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Business Service Management in a Service Oriented Virtualized World

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Contents

- This Presentation
- Business Service Management (BSM)
- Service Oriented Architecture (SOA)
  - What is SOA
  - Managing SOA
  - Using SOA for Management
- Virtualization
  - Background
  - Advantages
  - Challenges
  - Impact on Management Systems

This Presentation

Intended to Provide:

- An understanding of BSM and Why it is Important
- Background on SOA
- Challenges SOA provides for Management Applications
- How SOA can be leveraged to build Management Applications
- Background on Virtualization
- Challenges posed by Virtual Environments for Management Applications
- Management Components impacted by Virtualization
- A glimpse of future areas for further Development

Business Service Management (BSM)

BSM Goals:

- Improve business KPIs
- Reduce cost of doing business (not just cost of IT)
- Reduce business risk (not just IT risk)
- Drive revenue growth

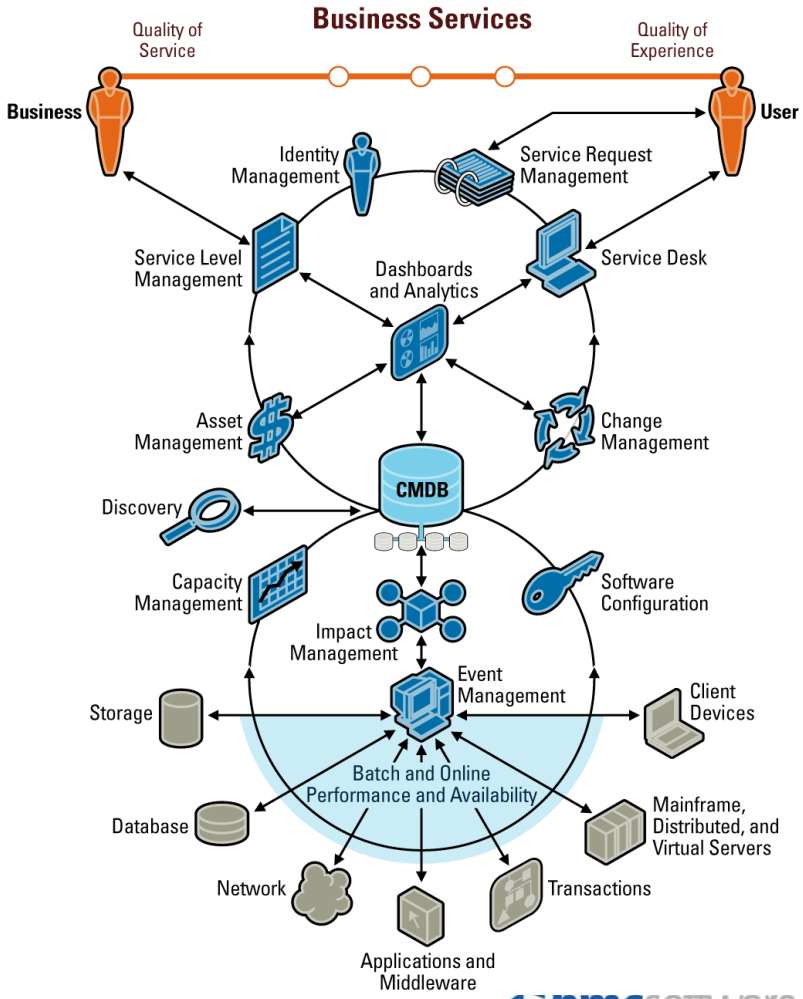
BSM Principles / themes of BSM

- Guide IT actions and decisions (human or automated) based on
  - Improvement of/impact on a business service
  - Dependencies between business services and infrastructure components
- Integrated visibility or control of infrastructure within an automated process
- Integration of automated IT process workflows across traditional silos using a common business service view

Other BSM messaging

- BSM is the best approach for managing IT from the perspective of the business
- Business Service Management is an automated IT management approach that aligns diverse IT decisions and activities according to their impact on services that drive the business.

BSM Blueprint



BSM Drivers

Underlying BSM Principles

- Guide IT actions and decisions (human or automated) based on
  - Improvement of/impact on a business service
  - Dependencies between business services and infrastructure components
- **Integrated visibility or control of infrastructure within an automated process**
- **Integration of automated IT process workflows across traditional silos using a common business service view**

Requirements of BSM

Requirements for Software

- Integration across product boundaries
- Workflow or Business Process Based
- Easily and Dynamically Configurable, in order to:
  - Address customers' specific requirements
  - Adapt to changes in the environment
- Evolve from a list of Point Products to Integrated Solutions
- Similar to CMDB in that SOA (in particular, Service Registry, will be a key integrating component for BSM

Parallel Worlds

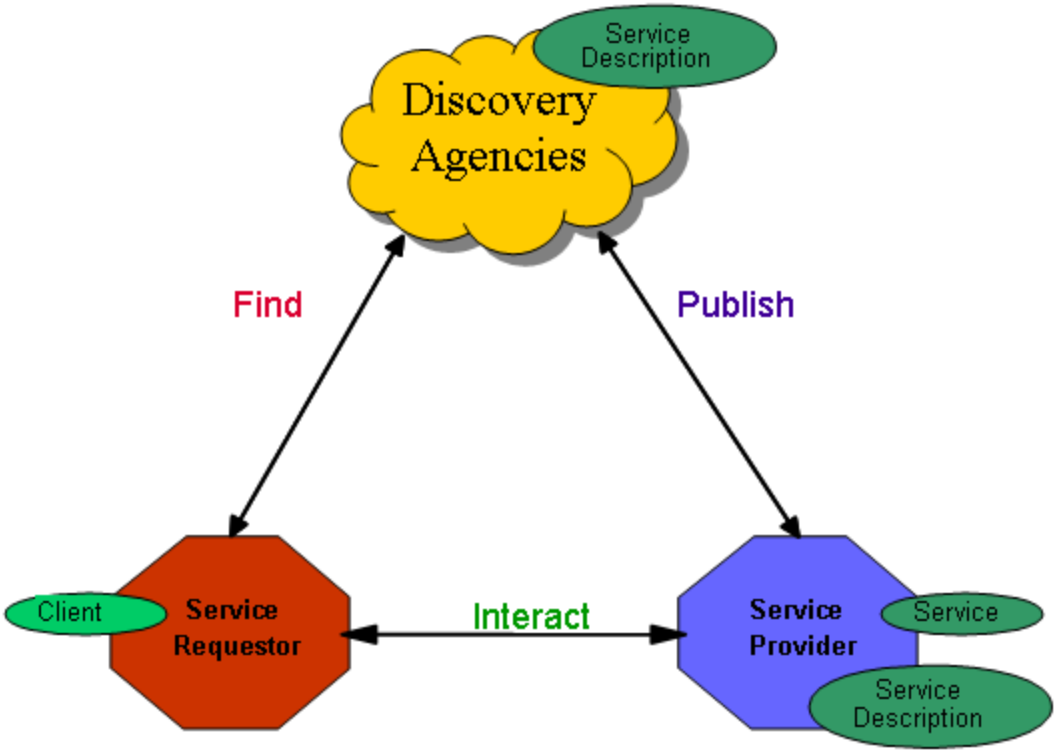
SOA is making Computing On-Demand Possible

Similar to Electrical Power On-Demand

Enabled by use of:

- Standards
- Interfaces (also Standard and Interoperable)
- Implementation Independence (of the service)
- No built-in Knowledge of the Intended uses (by the clients)

Service Oriented Architecture (SOA)

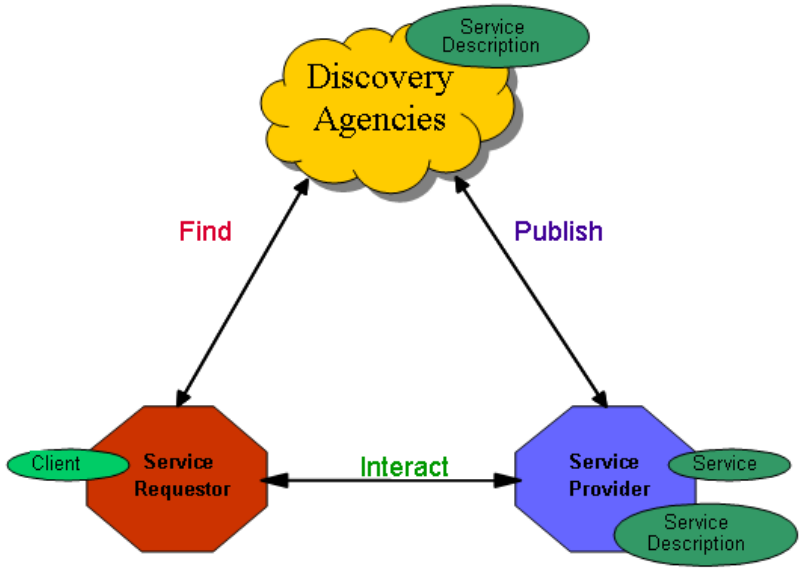


What is Service Oriented Architecture (SOA)?

Any Architecture consists of Components and their Interrelationships; for SOA:

Components

- Service Provider (or the Service)
- Service Requestor (or Client)
- Discovery Agency (or Registry)



Interrelationships

- Publish
- Find
- Interact (by far, the most important)

SOA Technology Components

The two main technology components are:

Web Services Stack

- Enabling the **Interact** interrelationship in our diagram

Web Services Registry

- Enabling the **Publish** interrelationship in our diagram
- Enabling the **Find** interrelationship in our diagram

Note: As BMC is not in the Web Services infrastructure business, we partner with other software companies and Open Source entities for these components.

SOA Technology

Candidate Technologies for SOA include:

- Web Services
- CORBA
- DCE

Does SOA equate to Web Services? No (but…)

Are there non-Web Services alternatives for SOA? Not very many

Can we apply SOA principles using more traditional tools (e.g. Java/C++)? Kinda

Essential Related Web Services Standards

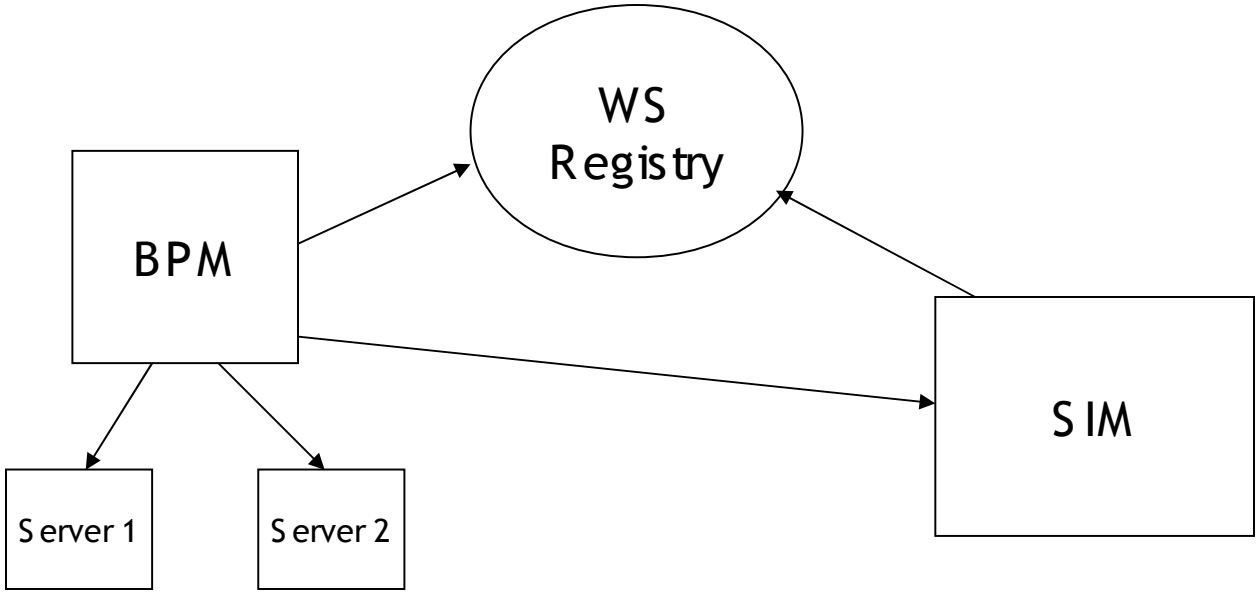
Web Services Stack

- XML
- SOAP
- WSDL
- WS-I Basic Profile

Web Services Registry

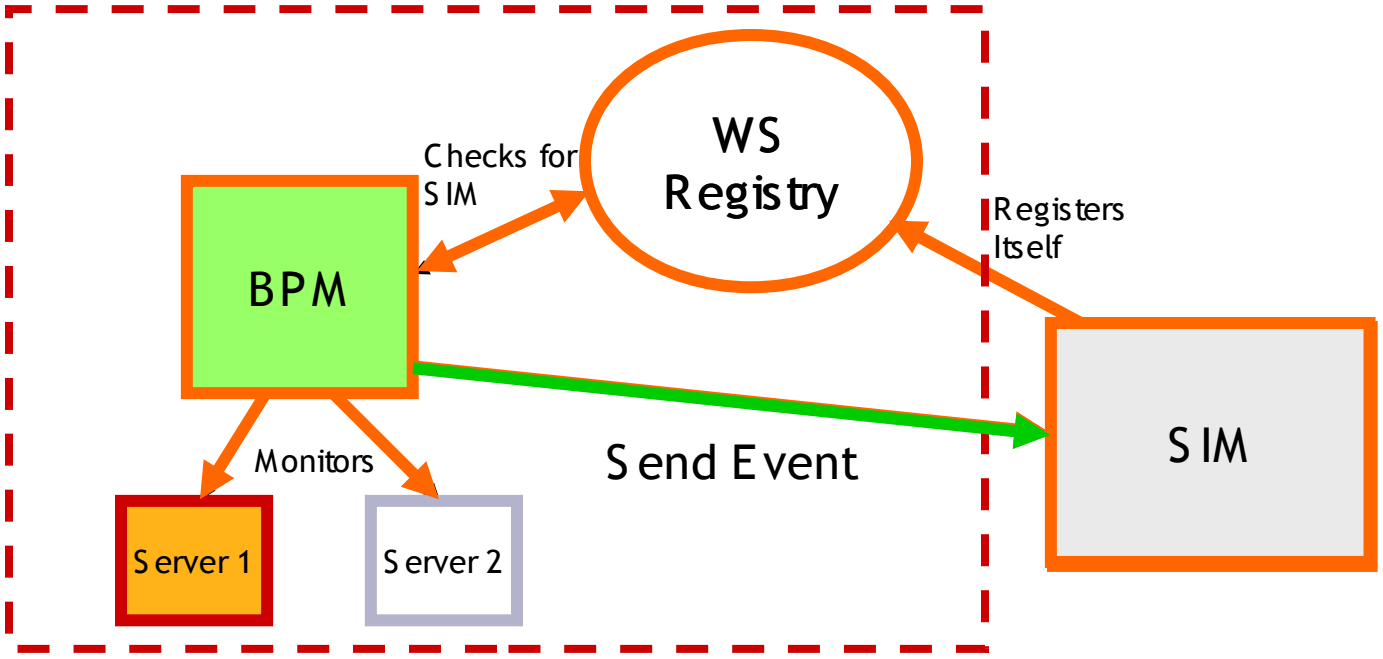
- UDDI

Registry Prototype: Components



- SIM's role: Manages & Displays Service Model
- WS-Registry role: Registry where SIM Service Provider is "Advertised"
- BPM's role: Monitors Server Nodes in the Enterprise

Registry Evaluation: Workflow

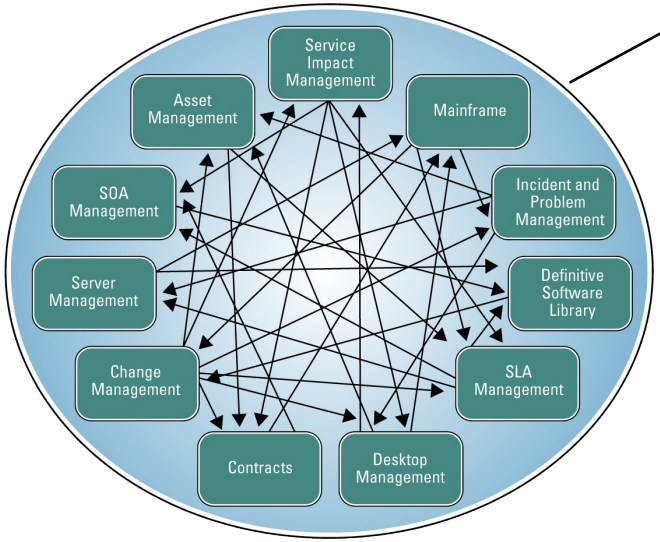


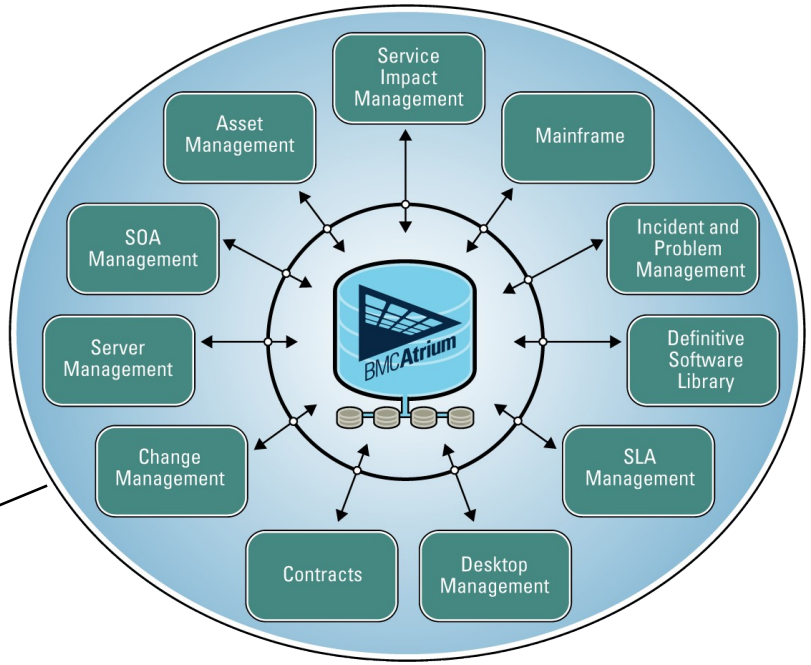
1. Initially, Registry Empty and BPM Monitoring 2 Nodes
2. SIM Registers itself with Registry
3. BPM is notified of this Registry Entry
4. BPM can now send Event to SIM
5. One Node goes down/offline
6. SIM is updated as a result of this Event

BMC Atrium is designed for BSM

Typical bottoms-up, ad hoc integration (APIs and UIs)

Prevents collaboration using common information





Architecture that brings functions together to enable more efficient IT processes to better support business needs

Virtual Computing Background

- Surprisingly Long History (Back to 1960's)
- Recent Resurgence
- What is Virtual Computing
  - Basically, a Simulation of a Machine running on an another Machine
- Advances in Hardware make running Virtual Machines more feasible

Advantages of Virtualization

Business Advantages of Virtualization include:

- Consolidation of IT hardware assets
- Maximization of under-utilized IT hardware resources
- Reduction of electrical energy consumption (Green Data Centers)

Challenges of Virtualization

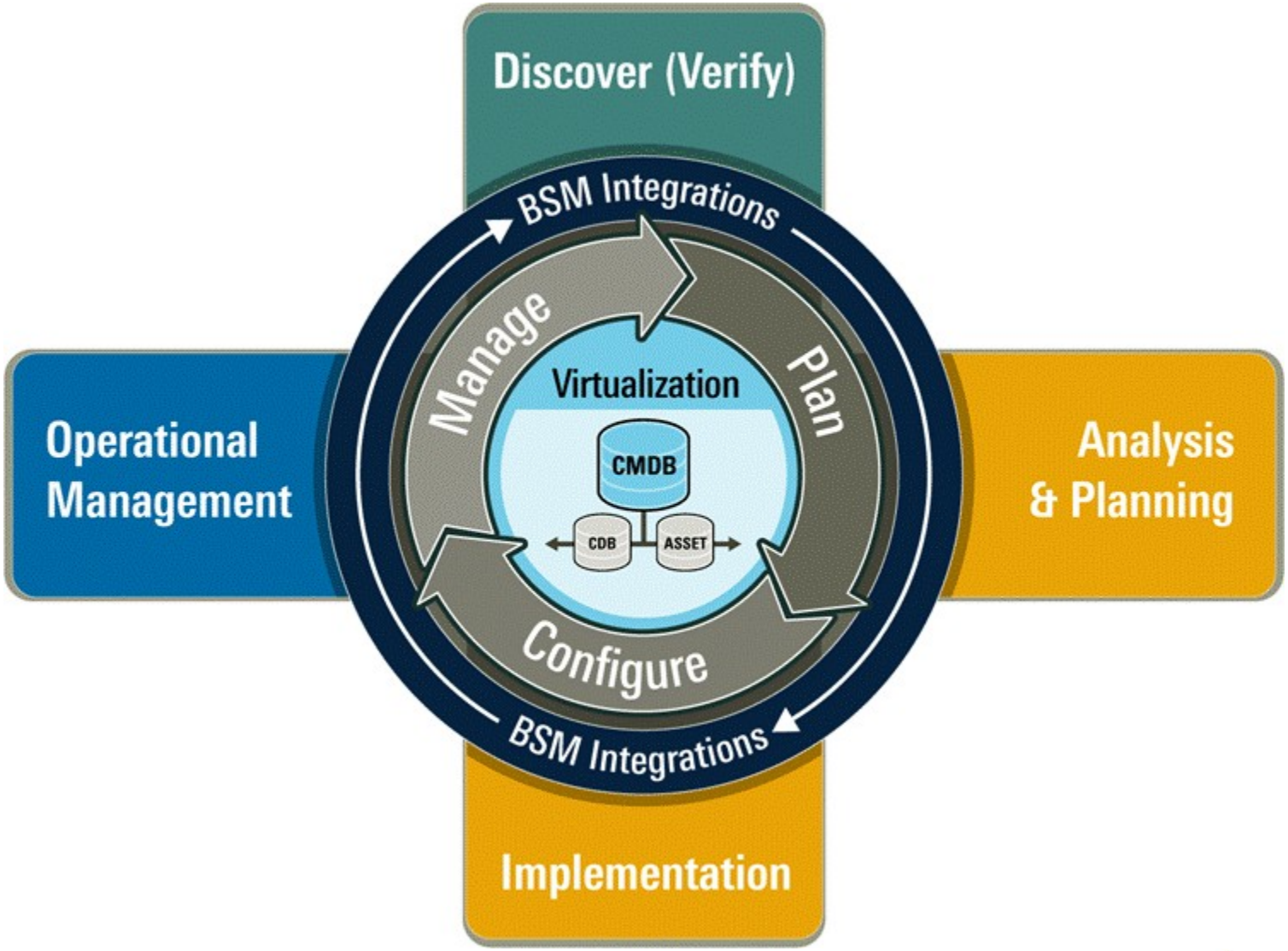
Virtualization presents a number of challenges in the management space that include:

- How to know the performance impact of virtualization before you virtualize
- Anticipating capacity issues and proactively responding to them before service is disrupted
- Reducing the risk of virtualizing
- Rapidly provisioning virtual servers without violating compliance with corporate policy or government regulations
- Eliminating over-provisioning and uncontrolled virtual server sprawl
- Managing and ensuring end-user performance of applications running on the virtual infrastructure

Management Components impacted by Virtualization

- Discovery (to be able to discover virtual resources)
- CMDB (to model virtual configuration items)
- Capacity Planning and Management (to account for virtual resources in capacity calculations)
- Systems Monitoring and Management (to monitor virtual resources in capacity calculations)
- Service Level Management (to account for virtual resources in determinations of Service Level Agreement compliance)
- Change Management

Management of Life Cycle of Virtual Environments



Q&A

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