Linux on System z: Managing the Ideal Platform for Consolidation

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Agenda

- **IT challenges and consolidation drivers**

- **IBM Service Management and Service Management Center for System z**

- **Scenarios for managing Linux on System z**

- **Demo**

Complex IT Infrastructure $+$ Escalating IT Costs $+$ Lack of Integration

IT organizations are under tremendous pressure

Challenges are coming from many fronts:

- **Complexity:** Heterogeneous resources, organizational silos, composite applications

- **Compliance:** ISO20000, COBIT, security

- **Change:** Market demands, workloads, service levels

- **Cost:** Management and administration

"We're trying to resolve a huge morass of IT complexity, while demand for our services keeps going up. We're getting hit from both sides. So what are we doing about it? "We're delivering an adaptive IT organization that provides services on demand to support the needs of the business."

– George Surdu, Director, Global Information Technology Infrastructure,

Ford Motor Company, September 2005

System z can address these challenges

- ☑ Affordable entry pricing with System z10 BC

- ☑ System z10 EC has 50-70% more capacity and 3 times the memory than the System z9 EC – 80% saving in IT costs[2]

- ☑ Greener data center – Consuming 80% (900,000 KWatts) less than distributed server[1]

- ☑ Manage new workloads with Linux on System z, and with easier to learn skills – Up to 49% less space and 80% people savings[2]

- ☑ Linux on System z is growing at 49% per year; 1300 System z customers are now using Linux on System z; Linux is 15% of the customer System z install base (MIPS)

"By moving to a service oriented architecture on System z, we have gained the ability to think more about business problems and work through business solutions. At Aurora Health Care, we no longer talk about the technical challenges; we talk about what is possible." - **Aurora Healthcare**

"The System z platform continues to deliver excellent value, and is helping us to exceed e-government targets for making information available via the Web." - **Martin Baldock, z/OS Software Manager, Land Registry**

1 - Source Patrick Irving 2007. David Anderson
2 – When you consolidate 786 Linux servers, Oracle DB workload from x 86 over a 3 year period

Service Management integration is critical to success, *and organizations who undertake these new initiatives…*

✓ <u>Consolidate</u> *workloads and mission critical workloads on System z*

✓ <u>Centralize</u> *management of business services and IT Infrastructure*

✓ *Implement <u>SOA</u> on System z*

✓ *Consolidate and improve <u>Storage</u> management on System z*

✓ *Improve <u>Security</u> – Audit, compliance, access mgmt on System z*

…can gain many competitive advantages
-Grow faster than the competition
-Reduce costs
-Increase efficiency and improve security

78% of CEOs believe integrating business and technology is fundamental for innovation[1]

1 – Source: IBM Global CEO Study 2006

IBM Service Management Center for System z *enables*
System z as a highly reliable hub for efficient management of enterprise-spanning business and IT services

Manage your enterprise from System z
– Enables System z as the strategic platform of choice for managing the enterprise

Visibility

Automation

Centralized Management

IBM Service Management Center for System z
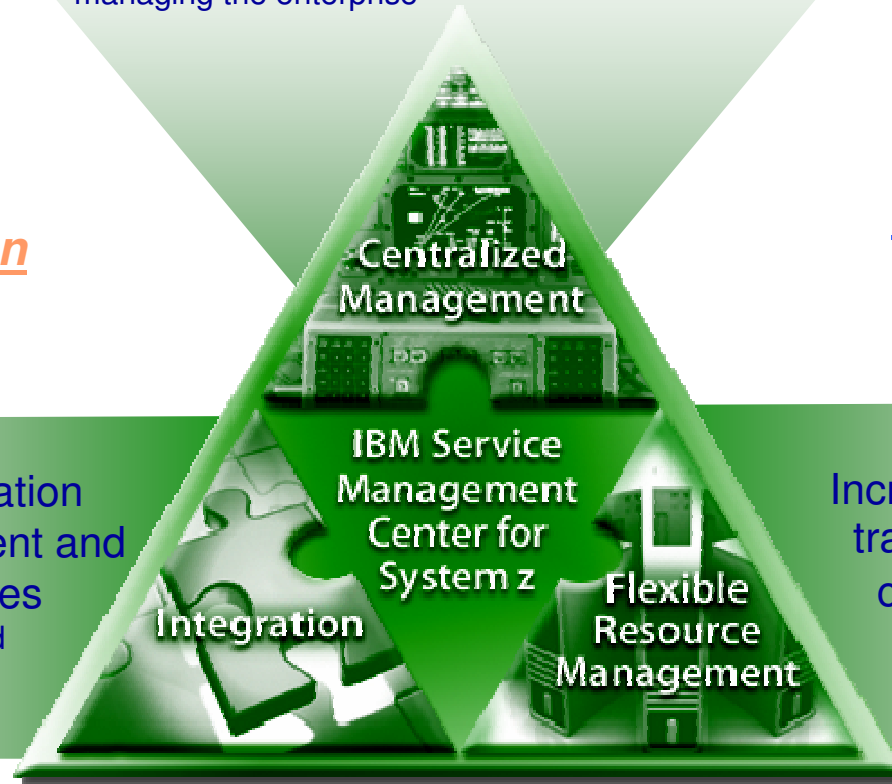
Integration

Flexible Resource Management

Seamless and tight integration across service management and business delivery processes
– Further reduces complexity and cost; increases efficiency

Incremental roadmap to transform to a green and cloud infrastructure
– Further realize cost savings; increase flexibility and efficiency

Control

When moving new workloads to Linux on System z, how to manage the new environment becomes an important issue

- **Scenario 1:** Consolidation – Do current solutions allow management from System z? Is there a rich portfolio for security?

- **Scenario 2:** Virtualization – If new to virtualization and consolidation, are there tools to manage this environment?

- **Scenario 3:** Dynamic/Cloud Computing – Apart from consolidation and lower TCO benefits, is there a need to implement a "New Enterprise Data Center" – a flexible infrastructure that can help IT align closely with the business?

Organizations must ensure they have the Visibility, Control and Automation to manage their entire enterprise centrally from System z

Scenario 1: Consolidation – IBM Tivoli integrated solutions can manage workloads on Linux on System z…and enterprise-wide

- **End-to-End Operations Management**

  - Integrated and automated solutions for service delivery process and other processes such as deployment, fulfillment, and change and release management.

  - *#1 in Worldwide IT Operations Management – Gartner (6th consecutive year)*

  - *#1 in System Management Software – IDC*

- **Highest Availability and disaster recovery**

  - Reduce the number and duration of service disruptions.

  - Help ensure high availability of critical applications with policy-based healing and automation capabilities.

- **Highest level of security with rich set of applications**

  - Provide integrated, end-to-end security management including identity protection, access control and regulatory compliance.

Scenario 1:
Existing management solutions may not allow management from System z. There may not be a rich portfolio for security.

Scenario 2: Virtualization – IBM Tivoli provides the tools to manage virtualized environments, realize the benefits of moving workloads to Linux on System z

- **Proactive monitoring and visualization tools are vital**
  - Comprehensive/cohesive view of IT resources; rapidly isolate/analyze problems before service levels threatened.
  - Advanced real-time visualization of services and processes to monitor and measure availability and performance.

- **Provide end-to-end automation of system and application availability across applications**

- **Dynamically manage workloads across virtualized environments and provide best resource utilization**
  - Ranked "All Star First Team" by analyst EMA.

- **Accurately assess which IT resources are being used; provide chargeback**

Scenario 2:
Organization is new to virtualization and consolidation, and may need a different set of solutions for this new environment.

Scenario 3: Dynamic/Cloud – Innovative, best-of-breed tools help organizations implement a Dynamic Data Center

IBM Service Management Center for System z provides a compelling new way to deliver service

- Dynamically provision and de-provision servers on demand and ensure full utilization of resources

- Understand the impact of incidents or changes

- Automate key process steps such as release targeting, testing and deployment

- *Highest Rated OvumSummit ITSM Vendor Report Card*

- Create a **Cloud Computing environment** – energy efficient, trusted, and virtualized for consolidation and high speed processing.

Scenario 3:
Apart from consolidation and lower TCO benefits, company may want to implement a "New Enterprise Data Center" – a flexible infrastructure that can help IT align closely with the business.

Demo

Running Live on the System z10 in the Technology Exchange

- Utilize IBM System z as your Enterprise Security Hub

- Management for Virtualized Applications

- Using IBM System z as a Management Hub

- Business Continuity for Process management

- Tivoli Storage Resource Management for System z

- Manage enterprise operations and production from IBM

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