

THE INTELLIGENT CHOICE FOR MICROSOFT® WINDOWS SERVER VIRTUALIZATION



CHALLENGE

Many organizations are turning to a virtual server infrastructure to help address common challenges of improving manageability and resource utilization. New ways are being sought to reduce the total cost of ownership of server infrastructure. To fully benefit from Windows Server® 2008 with Hyper-V and Systems Center Virtual Machine Manager 2008 (SCVMM) technology, a fully engineered virtualization solution is needed, that is both cost effective and easy to manage whilst simultaneously ensuring high availability with enterprise performance and stability.

SOLUTION

Dell has partnered with Microsoft to create several validated reference configurations, - profiled here - for Microsoft Hyper-V and SCVMM. Each offers a single source for fully tested hardware, software and services to accelerate and empower you to Simplify IT.

DELL HYPER-V REFERENCE CONFIGURATIONS

<http://www.Dell.com/Virtualization>

WHY DELL?

Fast Implementation, minimal risk.

Dell's Solution Engineering group has worked with Microsoft to test and validate several scalable, right-sized reference configurations to facilitate solution implementation of Windows Server 2008 and Hyper-V. Our Infrastructure Consulting team can help accelerate technology adoption by providing expert design and implementation assistance throughout all aspects of Microsoft server infrastructure.

Simplify IT.

We can help you utilize the Microsoft Core Infrastructure Optimization framework to Simplify IT.

Field Expertise.

Dell has invested thousands of hours in the development of field readiness and expertise around Windows Server 2008 implementation and server virtualization. This adds reliability, decreases risk and can enable quicker consulting engagements.

Easy Management & Maintenance

Dell offers our enterprise-class OpenManage™ platform, along with Microsoft's single management solution (Systems Center) for Physical and Virtual asset management.

EXPERT SERVICES

Infrastructure Consulting from Dell can accelerate Hyper-V adoption and empower you by bringing field expertise to all aspects of Microsoft Server Virtualization Implementation. Below are two of Dell Service's' featured two options:

	Hyper-V TECHNOLOGY INTRODUCTION (Estimated one Week)	*STRUCTURED DESIGN SOLUTION (Custom)
Key Service Steps	<p>Consultative Workshop Session– A Dell led session used to identify common considerations, risks and other key issues needed for a successful implementation.</p> <p>Proof of Concept Session -</p> <ul style="list-style-type: none"> • Installation of Hyper-V and SCVMM SCE into your existing lab. • Installation and configuration of Hyper-V (and associated dependencies) based on Dell's best practice under the guidance of a Dell consultant. • “Hands-on “introductory knowledge transfer of the most common features and components used. <p>Project Planning Session A Dell led session used to define the approach and next steps needed to adopt Hyper-V (with associated dependencies) .</p>	<p>Assessment Phase</p> <ul style="list-style-type: none"> • Tools based assessment, performance baseline and consolidation planning. <p>Design Phase</p> <ul style="list-style-type: none"> • Full design of Dell's Microsoft Server Virtualization solution. <p>Validation Phase</p> <ul style="list-style-type: none"> • Confirmation of solution readiness prior to implementation. <p>Functional (lab) Testing</p> <ul style="list-style-type: none"> • Functional testing of the proposed solution in your lab. <p>Pre-Build</p> <ul style="list-style-type: none"> • The solution design build in a production environment necessary for the delivery of a successful pilot. <p>Pilot</p> <ul style="list-style-type: none"> • A low-risk test of the solution performed in the production environment with key sample groups to help validate the end-to-end solution.
Deliverables	<ul style="list-style-type: none"> • Consultant led knowledge transfer of the deployed solution only. 	<ul style="list-style-type: none"> • WS2008 Design specification • WS2008 Validation specification • Management debrief
End State / Value	<ul style="list-style-type: none"> • Proof of Concept into a customer test lab based on Dell field experience. 	<ul style="list-style-type: none"> • Engineered solution consisting of a validated, repeatable build process in outline form. • Production deployment to a key pilot group

*Dell's best practice approach

IMPLEMENTATION – CAPTURE THE VALUE

Once the design has been agreed, Dell can execute all tasks required for full-scale WS2008 implementation depending on the role(s) needed and effectively manage the change into a production computing environment. Typical activities include, installation, configuration, migration, data transfer, acceptance testing, knowledge transfer as well as handover to operations and Dell support.

DELL HAS NO LIABILITY FOR LOSS OR RECOVERY OF DATA OR PROGRAMS

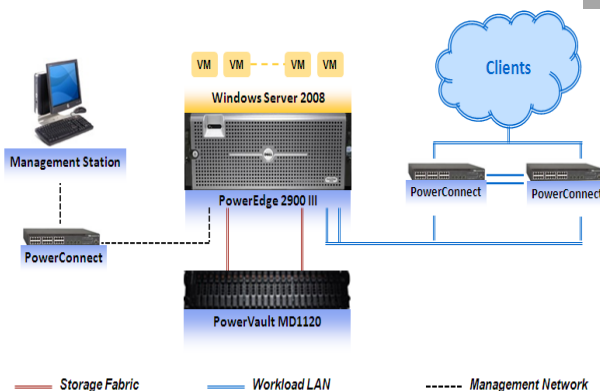
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HYPER-V REFERENCE CONFIGURATIONS

Note: These are provided as sample configurations engineered for performance and stability by Dell. Engage with Dell to develop a fully validated solution for your production environment.

Tier 1 - Sample *Small – Single Host*



Bill of Materials

Hardware & Software

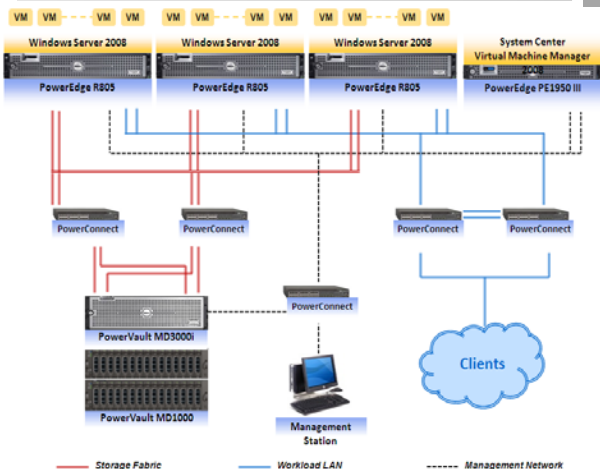
- (1+) WS2008 Enterprise or *Datacenter, Dell™ PowerEdge™ 2900 III with 32GB RAM, PERC 6E RAID Controller, 2 Quad-Core Intel® Xeon® Processors
- (2+) Intel PRO 1000PT Dual-Port 1GbE NICs
- (1) Dell PowerConnect™ 5424 GigE/iSCSI Switches for Backbone Network Access
- (1) Dell PowerVault™ MD1120 DAS Storage (with 2.5-inch 15K RPM SAS drives)

Services Enablement

- Installation of a Dell PowerVault MD1120 storage system (with 2.5-inch 15k SAS drives)
- Hyper-V Technology Introduction Consulting or WS2008 Structured Design Solution

*For higher density scenarios, Dell suggests Datacenter (est. 7+VMs)

Tier 2 - Sample *Medium – Highly Available Hosts*



Bill of Materials

Hardware & Software

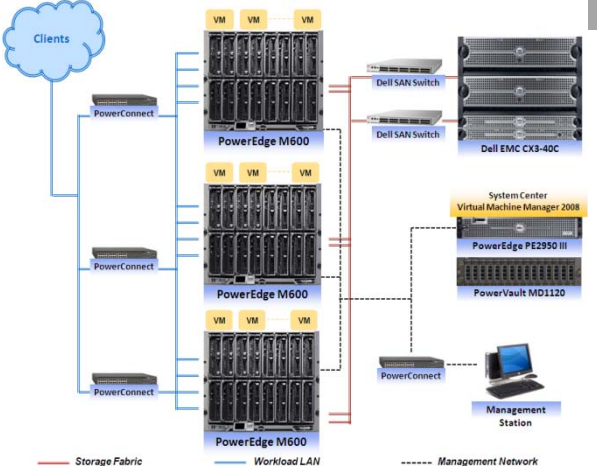
- (2+) WS2008 Enterprise or* Datacenter, Dell PowerEdge R805 with up to 64GB RAM, 2 Quad-Core AMD Opteron™ Processors
- (2+) Intel PRO 1000PT Dual-Port 1GbE NICs
- (2) Dell PowerConnect 5424 GigE/iSCSI Switches for backbone network access
- (2) Dell PowerConnect 5424 GigE/iSCSI Switches for dedicated iSCSI network
- (1) Dell PowerVault MD3000i Array with Dual Storage Processors, Dual controllers (with 300GB 3.5-inch 5k SAS drives)
- (1) Dell PowerVault™ MD1000 DAS Storage (with 3.5-inch 15K RPM drives)
- (1) Microsoft Systems Center with Virtual Machine Manager 2008 WGE or Enterprise

Services Enablement

- Installation of a Dell PowerVault storage system
- WS2008 Structured Design Solution Consulting or Hyper-V Technology Introduction

***Dell's best practice approach**

Tier 3 - Sample *Large – Enterprise D/R*



Hardware & Software

- (2+) WS2008 Datacenter, Dell PowerEdge multiple M600s with 32GB RAM, 2 Quad-Core Intel Xeon Processors per each blade
- (1) Broadcom 5708 Dual-Port GigE per blade
- (1) QLogic QME2472 4Gbps Fibre Channel per blade
- (2) Dell PowerConnect 5424 GigE/iSCSI Switches for backbone network access
- (1) Dell/EMC CX3-40 SAN Array with associated switches
- (1) Dell PowerVault™ MD1120 DAS Storage with 15K RPM SAS Drives
- (1) Hyper-V enabled replication product
- (1) Microsoft Systems Center with Virtual Machine Manager 2008 Enterprise

Services Enablement

- Storage and backup requirements determined and installed
- WS2008 Structured Design Solution Consulting

