Consulting Guide:
Microsoft Exchange Solutions on VMware

vmware®

Contents

1. Overview

Positioning VMware Solutions for Exchange 2007 through this Service Acceleration Kit frames a sales model rich in value for you and your customer. It positions Services where and when required for business and IT while leveraging a unique approach to running Exchange 2007 in the virtual infrastructure. These programs bring together the best of VMware Solutions for Exchange 2007 and Value Added Consultant Partner services to meet the needs of the marketplace and accelerate virtual infrastructure adoption.

Performance POC in-a-box	High-level Design Workshops	Project Chartering	Implementation
• Pre-made VMs with MSDN licenses • "Building Block" approach • Integration with customer servers and storage • Performance metrics with ESXTop	• 2-3 days of white-boarding with the customer • Storage planning • VM sizing • Virtual networking • VM placement • Availability/Recovery options	• Project Management-oriented engagement • Business and technical requirements planning • Education of deployment-related advantages of VMware • Identification of project tasks and durations • Identification of required skill sets and gaps • Development of a fully-functional project plan for implementation	• VMware Infrastructure Configuration and Deployment • Exchange 2007 Configuration and Deployment • Education and Training

By becoming a trusted advisor and understanding your customer's challenges and opportunities, you will be able to design a POC and Services engagement level to meet their needs. Whether a couple of days in duration or a complex Roadmap, your solution will build an approach around VMware Solutions for Exchange 2007 designed to close business and insure success.

As you begin to position your solution, keep in mind the following POC and Services programs described in detail in the following sections:

- Performance POC in-a-box
- Conceptual Design Workshops
- Project Chartering Workshops
- Implementation Services

2. Service Offerings

2.1. Performance POC in-a-box

2.1.1. Why Performance POC in-a-box?

Many organizations are convinced of the value of virtualization, but are hesitant to trust their enterprise applications, like Exchange, to the VMware Infrastructure platform. Specifically, many feel that performance of Exchange would suffer with the addition of the hypervisor layer and are skeptical of performance testing results published by VMware and other partners.

The Performance POC in-a-box is designed to demonstrate performance of Exchange 2007 mailbox and infrastructure servers on the customer's particular blend of server, network, and storage hardware. After the POC is complete, the virtual machines can be left behind to give the customer a unique opportunity to experiment with the solution at their own pace.

2.1.2. Objectives

POC in-a-box is intended to be a 3-day engagement providing customers with a complete Exchange 2007 infrastructure to be used for performance testing. This service is delivered on site with pre-built virtual machines with MSDN development licenses. The primary goal is to demonstrate the performance of Exchange 2007 on VMware Infrastructure 3. The secondary objective is to provide customers with the ability to do some experimentation on their own to both educate and satisfy technical curiosity. In the best-case scenario, it allows for a closer relationship between the customer and service provider and may lead into follow-on engagements to take the customer further down the path to full deployment in production.

2.1.3. Success Criteria and Milestones

1. Gain better understanding of current messaging environment and overall objectives
2. Demonstrate performance of Exchange 2007 on the VMware Infrastructure platform using the customer's servers and storage
3. Demonstrate the advantages of running Exchange in virtual machines to the customer staff
4. (Optional): Schedule Conceptual Design, Project Chartering, or Full Implementation for follow-up

2.1.4. Deliverables

1. VMware Exchange Questionnaire
2. VMware Exchange Customer Presentation
3. Configuration of server/storage/ESX environment
4. Pre-made virtual machines encapsulating everything needed in an Exchange 2007 infrastructure
5. Configuration of Exchange environment (database creation/placement)
6. Completed JetStress test results
7. Completed test results
8. POC Close-out presentation

2.1.5. Consultant Preparation Checklist

Familiarize yourself with the following documents prior to beginning the engagement. If the engagement is onsite, bring these documents with you.

1. VMware Exchange Questionnaire
2. VMware Exchange Customer Presentation
3. VMware Use Cases Whitepaper – Virtualizing Microsoft Exchange 2007
4. Best Practices Guide – Exchange 2007 on VMware Infrastructure
5. Deployment Guide – Exchange 2007 on VMware Infrastructure
6. Microsoft Exchange Sizing Calculator
7. VMware Performance Analysis How To
8. Installation and Configuration of JetStress
9. Installation and Configuration of LoadGen

2.1.6. Pre-Engagement Activities

In this engagement, there is a great deal of pre-work required in order to minimize the time onsite.

Assess Current Production State
1. Have customer fill out Exchange Questionnaire
2. Review Questionnaire with customer
3. Discuss current messaging architecture
4. Discuss future migration plans
5. Determine available lab server and storage hardware
6. Schedule POC (1-week)
7. Schedule Kickoff and Close-out meetings with customer (1st and last day of POC)

Conduct Project Control Workshop
1. Stakeholder introductions
2. Deliver Exchange customer presentation
3. Review Project Plan, deliverables, and staffing
4. Establish communication and escalation processes

Conduct Technical Planning Workshop
1. Review available hardware
2. Review and select applicable Exchange building block
3. Determine Storage Layout (Microsoft Exchange Storage Calculator)
4. "Determine host configuration (storage, networking, naming, etc.)"
5. Review performance testing tools and determine criteria and procedures

Prepare the ESX Environment (customer work)
1. Install and configure servers and storage (ESX 3.5 update 1)
2. Install and configure Virtual Center
3. Prepare the ESX Environment complete

2.1.7. Engagement Execution Guide

Day 1

1. Prepare the Exchange environment
    a. Copy pre-made virtual machines onto storage and import into Virtual Center
    b. Configure virtual machine processor and memory settings per building block guidelines
    c. Boot virtual machines, ensure application environment works properly, troubleshoot issues
    d. Configure LUNs for Exchange databases and logs based on Storage Layout plans
    e. Expose Exchange LUNs to JetStress VM, initialize and format in Disk Manager
2. Test Storage Subsystem
    a. Configure ESXTop on the host that will be running the JetStress VM
    b. On the JetStress VM, configure JetStress based on testing criteria and procedures
    c. Run JetStress tests and monitor/collect results
    d. Tweak configuration/troubleshoot when obvious bottlenecks appear

Day 2

1. Complete Exchange and test configurations
    a. Swing JetStress LUNs to Exchange VM, initialize and format in Disk Manager
    b. Configure ESXTop on the host that will be running the Exchange Mailbox VM
    c. Configure Exchange databases and logs per Storage Layout plans
    d. On the LoadGen client VM, configure LoadGen test and save as XML
    e. Run LoadGen test.
    f. Monitor/collect results
    g. Tweak configuration/troubleshoot when obvious bottlenecks appear
2. JetStress results
    a. Gather/analyze JetStress results from ESXTop
    b. Document results

Day 3

1. LoadGen results
    a. Gather/analyze LoadGen results from ESXTop
2. Conduct POC Close-out Meeting
    a. Present test results
    b. Discuss next steps/further testing and troubleshooting if needed
    c. Discuss follow-up services (Conceptual Design, Project Chartering, Full Implementation)

2.2. Conceptual Design Workshops

2.2.1. Why Conceptual Design Workshops?

Customers will likely have many questions about the best ways to design an Exchange 2007 environment on VMware Infrastructure 3. The Conceptual Design Workshops will help the customer answer some of these questions with a series of white boarding sessions that cover subjects such as virtual machine sizing, storage architecture, and availability and recovery options. The workshops provide the consultant with the opportunity to better understand the customer's environment and foster two-way communication that can lead to deeper engagement.

2.2.2. Objectives

The Conceptual Design Workshops offering is a 2-3 day engagement to help customers in high-level design decisions that are applicable to running Exchange 2007 on VMware Infrastructure. The Workshops should be delivered on site as a series of white boarding sessions with the customer. The primary goal is to guide the customer through high-level design decisions. The secondary objective is to educate the customer on features of VMware Infrastructure that can enhance the overall flexibility and availability of Exchange 2007 while helping to lower costs. In the best-case scenario, it allows for a closer relationship between the customer and service provider and allows for follow-on engagements to take the customer further down the path to full deployment in production.

2.2.3. Success Criteria and Milestones

1. Gain better understanding of current messaging environment and overall objectives
2. Gain understanding of the business and technical requirements of the desired solution
3. Assist the customer with design decisions that will concur with business and technical requirements
4. Communicate the advantages of running Exchange in virtual machines
5. (Optional): Schedule POC in-a-box, Project Chartering, or Full Implementation for follow-up

2.2.4. Deliverables

1. VMware Exchange Questionnaire
2. VMware Exchange Customer Presentation
3. Kickoff/Business Requirements Workshop
4. Technical Requirements Workshop
5. Virtual Machine Design Workshop
6. ESX Host Design Workshop
7. Availability and Recovery Workshop
8. Data Protection (Backup) Workshop
9. Conceptual Design Close-out Meeting

2.2.5. Consultant Preparation Checklist

Familiarize yourself with the following documents prior to beginning the engagement. If the engagement is onsite, bring these documents with you.

1. VMware Exchange Questionnaire
2. VMware Exchange Customer Presentation
3. VMware Use Cases Whitepaper – Virtualizing Microsoft Exchange 2007
4. Best Practices Guide – Exchange 2007 on VMware Infrastructure
5. Solution Brief - Virtual Exchange Availability and Recovery Options
6. Solution Brief - Virtual Exchange Backup Options
7. Microsoft Exchange Sizing Calculator

2.2.6. Pre-Engagement Activities

1. Have customer fill out Exchange Questionnaire
2. Review Questionnaire with customer
3. Discuss current Exchange architecture

4. Discuss future migration plans
5. Schedule Workshops (2-3 days)

2.2.7. Engagement Execution Guide

Day 1

1. Conduct Kickoff / Business Requirements Workshop
   a. Stakeholder introductions
   b. Deliver Exchange customer presentation
   c. Review Workshop schedule
   d. Establish communication and escalation processes
   e. Discuss business drivers, expectations, concerns, SLAs
2. Conduct Technical Requirements Workshop
   a. Review current Windows and messaging architectures
   b. Discuss current server and storage platforms
   c. Discuss technical requirements and product integration points (e.g. Blackberry, anti-virus, anti-spam)
   d. Discuss requirements for availability and recovery (SLAs, RPO, RTO)
   e. Discuss requirements for data protection (backup)

Day 2

1. Design Exchange Virtual Machines
   a. Review Best Practices - Exchange 2007 on VMware Infrastructure
   b. Plan Mailbox Server CPU Requirements
   c. Plan Mailbox Server Memory Requirements
   d. Plan for Server Role Ratios
   e. Plan Peripheral Server Role CPU Requirements
   f. Plan Peripheral Server Role Memory Requirements
2. Design ESX Hosts
   a. Plan the host hardware configuration
   b. Plan VM distribution
   c. Design anti-affinity rules
   d. Design Virtual Networking

Day 3

1. Plan for Availability and Recovery
   a. Review Solution Brief - Virtual Exchange Availability and Recovery Options
   b. Discuss availability and recovery technologies (Microsoft, VMware, third-party)
   c. Review availability and recovery requirements (SLAs, RPO, RTO)
   d. Design availability and recovery architecture
2. Plan for Data Protection (Backup)
   a. Review Solution Brief - Virtual Exchange Backup Options
   b. Discuss data protection technologies (Microsoft, VMware, third-party)
   c. Review data protection requirements
   d. Design Data Protection architecture
3. Conduct Conceptual Design Close-out Meeting
   a. Present Conceptual Design decisions
   b. Discuss next steps/further planning if needed
   c. Discuss follow-up services (POC in-a-box, Project Chartering, Full Implementation)

2.3. Project Chartering Workshops

2.3.1. Why Project Chartering Workshops?

Technical design is only one aspect of a successful deployment. A structured Project that establishes stakeholders from affected business groups, lays out concrete tasks, and takes into account project dependencies is a crucial step towards implementation. The Project Chartering Workshops will help the customer plan their migration to Exchange 2007 on VMware Infrastructure, establishing project controls and procedures to help manage the process.

2.3.2. Objectives

A project management-oriented engagement, the Project Chartering Workshops focus on walking the customer through the steps required for implementation of an Exchange 2007 environment running on VMware Infrastructure 3. The workshops will help the customer understand deployment-related advantages of virtualization, identify tasks and durations, and develop a fully functional project plan for full implementation. The deliverables from this engagement can be used by the customer to implement the solution internally or handed off to a service provider for execution.

2.3.3. Success Criteria and Milestones

1. Identify Project stakeholders
2. Develop Project Charter for management buy-in and visibility
3. Develop tasks, durations, and timelines for the project effort
4. Identify project dependencies, constraints, and assumptions
5. Develop project control, communication, and escalation plans
6. (Optional): Schedule POC in-a-box, Conceptual Design, or Full Implementation for follow-up

2.3.4. Deliverables

1. VMware Exchange Questionnaire
2. Project Chartering Workshops
3. Sample Project Charter
4. Project Charter
5. Project WBS/Project Plan
6. Project Success System document (controls, communication, escalation)

2.3.5. Consultant Preparation Checklist

Familiarize yourself with the following documents prior to beginning the engagement. If the engagement is onsite, bring these documents with you.

1. VMware Exchange Questionnaire
2. VMware Use Cases Whitepaper – Virtualizing Microsoft Exchange 2007
3. Best Practices Guide – Exchange 2007 on VMware Infrastructure
4. Deployment Guide – Exchange 2007 on VMware Infrastructure
5. Sample Project Charter

2.3.6. Pre-Engagement Activities

1. Have customer fill out Exchange Questionnaire
2. Review Questionnaire with customer
3. Discuss current Exchange architecture
4. Discuss future migration plans
5. Schedule Workshops (2-3 days)

2.3.7. Engagement Execution Guide

Day 1
1. Introductions and meeting objectives
2. Review sample Project Charter document
3. Develop Project Charter
    a. Name, background, project description
    b. Objectives and scope
    c. Stakeholders, target dates, constraints, risks, etc
4. Develop Project WBS/Project Plan
    a. Review existing plans/strategies, determine milestone/summary tasks and global tasks
    b. Create Project WBS
5. Review draft charter

Day 2
1. Continue Project WBS/Project Plan development
    a. Analyze project plan dependencies and linkages
    b. Create detailed network for global deliverables
2. Gap analysis of Project WBS

Day 3
1. Design Project Success System
    a. Establish project control processes
    b. Establish project communications and escalations processes
2. Project plan/WBS Compression (if appropriate)
3. Time Tracking and Process review
4. Wrap-up and next steps

2.4. Implementation Services

Every service provider has a different methodology for production deployments. Full Implementation Services should build on the previous services offerings, utilizing their outputs to generate highly accurate plans for project duration, costs, and staffing.

vmware®