Optimizing Performance and Capacity in Private and Hybrid Clouds

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Agenda

- Goals of cloud deployment
- The challenge: maintaining visibility in the cloud
- Best practices for optimizing performance and capacity
  - Identify the right candidates for migration
  - Monitor SLAs and user experience in real time
  - Discover the causes of performance problems
  - Align capacity utilization with business priorities
  - Prevent overprovisioning
- Summary: Ensuring the ROI of the cloud
Business Drivers of Cloud Computing

- Enabling business continuity: 44% Very Important, 39% Somewhat Important, 12% Not Very Important, 5% Not at all Important
- Greater flexibility to react to changing market: 44% Very Important, 39% Somewhat Important, 10% Not Very Important, 7% Not at all Important
- Improving customer support or services: 43% Very Important, 37% Somewhat Important, 12% Not Very Important, 8% Not at all Important
- Expanding revenue opportunities: 38% Very Important, 32% Somewhat Important, 20% Not Very Important, 10% Not at all Important
- Reducing resource waste: 37% Very Important, 42% Somewhat Important, 16% Not Very Important, 5% Not at all Important
- Enabling innovation: 36% Very Important, 38% Somewhat Important, 18% Not Very Important, 8% Not at all Important
- Gaining a competitive edge: 36% Very Important, 36% Somewhat Important, 19% Not Very Important, 9% Not at all Important
- Need for real-time information: 34% Very Important, 36% Somewhat Important, 20% Not Very Important, 10% Not at all Important
- Savings on CAPEX: 33% Very Important, 37% Somewhat Important, 22% Not Very Important, 8% Not at all Important

Business & IT Shift to Cloud – Growing Complexity

- Improve Agility
- Reduce Cost
- Minimize Risk
- Protect Experience

Enterprise domain

Applications
- Core Banking
- Online Accounts
- Loans & Savings

Operations
- Web
- App
- DB

Even before the cloud, architectures are complex and difficult to monitor.
The increasing use of shared services increased the challenge of understanding application performance.
Today’s migration to private and hybrid clouds can lead to a total loss of visibility and insight into application performance.
Top CIO concerns of private clouds

- Performance: 82.9%
- Availability: 83.3%
- Security: 87.5%

Source: IDC Cloud Computing Update 2010
Best Practices for the Cloud

How to Optimize Performance and Availability
Will it work in the cloud?

How can you tell which parts of which applications are suitable for cloud, and plan a successful migration?

- Identify potential problems such as chattiness and latency
- Create a performance baseline
- Get a clear picture of service dependencies and infrastructure usage
- Create a checklist that will ensure a complete and successful migration
Indicators of Cloud Readiness

- Application Bandwidth Cost
- Application Complexity
- CPU Usage
- Volume and Resource Volatility
- J2EE Dependencies
- Apdex Scores
- SLA Compliance
Optimize Transaction Performance

If you don’t know which physical servers your application is running on, how do you monitor performance in a business context?

- Can’t use infrastructure metrics to diagnose performance issues
- Silo-centric metrics don’t show service-centric performance
- Need a real-time topological map of service delivery across all tiers
Monitor SLAs and User Experience

How can you monitor the experience of your end users in a hybrid cloud?

- Both real-user monitoring and synthetic transaction monitoring
- Need cloud-ready deployment architectures based in the cloud or in the application client
Uncover the Source of Problems

How can you maintain a real-time up-to-date view of how each service flows through the cloud and identify the source of problems?

In the cloud, you need:

- A dynamic picture of service dependencies
- Complete top down visibility across the infrastructure
- Automatic, continuous transaction discovery technology
Optimize Resource Utilization

How can you right-size capacity and prevent over-provisioning that undercuts the ROI benefits of the cloud?

- Get an accurate picture of resource usage for each service
- Measure how the allocation is related to SLA compliance
- Prioritize the allocation of resources
- Plan future capacity accurately with consumption metrics
Align Consumption with Business Priorities

How do you ensure that services are allocated according to business priority?

- You must prioritize the allocation of resources
- Need a clear picture of resource consumption at the transaction level
- Need business intelligence about the impact of each infrastructure tier
Summary: ROI throughout the Cloud Lifecycle

Business
- Improve Agility
- Reduce Cost
- Minimize Risk
- Protect Experience

Enterprise/cloud provider

Planning & Migration
Operation
Optimization

Manage Change
- Maintain Visibility and Control
- Reduce Complexity
- Increase Automation
- Ensure Security and Compliance
Thank You
OpTier at a Glance

Mission: Enable enterprises to manage their mission critical, automated business services in Dynamic Environments

- The de facto leader in Business Transaction Management
- Proven Value in Shared Services, Private Cloud Projects
- Funded by leading VCs, Cisco and Morgan Stanley
- Growing business, 200+ employees