

Implementing the Cloud



Ing. Adrian Demeter

Technical Director

GC System a.s.



GC System a.s.

GC System a.s.

- ✓ Design, implementation and support of Data Centers
- ✓ Professional ICT services with high skills
- ✓ International cooperation with IBM (IBM Premier BP)
- ✓ Wide coverage of ICT products, including high-end
- ✓ Based in European Union – Czech Republic
- ✓ Security clearance – SECRET/SECRET DEFENSE




Osvědčení
IBM Česká republika spol. s r. o.
 V Parku 2294/4, 148 00 Praha 4 - Chodov

potvrzuje, že
GC System a.s.
 Špitálka 41, 602 00 Brno

je obchodním partnerem společnosti IBM Česká republika, spol. s r. o.
 a je autorizována jako Dynamic Infrastructure Business Partner

pro rok 2009/2010



23.9.2009
 V Praze dne



Martin Rieder
 ředitel pro obchodní partnery
 IBM Česká republika





IBM Tivoli Storage Management Concepts

- See how IBM Tivoli Storage Manager can improve your IT operations
- Learn how to protect your vital applications and data
- Understand all aspects of storage management



Charlotte Brooks
 Peter McFarlane
 Norbert Pott
 Martin Tčka
 Eduardo Tomaz

ibm.com/redbooks



Professional Certification Program from IBM.
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In recognition of the commitment to achieve professional excellence,
 this certifies that

Anton Lacička

has successfully completed the program requirements as an

IBM Certified Advanced Deployment Professional
 IBM Service Management
 Service Delivery and Process Automation 2009

July 27, 2009

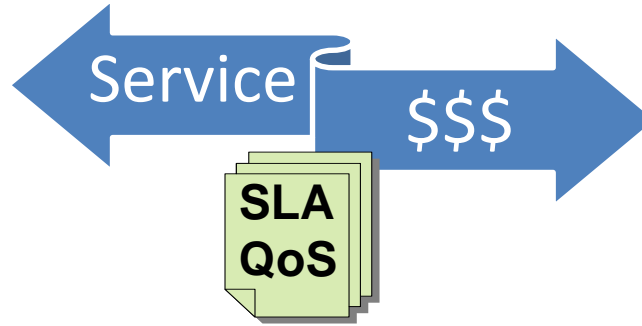




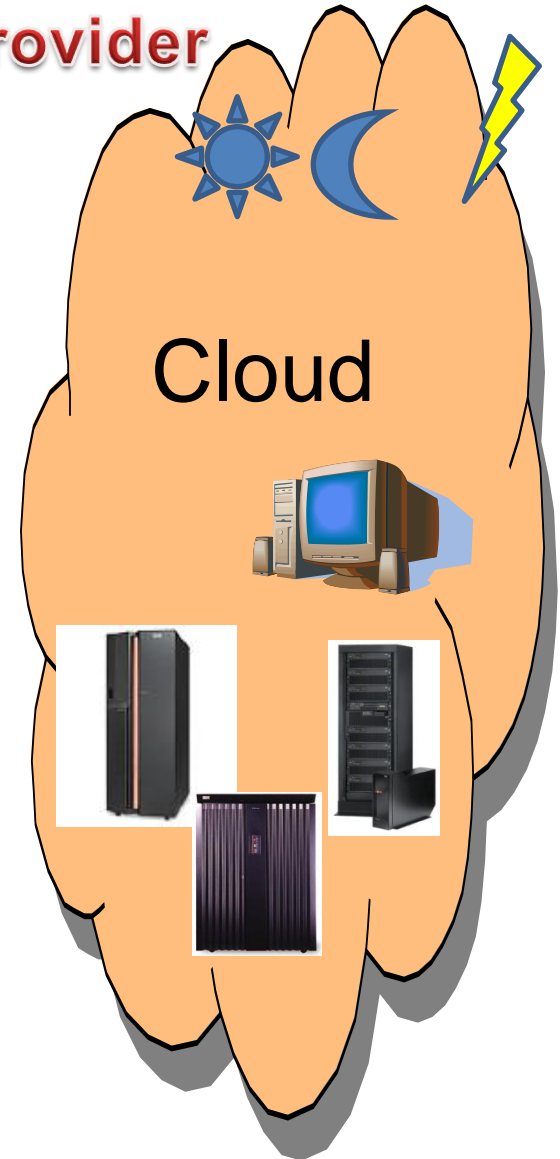
IBM Software Group
 Service and Product and Group Controller
 Steve Mills

IBM Software Group
 Service and Product and Group Controller
 Al Zoller

User



Provider



- I need actual information
- I need to store data
- I need results
- I need to run my program
- I need to access registers
- I need to communicate



Who benefits from the Cloud

GC System a.s.

- ✓ How quickly can you react and deliver new ICT service?
- ✓ Do you experience outages due to human error?
- ✓ How many different configurations do you use? Is it sized for min/mean/peak?
- ✓ How is ICT usage metered and charged?
- ✓ Does your ICT budget allow for innovation supporting new business initiatives?

- ✓ Cost cutting
 - Pay only for what you use
 - Reduce end-user support by up to 40%
 - Transfer CapEx -> OpEx
- ✓ Improve efficiency – focus on your core business and „cloud“ the non-core
- ✓ Deploy fast and easy – business growth, new markets, collaboration
- ✓ Improve customer service

VIRTUALIZATION



STANDARDIZATION



AUTOMATION



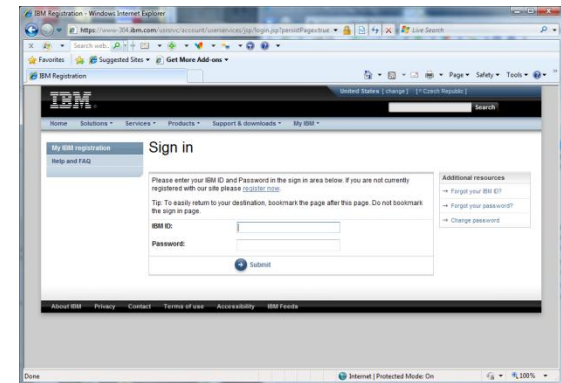
Cost

Flexibility

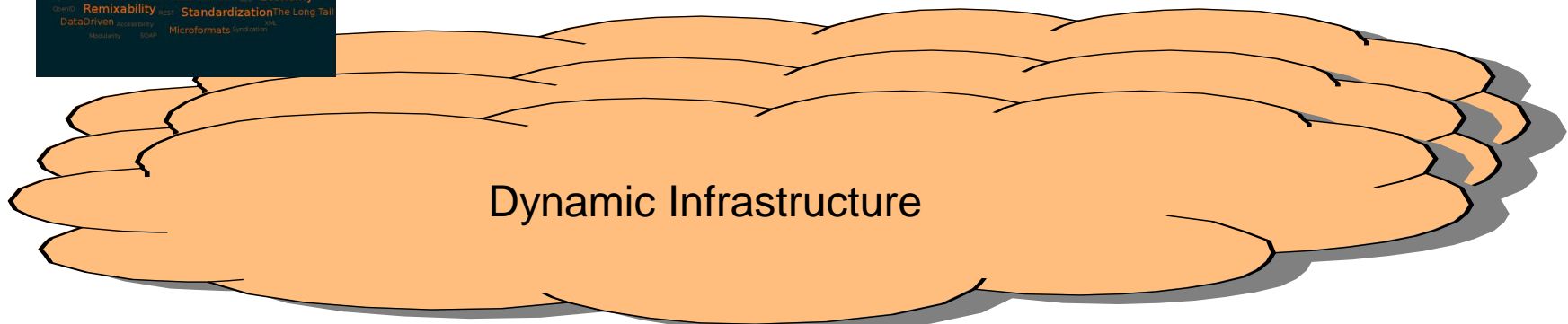
Cloud computing is a style of computing in which dynamically scalable and often virtualized resources are provided on demand as a service over the Network.

- IaaS – Infrastructure as a Service
- SaaS – Software as a Service
- PaaS – Platform as a Service
- CaaS – Connectivity as a Service

Service: Internal or External or Hybrid?
Cloud, Outsourcing, Grid, ...?



Web 2.0, Telco 2.0, Infrastructure 2.0, Xyz 2.0





Dynamic Infrastructure

GC System a.s.

- Reliable & scalable platform (HW, SW, support)
- **Virtualized** resources (processing, storage, communications)
- Provisioning & Deployment
- Accounting & **Charging**
- Monitoring & Support
- Self Service Portal
- **Standardized** environment (Java, Web 2.0)
- Security and user management
- Datacenter physical infrastructure & energy & workforce

BUILD FROM PACKAGE

Build your own

Resell Service



IBM CloudBurst v2.1 for System x

GC System a.s.

- ✓ Prepackaged Cloud Solution
- ✓ Based on **Intel Xeon 5660** in HS22V **blades**
- ✓ Dual Ethernet 10Gb, Dual FC 8Gb, Ethernet 1Gb
- ✓ DS3400 + EXP3000 + SVC
- ✓ VMware
- ✓ Self service portal
- ✓ Automated provisioning and deprovisioning
- ✓ Real time monitoring
- ✓ Usage and accounting chargeback
- ✓ Prepackaged configurations:
 - Small (3 compute blades, 7,2TB storage)
 - Medium (4-13 compute blades, 29TB storage)
 - Large (14-27 compute blades, 58TB storage)
 - X-Large (28-57 compute blades, 115TB storage)
 - Expansion nodes (additional blades added after install)
- ✓ Preinstalled in T42 rack, additional management components included





IBM CloudBurst v2.1 for Power

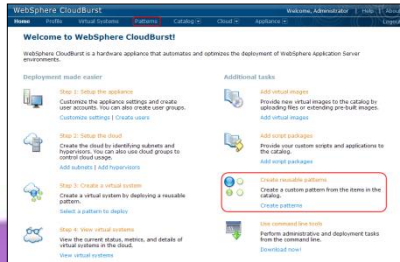
GC System a.s.

- ✓ Prepackaged Cloud Solution
- ✓ Based on IBM **Power7**/3,0GHz in p750
- ✓ Dual Ethernet 10Gb, Dual FC 8Gb, Dual Ethernet 1Gb
- ✓ DS5020 + EXP520 + SVC
- ✓ AIX, PowerVM, Vmcontrol, Net Control, Active Energy Mgr.
- ✓ Self service portal
- ✓ Automated provisioning and deprovisioning
- ✓ Real time monitoring
- ✓ Usage and accounting chargeback
- ✓ Preinstalled in T42 rack, additional management components included



WebSphere CloudBurst Appliance V2 ->

-> IBM Workload Deployer V3



- ✓ Appliance (HW + SW + preconfigured)
- ✓ End-to-end management of web applications (WAS)
- ✓ Set of virtual images are preloaded (WAS HV)
- ✓ Managing topology or workload patterns across a pool of virtual servers
- ✓ Virtual image customization
- ✓ REST APIs to help integrate into existing data centers
- ✓ Requires VMware ESX or PowerVM or zVM + hardware
- ✓ WAS HyperVisor Edition = WAS + OS, ready to run on „hypervisor“



IBM Service Delivery Manager

GC System a.s.

- ❖ IBM Service Management for Cloud Computing – software only
- ❖ Build Cloud upon existing virtualized environment
- ❖ Automate service delivery
- ❖ Self service portal and service catalog
- ❖ Integrates TSAM (srcv automation), ITM (monitoring), TUAM (usage accounting)
- ❖ Includes virtualization management



Workflow



Provisioning



Monitoring



Metering and rating

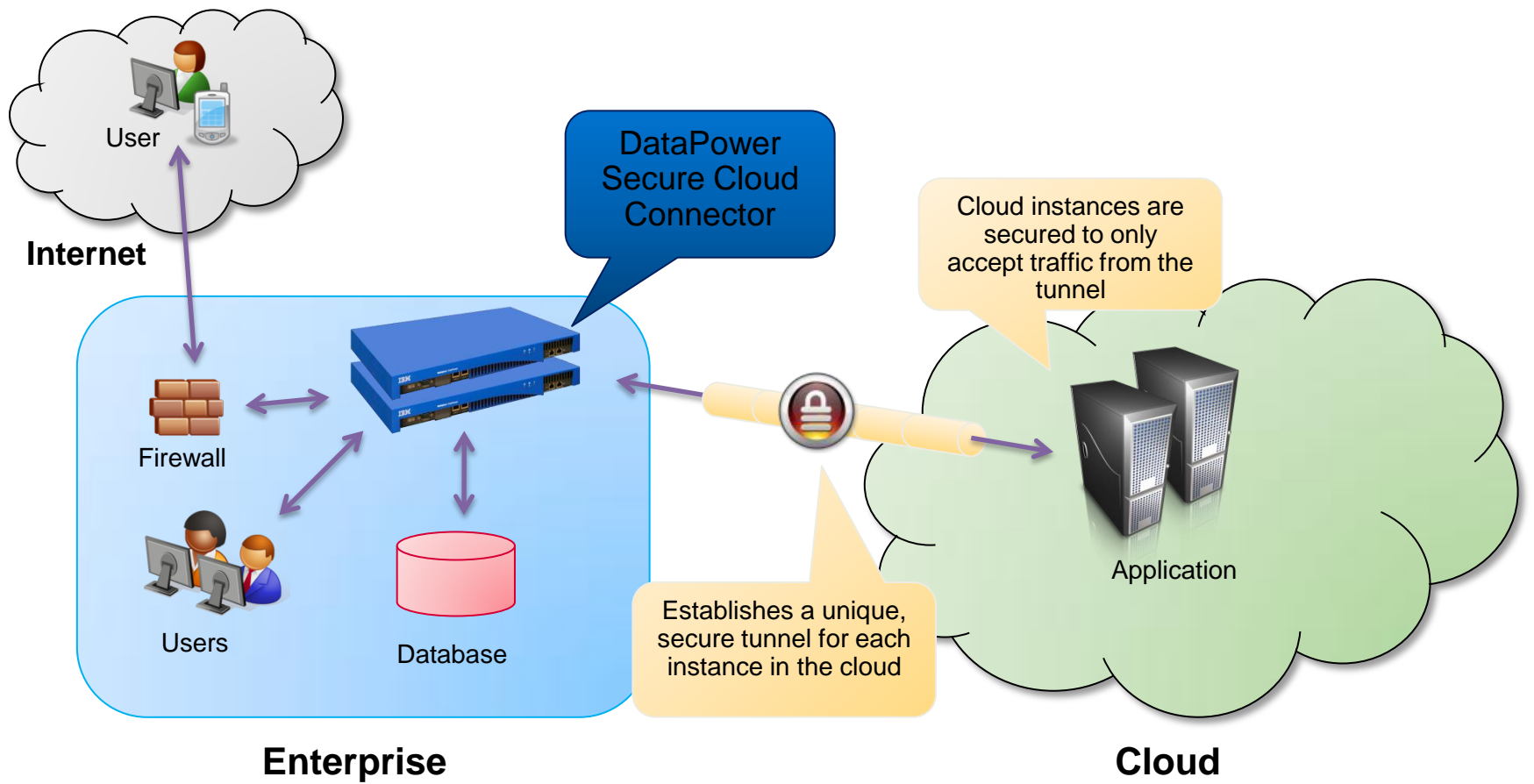


Connectivity and Integration

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WebSphere DataPower Secure Cloud Connector

WebSphere DataPower Cast Iron Appliance XH35





Computing Cloud

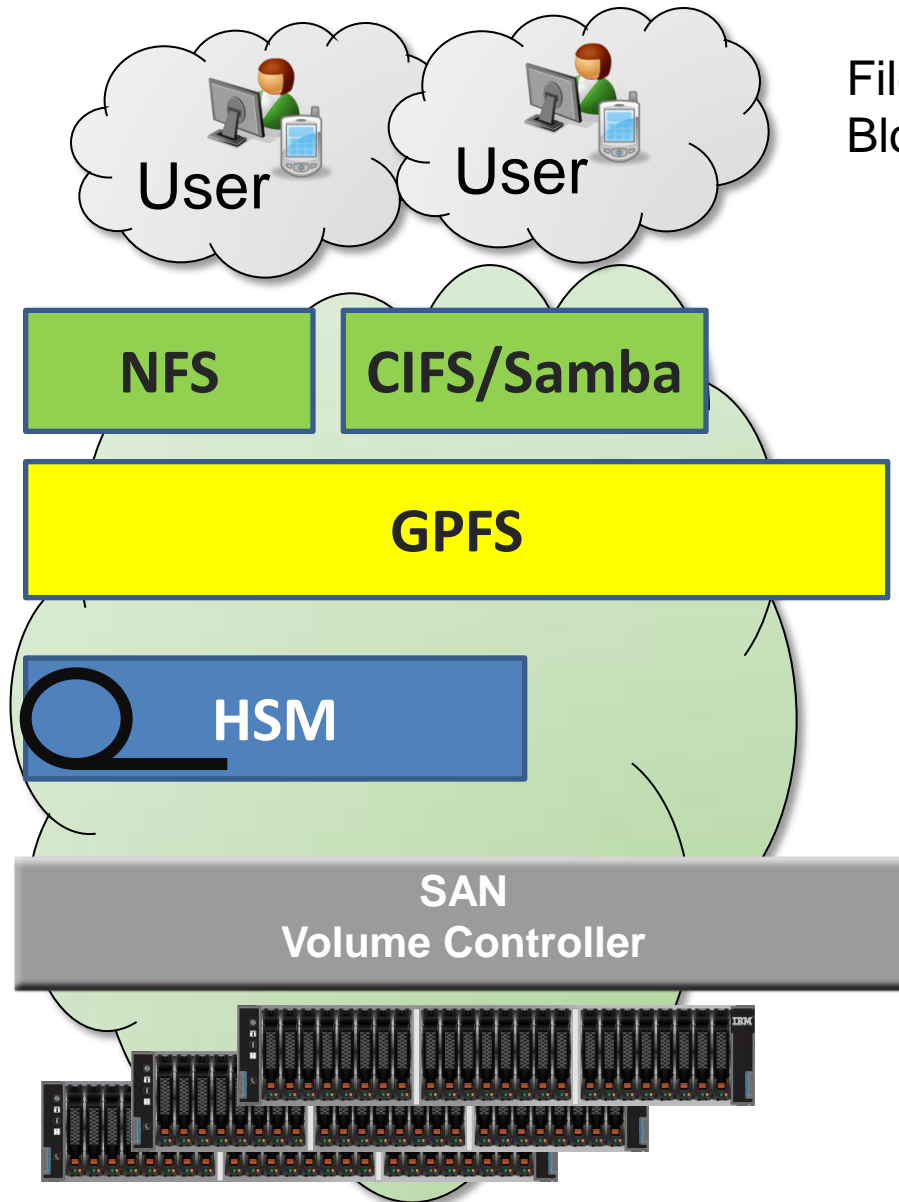
GC System a.s.

Monitoring: ITM
Usage Accounting: TUAM
Provisioning: TPM
Automation: TSAM
OS: Linux, AIX, Windows, zOS, iOS, ...
Virtualization: Wmware, PowerVM, zVM
Hardware & Firmware



File services (NFS, CIFS/Samba)
Block Services (FC, iSCSI, FCoE)

Cloud Mangement - TSDM



Network Filesystem

Scalable Parallel Filesystem

Hierarchical Storage Management

Virtualization Layer

Disk Layer



IBM Lotus Live

GC System a.s.



eMail



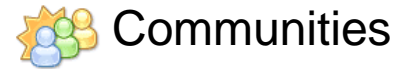
Meetings



Social Networking



Chat



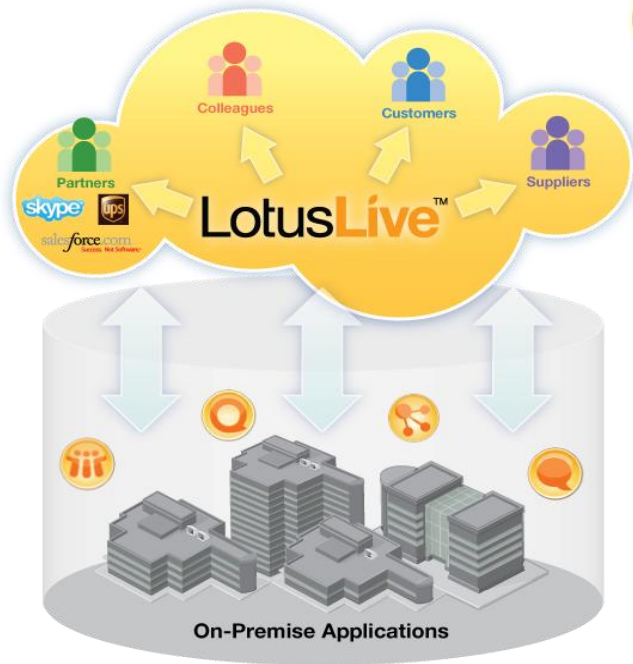
Communities



Files



Activities



www.lotuslive.com



Thank you

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