IBM SAP Managed Cloud Services

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Agenda

- Changes in today’s IT Landscape lead to different challenges
  - Common terminology for the Cloud
  - What are the drivers behind Cloud Computing?
- Cloud Characteristics and Service Models provided by IBM
  - Defining the terms public, private and hybrid Cloud and the various Options
- IBM’s Cloud Solutions
  - Softlayer
  - Cloud Managed Infrastructure Services
  - Cloud Managed SAP Services
  - Private Cloud Scenario with IBM’s Solutions and SAP LVM
- Considerations and the Path to your Cloud Solution
Changes in today’s IT Landscape
The emergence of social, mobile, analytics and cloud are fundamentally changing how we live, work and interact.

- **77%** of chief information officers plan to allow staff to use personal mobile devices to access company data and applications
- **82%** of 493 enterprises surveyed have migrated or plan to migrate customer relationship management (CRM) workloads to the cloud
- **Over 30%** of organizations expect the majority of their IT capability will be delivered through public cloud services within five years
- **45%** of IT resources are expected to be accessed through some form of cloud—public, private or hybrid—within three years

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2. The Everest Group, *Cloud Connect Enterprise Adoption Survey*, 2013
3. IDC Cloud Maturity Model, IDC #239772, March 2013
4. Ibid
New technology is playing a critical role in achieving organizational objectives.

For the first time, CEOs identify technology as the most important external force impacting their organizations.

Source: 2012 IBM Chief Executive Officer (CEO) Study
Regardless of your role, cloud computing is opening the door to business transformation.

- **Corporate applications managers**
  - Speed the delivery of new products and services
  - Access new services that can improve business processes

- **Managed service providers**
  - Open new revenue streams and offer differentiated higher-value services
  - Reduce support costs

- **Chief information officers**
  - Transform responsiveness of the IT infrastructure and development
  - Better manage compliance

- **Chief marketing officers**
  - Strategically reinvent customer relationships
  - Share expertise among customers, employees and partners.

- **Data center managers**
  - Serve up resources so staff can focus on higher-value projects
  - Manage data center on flat or decreasing budgets

Whether you are a new or long-time user of SAP applications, you face challenges in today’s competitive market.

| Long-time users need to do more with less. | High total cost of ownership and complexity involved in managing traditional SAP environments  
| Demands from line-of-business executives are creating unmanageable growth. | Slow-down of new innovative SAP projects due to inflexibility of infrastructure and SAP operation resource constraints  
| New users need a faster way to get up and running with their new SAP licenses. | Gap in SAP-skilled staff  
| Mergers and acquisitions can take 18 to 24 months. | Long time frames to merge SAP environments and data and to eliminate customization  
| | Difficult to meet regulatory requirement deadlines to complete the merger |
Cloud Classification and IBM‘s Solutions
Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model is composed of five essential characteristics, three service models, and four deployment models.

Source: NIST Definition of Cloud Computing

**Consumer View:**
A new form of requirements and usage of IT services over the Internet where the underlying technology is invisible to the user.

**Provider View:**
A highly automated form of IT services delivery characterized by (almost) unlimited scalability and ad-hoc provisioning.
The solution: Cloud and non-cloud offerings grouped according to their characteristics and service models

On-premise (Client’s datacenters)

- Combination of dedicated or virtualized Infra.
- HaaS

Off-premise (IBM’s datacenters)

- Combination of Private & Public Cloud services = Hybrid Cloud

Managed Cloud

Private Cloud

- Private Cloud
  - Managed by IBM
- HaaS

Dedicated Cloud

Public Cloud

- Private Cloud
  - Managed by IBM
- Public/Private Cloud Services

Multi Tennant Cloud

- Private/Public Cloud Services
  - Managed by IBM
  - Hosted Private Cloud
  - Managed by IBM
  - Company
  - Company B
  - Company C
  - Company D
  - Company E
  - Company A

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The different layers of public/private cloud managed services for SAP

**Self-Service IaaS**
- SAP Managed Services
  - SAP Basis
  - DB Administration
  - SAP Installation/ Monitoring/ Operations
  - SAP Upgrades/ Patching
  - SAP HA/DR

**Managed IaaS**
- SAP Managed Services
  - SAP Basis
  - DB Administration
  - SAP Installation/ Monitoring/ Operations
  - SAP Upgrades/ Patching
  - SAP HA/DR

**Managed PaaS**
- SAP Managed Services
  - SAP Basis
  - DB Administration
  - SAP Installation/ Monitoring/ Operations
  - SAP Upgrades/ Patching
  - SAP HA/DR

**Infrastructure Services**
- Infrastructure
  - OS Admin/ Patching
  - Backup & Recovery
  - Network & Security
  - Monitoring

**Infrastructure**
- DC- Facilities
  - Virtual/ BareMetal Servers
  - Storage
  - Network

**Standard IBM offering with SLA’s**
- Infrastructure Services
  - OS Admin/ Patching
  - Backup & Recovery
  - Network & Security
  - Monitoring

**Infrastructure**
- DC- Facilities
  - Virtual/ BareMetal Servers
  - Storage
  - Network

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IBM’s cloud portfolio is delivering flexibility and choice for any business scenario.

**IBM Cloud Managed Services for SAP**
- SAP service catalog including a wide range of predefined SAP managed services with more transparent, flexible pricing options
- Support for SAP Business Suite, SAP Netweaver and SAP Business Objects products and a large variety of additional SAP middleware and partner products, including HANA

**IBM Cloud Managed Services**
- Fully managed ITIL compliant services delivered by IBM helps drive business value, competitive advantage, peace of mind
- Runs production workloads, including SAP and other applications
- Hardware, hypervisor and isolation elements included

**SoftLayer**
- Bare metal to virtualized to address practically all applications
- Private or Public, Dedicated or Shared deployment options
- Robust, reliable performance and uptime for demanding born-on-the-cloud applications
IBM’s SoftLayer provides a unified architectural platform with common management and programming interfaces.

- Common command and control interface across a unified architecture
- Combine bare-metal servers, public cloud instances and private cloud deployments into distributed hybrid architectures and manage from a single control pane and application programming interface (API)
- All deployed on-demand and provisioned in real-time
- Ideally suited to big data deployments, high input and output (I/O) and latency-sensitive apps
IBM’s SoftLayer provides a wide range of options for customizing and building out your SoftLayer environment.

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<tr>
<th>Web</th>
<th>iPhone and iPad</th>
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<th>Windows Mobile</th>
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<td>Management portals</td>
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**DEVELOPMENT**
- API\(^1\)
- Message queue

**ADMINISTRATOR**
- Monitoring
- Flex images
- RescueLayer

**Managed hosting**
**Platform management**
- Firewalls
- IDS and IPS\(^2\)
- Anti-virus/malware
- SSL\(^2\) cert. management
- Load balancers
- Global DNS\(^4\)
- Domain services
- CDN\(^5\)

**Network and security**
- Bare metal servers
- Virtual server instances
- SAN\(^6\)
- NAS\(^7\)
- Object storage
- Backup

**Compute and storage**

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\(^1\)Application programming Interface (API); \(^2\)Intrusion detection system and intrusion protection system; \(^3\)Secure socket layer (SSL); \(^4\)Domain name server (DNS); \(^5\)Content delivery network (CDN); \(^6\)Storage area network (SAN); \(^7\)Network-attached storage (NAS)
IBM’s Softlayer global footprint

- SoftLayer’s software automates every aspect of Infrastructure as a Service (IaaS) – enabling it to deliver one of the industry’s broadest and highest performing cloud platforms.
- SoftLayer is one of the largest cloud infrastructure providers in the world, with more than 100,000 devices under management for 21,000 customers in 140 countries.
- SoftLayer operates a global footprint of 13 integrated data centers and an expansive network of points-of-presence around the world, filled with servers, storage, routers, firewalls and load balancers.
IBM’s SAP services can be combined with IBM’s cloud managed services infrastructure.

IBM Cloud Managed Services for SAP Applications
IBM manages the SAP Basis and database layers with business-centric service-level agreements (SLAs).

IBM Cloud Managed Services
IBM provides and manages the core infrastructure through the operating system.

Private shared cloud
IBM-owned and operated (multitenant)

Cloud services are delivered through physical and virtual separation of tenants.
IBM Cloud Managed Services is deployed in data centers around the world for global reach with local control.

*China and Portugal data centers scheduled to be available in second half 2014. Plans are subject to change.
Building your private/hybrid cloud with IBM Solutions and SAP LVM

SAP Automation Use Cases

- Unified view at the SAP landscape
- Monitoring
- Start / Stop LPAR/VM or SAP system
- Relocate LPAR/VM or SAP system with or without downtime
- Perform mass operations
- Provisioning of HW, VM, Storage, OS, SAP system, SAP clients
- SAP System Cloning, Copy, Refresh
- Resource adjustments
- Capacity Management
- Approval Workflow & Accounting

IBM Infrastructure combined with SAP LVM

- Automated Capacity Management
- System Cloning
- Start, Stop & Relocate Systems, Mass Operations
- Third-Party Support & Extensibility
- Manage Your SAP Landscapes
- End-to-End Visibility & Monitoring of all Infrastructure Layers
- Landscape Visualization
Integration overview and required components of the IBM solutions and SAP’s LVM

IBM SmartCloud Entry Integration shows how the integration of the products above is based on plug-ins and libraries (SAP LVM Plugin for IBM, SAP HostControl, DB Library, OS Library and Storage Library) which are provided by IBM.
Technical integration of IBM Solutions with SAP’s LVM

- IBM’s SVC FlashSystem V7000 Storage
- LPARs with AIX, Power Linux
- Tivoli Storage FlashCopy Manager

Virtualization Management & OS Provisioning

- Systems Director
- Flex System Manager (upcoming) PowerVC

SAP Processing

- Plugin for IBM
- DB library
- OS library
- Storage library

DB & Storage Cloning

Storage + file systems cloning, synchronized with DB + OS

Platform-specific SAP code, developed by IBM@SAP
Steps to your SAP Cloud Solutions powered by IBM
Considerations for the best Path to the Cloud and your starting Position
The Roadmap to Cloud Managed Services

1. IT-Roadmap
   - Workload
     - Custom
     - Standard
   - Time
     - Hybrid Cloud
     - Private Cloud
     - Trad.IT
     - Cost
     - Opex

2. Architecture
   - User
   - Cloud Services
     - Software
     - Platform
     - Infrastructure
   - Service Planning
     - Service Definition
     - Service Deployment
   - Cloud-Platform
     - OSS
     - BSS
     - Monitoring
   - Service Catalogue
     - Service Reporting
     - SLA Mgmt

3. Workload Assessment
   - E-Mail, Collaboration
   - Software Development
   - Test and Planning
   - Big Data / Analytics
   - Databases
   - SAP ERP

4. Deployment Operations Governance
   - Enterprise
     - Traditional
     - Private
     - Public
     - Hybrid

5. Return-on-Investment (ROI)
   - Systems Infrastructure
     - Systems Storage
   - Network

6. Implementation
   - Platforms and Applications
     - E-Mail
     - SAP
     - BPM7
     - Sys.-mgmt.
     - Info.-mgmt.
     - Web-Server

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Thank you!

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