Introduction to Amazon EC2
Running IBM

Featuring

Mike Culver, Technical Evangelist for Amazon Web Services

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Data Management Emerging Partnerships & Technologies for IBM

Jason Chan, Linux and Virtualization Lead,
Data Management Emerging Partnerships & Technologies for IBM

Majed Itani, Chief Software Architect for SugarCRM
Webinar — Introduction to Amazon EC2 Running IBM

Introduction

IBM

SugarCRM

Q&A
Amazon Has Three Parts
What You Want…

Develop → Test → Operate
What You Get…

Undifferentiated heavy lifting
- Hardware costs
- Software costs
- Maintenance
- Load balancing
- Scaling
- Utilization
- Idle machines
- Bandwidth management
- Server hosting
- Storage Management
- High availability
Continuous Process Improvement Makes it Worse

Undifferentiated heavy lifting
- Hardware costs
- Software costs
- Maintenance
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- Utilization
- Idle machines
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- Storage Management
- High availability
The 70/30 Switch

Undifferentiated Heavy Lifting

Differentiated Value Creation

Undifferentiated Heavy Lifting

Differentiated Value Creation
We Think of the Cloud as a Set of Building Block Services

- **Infrastructure As a Service**
  - Amazon Simple Storage Service
  - Amazon Elastic Compute Cloud
  - Amazon Simple Queue Service
  - Amazon SimpleDB
  - Amazon CloudFront
  - Amazon Elastic MapReduce

- **Payments As a Service**
  - Amazon Flexible Payments Service
  - Amazon DevPay

- **Fulfillment and Associates**
  - Amazon Fulfillment Web Service
  - Amazon Associates Web Service

- **People As a Service**
  - Amazon Mechanical Turk
What is Amazon EC2?

- On-demand virtual computing capacity
- That is essentially unbounded
- Offering full root / administrator access
- Supporting mainstream Enterprise software
- At very affordable prices
- With a SLA
Predictions Cost Money

Infrastructure Cost $ 

Large Capital Expenditure

You just lost customers

Opportunity Cost

Predicted Demand

Traditional Hardware

Actual Demand

Automated Virtualization
Can You Do This at Home?
Regions & Availability Zones

US East Region
- Availability Zone A
- Availability Zone B
- Availability Zone C

EU West Region
- Availability Zone A
- Availability Zone B
Elastic Block Storage
Is Network-Mountable Drive Capacity

Data Center A

Data Center B

Note: Conceptual diagram only
Actual number of nodes and data center copies may vary
Amazon EC2 running IBM AMIs

Melody Ng (mysng@ca.ibm.com)
Jason Chan (jasoncha@ca.ibm.com)

Data Management Emerging Partnerships and Technologies
IBM Toronto Lab
Agenda

• IBM Amazon Machine Images (AMI) Availability Timeline

• Brief overview of IBM software products available on Amazon EC2 as AMIs

• In-depth technology brief of DB2 AMI and online demo
IBM on AWS Availability Timeline

- Immediate availability of new IBM Amazon Machine Images (AMIs) at no charge for development and test purposes
- Announce upcoming availability of IBM AMIs for production purposes
- New licensing guidelines enabling customers to run their already-purchased IBM software on AWS (Bring Your Own Licenses)

April 22nd, 2009

- Development and test AMIs available for:
  - IBM Mashup Center
  - Lotus Forms Turbo

April 30th, 2009

- Availability of IBM AMIs for production purposes:
  - IBM DB2 for Linux, Unix, Windows (LUW)
  - IBM Informix Dynamic Server (IDS)
  - IBM WebSphere sMash
  - IBM Lotus Web Content Management Standard Edition
  - IBM WebSphere Portal Server

February 11th, 2009

More to come!
IBM SWG Products Available as AMIs

- IBM DB2 for Linux, Unix, Windows (LUW)
- IBM Informix Dynamic Server (IDS)
- IBM WebSphere sMash
- IBM Lotus Web Content Management Standard Edition
- IBM WebSphere Portal Server
- IBM Mashup Center
- Lotus Forms Turbo
IBM SWG Products Available as AMIs

• For Development and Testing
  • IBM DB2 Express-C
  • IBM IDS Developer Edition
  • IBM WebSphere sMash
  • IBM Lotus Web Content Management Standard Edition
  • IBM WebSphere Portal Server
  • IBM Mashup Center
  • Lotus Forms Turbo

<table>
<thead>
<tr>
<th>Instance Size</th>
<th>Usage charge US</th>
<th>Usage charge EU</th>
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</thead>
<tbody>
<tr>
<td>Standard Small</td>
<td>$0.10 / hour</td>
<td>$0.11 / hour</td>
</tr>
<tr>
<td>Standard Large</td>
<td>$0.40 / hour</td>
<td>$0.44 / hour</td>
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<tr>
<td>Standard Extra-Large</td>
<td>$0.80 / hour</td>
<td>$0.88 / hour</td>
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<tr>
<td>High-CPU Medium</td>
<td>$0.20 / hour</td>
<td>$0.22 / hour</td>
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<tr>
<td>High-CPU Extra-Large</td>
<td>$0.80 / hour</td>
<td>$0.88 / hour</td>
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No cost for IBM software. Amazon EC2 usage charges apply.

More to come
IBM SWG Products Available as AMIs

• Development and Testing – More information:
IBM SWG Products Available as AMIs

- **DB2 and Informix pricing – Production AMIs**

  **Pricing for Instances running IBM DB2 Express Edition**

<table>
<thead>
<tr>
<th>Instance Type</th>
<th>US Region</th>
<th>EU Region</th>
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<tbody>
<tr>
<td>Standard Small (Default)</td>
<td>$0.38 per hour</td>
<td>$0.39 per hour</td>
</tr>
<tr>
<td>High CPU Medium</td>
<td>$0.65 per hour</td>
<td>$0.67 per hour</td>
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  **Pricing for Instances running IBM DB2 Workgroup Edition**

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<tr>
<td>Standard Large</td>
<td>$1.31 per hour</td>
<td>$1.35 per hour</td>
</tr>
<tr>
<td>Standard Extra Large</td>
<td>$2.50 per hour</td>
<td>$2.58 per hour</td>
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<tr>
<td>High CPU Extra Large</td>
<td>$3.30 per hour</td>
<td>$3.38 per hour</td>
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  **Pricing for Instances running IBM Informix Dynamic Server Express Edition**

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  **Pricing for Instances running IBM Informix Dynamic Server Workgroup Edition**

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<td>High CPU Extra Large</td>
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IBM SWG Products Available as AMIs

- **WebSphere sMash, WebSphere Portal Server, Lotus Web Content Management – Production AMIs**

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<tr>
<td>Standard Small (Default)</td>
<td>$0.50 per hour</td>
<td>$0.51 per hour</td>
</tr>
<tr>
<td>High CPU Medium</td>
<td>$0.50 per hour</td>
<td>$0.52 per hour</td>
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<th>Instance Type</th>
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<tr>
<td>Standard Large</td>
<td>$2.48 per hour</td>
<td>$2.52 per hour</td>
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<tr>
<td>Standard Extra Large</td>
<td>$4.82 per hour</td>
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<tr>
<td>High CPU Extra Large</td>
<td>$8.71 per hour</td>
<td>$8.79 per hour</td>
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<th>Instance Type</th>
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<th>EU Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Large</td>
<td>$6.39 per hour</td>
<td>$6.43 per hour</td>
</tr>
<tr>
<td>Standard Extra Large</td>
<td>$12.64 per hour</td>
<td>$12.72 per hour</td>
</tr>
<tr>
<td>High CPU Extra Large</td>
<td>$24.35 per hour</td>
<td>$24.43 per hour</td>
</tr>
</tbody>
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More to come
IBM SWG Products Available as AMIs

• For more information:
  • http://aws.amazon.com/ibm
  • http://aws.amazon.com/solutions/featured-partners/ibm/

• Each AMI’s catalog entries
IBM Innovation Center Workshops

Enabling applications for Software as a Service and cloud computing

- ½ day seminar
- SaaS marketplace, IBM programs & resources for business partners
- Three major design approaches for enabling multi-tenancy
- Demonstrate how IBM and AWS can give you a low cost, scalable, pay-as-you-go development and deployment environment

- May 13, 2009 in Waltham MA
- May 26, 2009 in Brisbane, AU
- June 2, 2009 in Sydney, AU
- June 3, 2009 in San Mateo CA
- June 10, 2009 in Melbourne, AU
- June 30, 2009 in Chicago, IL

Rapid enablement of existing applications for deployment on Amazon EC2

- Full day hands on workshop
- Learn how to quickly develop and deliver SaaS offerings in the cloud by using the Amazon EC2 environment
- Launch a SaaS application on EC2 using WebSphere sMash and DB2
  (Future workshops planned for other IBM AMIs)

- May 8, 2009 in Dallas, TX
- May 14, 2009 in Waltham, MA
- May 28, 2009 in Austin, TX
- June 4, 2009 in San Mateo, CA
- June 10, 2009 in Chicago, IL
- July 9, 2009 in Chicago, IL

Check for more dates and locations at www.ibm.com/isv/spc/events (Software as a Service)
Technology found in DB2 AMI

- Latest versions of DB2 9.5 packaged in AMIs
- Linux based AMIs
- Integrated modules for seamless setup and configuration of AMI
  - SUSE YaST (Yet Another Setup Tool) modules used for:
    - AWS user setup of private key and certificate file
    - EBS volume configuration within DB2 AMI
    - AMI user configuration
    - DB2 instance setup and configuration
Amazon EC2 running IBM AMIs

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IBM Toronto Lab
SugarCRM on WebSphere sMash

Majed Itani
Chief Software Architect
About SugarCRM

World’s leading commercial open source
Customer Relationship Management (CRM) application

- Founded in April 2004
- 4,500 Customers in 30 countries
- Over 500,000 users on 60,000 systems
- 115,000 Community members
- 150 Partners on five continents
CRM is a system for identifying, acquiring, and retaining customers. Key functional modules include:

- Marketing
- Sales
- Collaborate
- Sugar
- BackOffice

Increases the number of and depth of human relationships between organizations or individuals and their customers, partners, friends, etc...
SugarCRM and IBM

- Integration with WebSphere sMash
- Customers can run PHP applications utilizing Java libraries
- Customers can expect superior runtime with sMash’s JVM tooling
- Customers are provided with simple tooling for basic integration tasks
  - Module Builder on SugarCRM and App Builder on sMash
  - Exploit the mashup tooling features to create fully functional, integrated applications with minimal code
Thank You

- Contact Mike Culver at mculver@amazon.com
- Visit the AWS website at http://aws.amazon.com
- Visit the Amazon EC2 Running IBM detail page at http://aws.amazon.com/ibm