you need to complete the hypervisor configuration. Navigate to Cloud > Hypervisors. For each vCenter hypervisor that you added, you need to specify an IP group and select the storage before starting the hypervisor.

Deployment

- Navigate to **Patterns > Virtual Systems > your_pattern** and click the deploy icon
- Choose the cloud group that represents vCenter
- IBM Workload Deployer will supply placement information
- All communications (file transfers) go through vCenter

Describe the virtual system you want to deploy.

 Virtual System 1

 Cloud Group 1(vCenter) 

 [Schedule deployment](#)

 [Configure virtual parts](#)

You have successfully configured your vCenter cloud group. The final step is to verify that it is working as expected. You can do this by performing a simple stand-alone server deployment, making sure to specify the vCenter cloud group. Once the deployment completes, verify that a virtual machine was created on one of the hypervisors associated with your vCenter cloud group.

Summary

This section provides a summary of this presentation.

Summary

- You are now able to manage your hypervisors using vCenter with a few stipulations:
 - IBM Workload Deployer **still** manages placement of deployments
 - IBM Workload Deployer **still** requires dedicated access to the hypervisors

This presentation covered the IBM Workload Deployer to VMware vCenter Server integration. This integration comes with a few existing stipulations. One, IBM Workload Deployer still manages placement of deployments. Two, IBM Workload Deployer still requires dedicated access to the hypervisors.

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