Breaking Down Barriers To VMware Technology Adoption

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Regional Manager – Southern Asia Pacific
Agenda

VMware Technology Adoption
   The Road to Virtual Infrastructure
Phase 1: Adopt
Phase 2: Expand
Phase 3: Standardize
Breakdown Solutions
Q&A
Define: “VMware Technology Adoption”

Road to Virtual Infrastructure

1. ADOPT
2. EXPAND
3. STANDARDIZE

Virtual Machines

POC
Pilot
Expanded Rollout
Process and Technology Standardization

Time & Capability
Benefits Of VMware Technology Adoption

Innovative solutions for the difficult problems facing IT

- Increasing utilization, availability and flexibility

Up to 70% savings in operational costs

- Server provisioning cycles cut from weeks to minutes

Freedom to run your choice of operating system

- Run unmodified Linux and Windows OSes

Dramatic hardware costs savings

- 6-9 month ROI typical

Increased service availability

- Reduced planned and unplanned downtime
Barriers To VMware Technology Adoption

I continuously find these barriers:

<table>
<thead>
<tr>
<th></th>
<th>Positive Indicator</th>
<th>Warning Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear, Uncertainty and Doubt (FUD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“I don’t know what I don’t know”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resistance to change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unclear / changing drivers and goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect and negative perceptions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Positive indicators mean you are pushing the envelope which is critical for VMware technology adoption.

Warning indicators mean you are doing it wrong.
Impact Of Barriers

Somebody Else’s Problem?

- Management by Objective (MBO)
- Yearly budget targets
- Goodwill
- Opportunity Cost
- Competitive advantage

The Somebody Else's Problem field (SEP field)
is a fictional technology from The Hitchhiker's Guide to the Galaxy "trilogy" by Douglas Adams. It is a cheaper and more practical alternative to an invisibility field.

From Wikipedia, the free encyclopedia
**Balanced Adoption**

**Road to Virtual Infrastructure**
- **ADOPT**
- **EXPAND**
- **STANDARDIZE**

**Virtual Machines**
- **Too much too soon**
- **Risk**
- **Return on Investment**
- **Too little too late**

**Process and Technology Standardization**

**Time & Capability**

**VIRTUALIZATION FORUM 2008**

**vmware®**
VMware Technology Adoption Summary

Road to Virtual Infrastructure

1. ADOPT  2. EXPAND  3. STANDARDIZE

Road to Virtual Infrastructure

⇒ Adopt → Expand → Standardize

Business benefit multiplies by size of virtual infrastructure

Some barriers are positive indicators

Barriers affect everyone

Balanced adoption is critical
Road To Virtual Infrastructure: Phase 1

1. ADOPT
2. EXPAND
3. STANDARDIZE

Process and Technology Standardization
Expanded Rollout
Time & Capability

VIRTUALIZATION FORUM 2008
vmware®
Characteristics Of The Adopt Phase

Proof of Concept and Pilot

Time limited
Agreed exit criteria
Collaboration

<table>
<thead>
<tr>
<th>Risk</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takes too long</td>
<td>More cost and delayed RoI to business</td>
</tr>
<tr>
<td>Not ready for Expand</td>
<td>Delays the whole program, not just this phase</td>
</tr>
<tr>
<td>Pilot not fit for purpose</td>
<td>Rework means lost money and opportunity</td>
</tr>
<tr>
<td>Operations not involved</td>
<td>Missing or inadequate SOPs</td>
</tr>
</tbody>
</table>
## Considerations In The Adopt Phase

<table>
<thead>
<tr>
<th>VOF(^1) Process Area</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning</td>
<td>How to design, test and build</td>
</tr>
<tr>
<td>Consumption</td>
<td>How to P2V and deploy new VMs</td>
</tr>
<tr>
<td>Operations</td>
<td>How to monitor and SOPs</td>
</tr>
<tr>
<td>Security</td>
<td>What policy? How do I implement it?</td>
</tr>
<tr>
<td>Change</td>
<td>Does vMotion require a change? What about DRS?</td>
</tr>
<tr>
<td>Configuration</td>
<td>Is VirtualCenter enough for a CMDB for now?</td>
</tr>
<tr>
<td>Capacity</td>
<td>When will I run out of capacity?</td>
</tr>
<tr>
<td>Incident &amp; Problem</td>
<td>How do I isolate faults?</td>
</tr>
</tbody>
</table>

\(^1\) VMware Operations Framework

**Virtualization Forum 2008**
Common Barriers In The Adopt Phase

Barriers
- Fear, Uncertainty and Doubt
- I don’t know what I don’t know
- Getting Started
- Unclear Goals
- Changing Priorities
- Incorrect Design
- Inadequate Testing

Solution
- Your Pilot, FAQs, Roadshow
- Your Pilot, VMTN, User Group
- SWAT team
- Limited, management support
- Impact and cost of change
- Vendor(s), VMTN, User Group
- Vendor(s), VMTN, User Group
Summary Of The Adopt Phase

Key Points

- Must be create a fit for purpose, Expand-ready VI3 in a timely manner
- Risks will impact the whole program, not just the Pilot
- Considerations across a range of process areas must be addressed
- Attribute a financial cost to a barrier
Road To Virtual Infrastructure: Phase 2

1. ADOPT
2. EXPAND
3. STANDARDIZE

Virtual Machines

Time & Capability

POC
Pilot

Expanded Rollout
Process and Technology Standardization
Characteristics Of The Expand Phase

The time when VI3 proves itself in your organization
To 300 VMs and beyond
Beyond Test and Dev into Production
Processes still adhoc, no delegation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits not proven</td>
<td>Executive support withdrawn</td>
</tr>
<tr>
<td>Too much too soon</td>
<td>More and longer outages</td>
</tr>
<tr>
<td>Too little too late</td>
<td>Lower RoI and perceived as an expensive solution</td>
</tr>
<tr>
<td>Can’t move beyond T&amp;D</td>
<td>Limited opportunity for expansion</td>
</tr>
</tbody>
</table>

ADOPT  EXPAND  STANDARDIZE
## Considerations In The Expand Phase

<table>
<thead>
<tr>
<th>VOF Process Area</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning</td>
<td>How can the Server Build team deploy ESX Server?</td>
</tr>
<tr>
<td>Consumption</td>
<td>How can I delegate P2V? Self-service for VMs?</td>
</tr>
<tr>
<td>Operations</td>
<td>How can Operations manage more?</td>
</tr>
<tr>
<td>Security</td>
<td>Am I adhering to policy? How do I audit?</td>
</tr>
<tr>
<td>Change</td>
<td>What are all the VMware changes, their risk and impact?</td>
</tr>
<tr>
<td>Configuration</td>
<td>How does VirtualCenter integrate with my CMDB?</td>
</tr>
<tr>
<td>Capacity</td>
<td>Am I control of my virtual infrastructure?</td>
</tr>
<tr>
<td>Incident &amp; Problem</td>
<td>Are VMware incidents properly managed?</td>
</tr>
</tbody>
</table>

¹ VMware Operations Framework
Breaking Down The Barriers In The Expand Phase

**Barriers**
- Fear, Uncertainty and Doubt
- I don’t know what I don’t know
- Limited, Point Solution
- Can’t Delegate
- Lack of Momentum
- Too Much Too Soon
- Too Little Too Late

**Solution**
- Your VI3, FAQs, Roadshow
- Your VI3, VMTN, User Group
- Customer References
- Training and SOPs
- New targets / MBOs
- Check sprawl, invest in process
- Accelerate adoption fast

ADOPT | EXPAND | STANDARDIZE
Summary Of The Expand Phase

Key Points

- Expand virtual machines into Production and more application types
- Expand capabilities through experience and delegation
- Balance adoption to avoid higher risk or lower RoI
- Exceed the tipping point, and be ready for Standardization
Characteristics Of The Standardize Phase

Integrating VI3 into the standard processes
Transforming processes with VI3
Multiple Solutions
Large team working on VI3

<table>
<thead>
<tr>
<th>Risk</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization slow to change</td>
<td>Agility benefits not delivered to business</td>
</tr>
<tr>
<td>Staff changes</td>
<td>Lose skills, need to invest in retraining</td>
</tr>
</tbody>
</table>
## Considerations In The Standardize Phase

<table>
<thead>
<tr>
<th>VOF&lt;sup&gt;1&lt;/sup&gt; Process Area</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning</td>
<td>Agreed, documented virtual infrastructure lifecycle</td>
</tr>
<tr>
<td>Consumption</td>
<td>P2V and containment lifecycle, including pre-build</td>
</tr>
<tr>
<td>Operations</td>
<td>Instrumentation and SOPs integrated into BAU OPS</td>
</tr>
<tr>
<td>Security</td>
<td>IT Security incorporates VMware, auditing integrated</td>
</tr>
<tr>
<td>Change</td>
<td>VMware rep. on CAB, RFCs common</td>
</tr>
<tr>
<td>Configuration</td>
<td>Tracking changes across servers, VDI, LabManager</td>
</tr>
<tr>
<td>Capacity</td>
<td>Forecasting managing demand and driving purchasing</td>
</tr>
<tr>
<td>Incident &amp; Problem</td>
<td>Problem work-arounds and fixes in Known Error DB</td>
</tr>
</tbody>
</table>

<sup>¹</sup> VMware Operations Framework
Breaking Down The Barriers In The Standardize Phase

Barriers
- Fear, Uncertainty and Doubt
- I don’t know what I don’t know
- Standardization is boring
- Not ready for production
- We’ve done enough with VMware

Solution
- Your VI3, FAQs, Roadshow
- Your VI3, VMTN, User Group
- Business Critical
- Customer References
- Multiple Solutions

ADOPT  EXPAND  STANDARDIZE
Summary Of The Standardize Phase

Key Points

➢ Use VI3 to transform the organization, not the other way around
➢ Exploit VI3 as a foundation layer for multiple solutions
➢ What is the impact and cost of a “VM-unaware” process?
➢ You are now ready for the next phase… Optimization!
Breakdown Solution #1: Executive Sponsorship

Key stakeholder affected by the business driver / goal

Influence other parts of the organization

Provide a mandate for virtualization

Interested in ALL barriers!

- Will help with positive indicators
- Will not like to see warning indicators!
Breakdown Solution #2: Center Of Excellence

SWAT team of cross-disciplined experts
Committed to best design
Committed to full testing
Critical in all stages

- Ensures successful Pilot
- Manages balanced adoption
- Drives standardization
Breakdown Solution #3: Aim For Operational Readiness

Target state on the Road to Virtual Infrastructure

- The capability to routinely provision, consume, and manage virtual infrastructure for an enterprise production environment.
Breakdown Solution #4: Best Of Breed Design

Integrate VI3, Network, SAN, Monitoring, Datacenter

Design against today’s features, not a marketing roadmap

Use VI3 features of clustering to keep it simple

Poor design means rework

- Re-design means reduced RoI
- How many chances to get it right?
Breakdown Solution #5: Adequate Testing

Integration Testing most important
Involve Operations
Not a last item, but a constant process

Common cause of failure
- Changes made after testing
- Lack of involvement from Ops
- Not repeatable or consistent

<table>
<thead>
<tr>
<th>NIC Failover Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ops</strong></td>
</tr>
<tr>
<td>Check monitoring</td>
</tr>
<tr>
<td>Check NIC status</td>
</tr>
<tr>
<td>Remove NIC cable</td>
</tr>
<tr>
<td>Check for alert</td>
</tr>
<tr>
<td>Check status of VMs</td>
</tr>
<tr>
<td>Confirm failover</td>
</tr>
<tr>
<td>Create incident ticket</td>
</tr>
<tr>
<td>Schedule maintenance</td>
</tr>
</tbody>
</table>
Breakdown Solution #6: Balanced Adoption

Balance VM increase with capability increase
Virtualize now! Don’t delay adoption
Capability is mostly Operations and other Service Support

Project Risk
- Too much too soon means platform is considered unstable
- Too little too late means platform is considered expensive
Breakdown Solution #7: Process Transformation

Find the best process for you
Make repeatable and consistent
Integrate and transform the organization
Essential for growth

- Create SOPs for all, not just Operations
- Without this, team scaling and therefore VMware scaling is hard
Breakdown Solution #8: Internal Marketing

FUD is ever present
Don’t be complacent
Roadshows are fun!

Keys to success

- Make it interesting!
- Make it relevant!
- Brainwash, rinse, repeat! 😊
Breakdown Solution #9: Pick Winners

Good candidates for migration

Trusted and willing projects for containment

Getting to the Tipping Point

- 300 VMs are all the proof you need
- Have at least one critical service
- Demonstrate willing to be flexible
- Turn down difficult demands at start
Breakdown Solution #10: Multiple Solutions

Datacenter with VI3
Desktop with VI3 and VDI
Developers with LabManager

Foundation layer
> Central platform for multiple solutions
> More demands on existing process
> Drives expansion
Summary

One Roadmap

- Road to Virtual Infrastructure

Three Phases

- Adopt  →  Expand  →  Standardize

Fifteen Barriers

- From FUD to Not Production Ready

Ten Solutions

- From Executive Sponsor to Multiple Solutions

THANK YOU FOR YOUR TIME
Questions And, Possibly, Answers