

Managing the Virtualized Data Center: Monitoring and Managing for Performance and Availability

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Managing the Virtualized Data Center

Managing for Performance and Availability
(DC03)

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The Virtualization Management Story

- Irresistible force versus the immovable object
- The BIG Change
 - Where to start
 - Paths
- Ongoing management
 - Availability
 - Performance
 - Change and Configuration Management

Why Virtualize the Data Center?

Business

- Assure Service
- Optimize Resources
- Manage Change

Average Utilization rates in 10-15% range = massive over provisioning

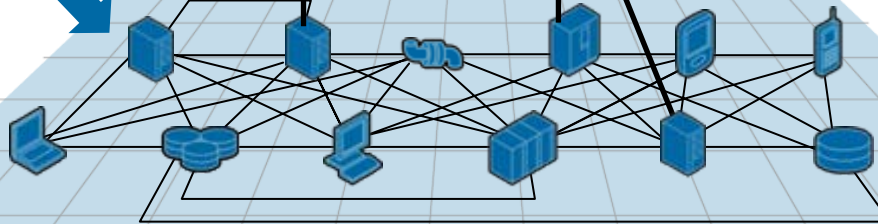
Non-server costs exploding (power, cooling, etc.)

- Cost
- Availability
- Performance



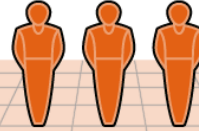
- Reduce costs
- Mitigate risks
- Accelerate growth

IT Environment



Why Manage Change?

Business



Large companies lose 2%–16% of annual revenue to downtime¹

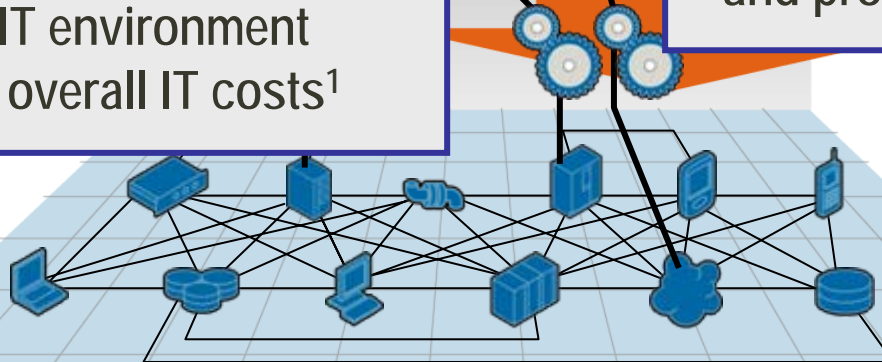
IT Process



80% of downtime is from people and process failures¹

Maintaining current IT environment accounts for 75% of overall IT costs¹

IT Environment



¹See notes for sources

Virtualization: The Big change – where to start?

- Determine rationale(s) and priorities
 - Fixing existing production inefficiencies?
 - Resource? Process? Management?
 - All/blend?
 - New Development?
- Determine *all* key stakeholder(s) upfront
 - Application, Business
 - Operations
 - Finance
- Determine key application(s)
 - Will depend on the path you take...
- Evaluate Path(s)

Change Approach – Forced March

- Moving existing physical to virtual
 - Benefits
 - Faster and larger reduction of over-provisioning
 - Lowest possible CapEx – reclamation easy/quick win
 - Fastest standardization
 - Fastest ROI
 - Considerations
 - Big decision => big buy-in
 - May delay some technology refresh projects
 - Some new projects will require new technology
 - Requires Capacity Management – existing and new

Change approach – “stop the madness”

- Mandate: “All new projects will be virtual”
 - Benefits
 - Stops digging the hole deeper
 - No intrusion/change on existing infrastructure
 - Lowers Availability and Performance Risk
 - “Divide and conquer” organizational approach minimizes scope
 - Additional Capacity Management required only for new
 - Considerations
 - Big decision, big buy-in
 - Significantly delays ROI benefits, can you wait?
 - Creating technology “ghettos”?

Change approach – Blended

- Most new virtual + incremental change for existing
 - Benefits
 - Not so big a decision, buy-in
 - Quick ROI while slowing “hole digging”
 - Controlled scope of change to existing infrastructure
 - Lowers Availability and Performance Risks
 - “Divide and conquer” organizational approach minimizes scope
 - Reduces capacity planning effort/scope
 - Considerations
 - Slows standardization
 - Extends evaluation process

Availability Management

- In order to monitor (manage) it, you need to know
 - What it is?
 - Dependencies – both physical and virtual
 - Business Service Context is everything
 - The virtualized workload is key – monitor from service down to infrastructure!
 - Where it is?
 - Workload :: Resource relationships can and will change
 - Currency across change is everything
 - Configuration Management Data Base is key
- You need this in place before starting!
 - “March”, “No more madness”, or “Blended

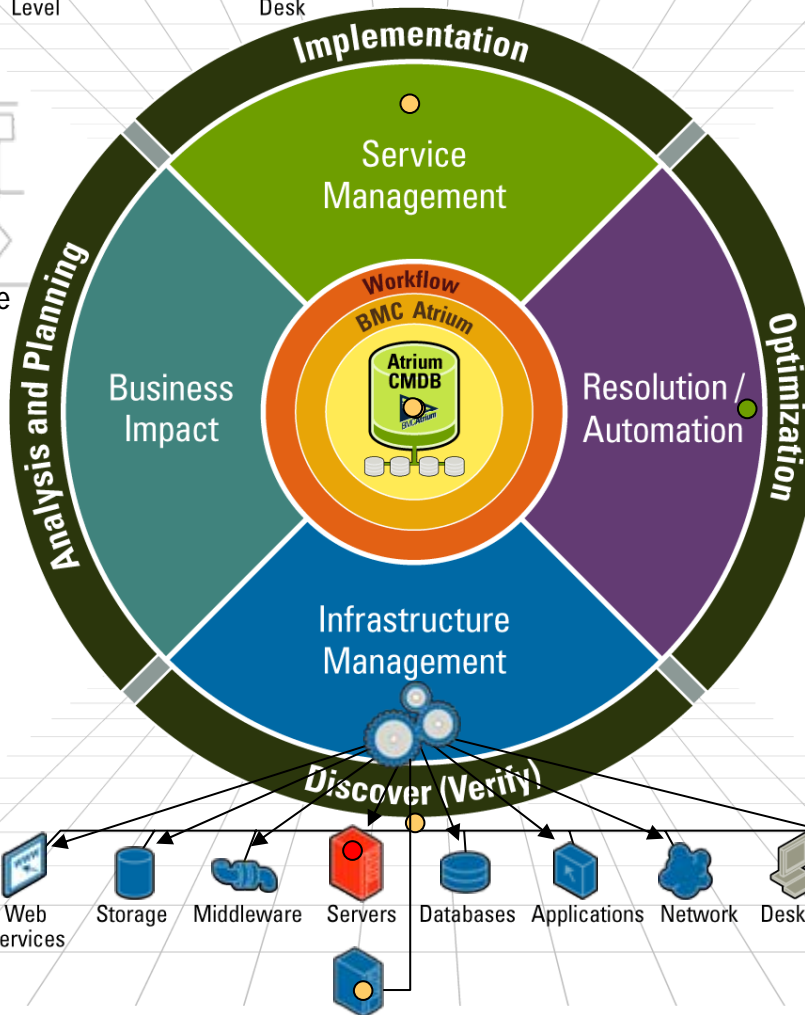
Performance Management

- Virtualization requires ongoing Capacity Management
 - More service eggs in fewer physical baskets
 - Resources are shared now – there will be contention
 - Prevention of Virtual Server sprawl
- You need this in place before starting!
 - “March” or “Blended”
 - “No more madness” only for NEW

Change and Configuration Management

- Virtualization requires up to date configuration information to ensure Service Delivery
 - Static changes: from Physical to Virtual
 - Dynamic changes: ongoing Virtual
- You need this in place before starting!
- Affects all Availability, Capacity (Performance) and Service Level Management
 - “March”, “No more Madness” or “Blended”

BMC Solution Approach



Resource

- Know where to start
- Know what to do
- Know when to do it

- Optimize Resources
- Manage Change
- Assure Service

Thank You!

Questions?

For comprehensive information on how to optimize your Data Center in today's virtualizing world, please see our Data Center Optimization solutions information at www.bmc.com