Cloud Computing in Japan: Trends and Issues

January 21, 2011

NAKATA Yusaku
Agenda

1. IPA Overview
2. Trend and topics on Cloud Computing
3. IPA’s report on Cloud Computing (2010FY)
4. Issues on Cloud Computing in Japan
5. IPA’s Activities over Cloud Computing (2010FY)
6. Toward the sound development of IT society
IPA Overview
- Basic missions

Basic missions

- IT human Resources
- the security and reliability of IT
- International Competitiveness
IPA Overview

-Four Principal Fields

- IT Security
- Software Engineering
- IT Human Resources Development
- Open Software
Trend and topics on Cloud Computing - Activities for Cloud Computing in Japan

IPA
- Study Group for cloud
- WG for utilization in the regional and local small business

METI
- Competitiveness
- Guideline for IT vendor

MIC
- Study Group for Smart Cloud
- Japan Cloud Consortium

Activities for Cloud Computing
- Research
- Alliance
- Study Group

NIST
ENISIA
CSA

¥40T Plan

Cloud Vendor & Cloud User

New Business
Trend and topics on Cloud Computing - IPA-CSA mutual cooperation agreement

- June 7, 2010
- Cooperation fields
- Mutual activity support

Dec 16, 2010
Cloud security symposium
Trend and topics on Cloud Computing - ENISA e-Government Cloud Project

Expert group members in alphabetical order:

Andrea Glorioso, European Commission
Amanda Goodger, CESG –GSI, UK
Antonio Lioy, Politecnico di Torino, Italy
Ben Katsumi, IPA, Japan
CJ Moses, Amazon, US
Daniele Catteddu, ENISA (chair)
David Wright, Trilateral Research LTD, UK
Dennis Heinson, Center of Advanced Security Research
Darmstadt (CASED), Germany
Giles Hogben, ENISA
Fabrizio Baiardi, Università di Pisa, Italy
Jim Reavis, Cloud Security Alliance, US
Kim Jongpyo, KISA, Korea
Liam Lynch, eBay, US
Marcos Gomez, INTECO, Spain
Matt Broda, Microsoft, US
Milan Petkovic, Philips Research and Technical University
Eindhoven, Netherlands
Paolo Balboni, Attorney, Italy
Peter Dickman, Google, US
Philippe Massonet, CETIC – Reservoir Project, Belgium
Raj Samani, McAfee, EMEA -UK
Rui Barros, ELANET (CEMR) - European Network for
eGovernment and Information Society (supported
by the Council of European Municipalities and Regions)
Srijith Nair, British Telecom, UK
Theo Dimitrakos, British Telecom, UK
Steffen Schreiner, CASED, Germany / CERN, Switzerland

September 17, 2010
@ENISA headquarters
Trend and topics on Cloud Computing
- Cloud Computing market size forecast in Japan

Cloud service:
service on IT vendor’s Data center.
IaaS, PaaS etc.,

Reference: Yano Research Institute 2009
Trend and topics on Cloud Computing
- Cloud Computing users in Japan

Many companies have installed Cloud Computing service

■ Sompo Japan, CRM,
  Salesforce.com (Salesforce partner portal)  April 2010 announced
  375,000 users

■ Panasonic, Information sharing system,
  IBM (Cloud Service)  May 2010 announced
  280,000 users

■ Asahi Glass Company, SaaS,
  Hitachi (EcoAssist-Enterprise-Light)  July 2010 announced
  100 business places

■ Uchida Yoko, groupware,
  Microsoft (Business Productivity Online Suite)  August 2010 announced
  2,000 users
Trend and topics on Cloud Computing
- Cloud Vender

- **Japanese Venders**
  - Cloud Computing solution ‘Harmonious Cloud’ announced June 2010~ Hitachi
  - In cooperation with SAP to deliver ERP services over cloud announced Nov 2010 NEC
  - 100B¥ (10 years) investment Cloud Computing Business announced ~March 2011 Fujitsu
  - Lindacloud Service announced Nov 2010 NTT-Data

- **Foreign Capital Companies**
  - Operating Data Center with NTT-Com in Tokyo announced 2011~ Salesforce.com
  - Operating Global Data Center in Chiba March 2011 IBM
  - Collaboration with Softbank-telecom Feb 2011 Google
IPA’s report on Cloud Computing (2010FY)
- Background and purpose of IPA’s Report

“The study Group about the social Infrastructure of the cloud computing society”,

➢ On March 24, 2010, IPA published a report on ‘Cloud Computing’


➢ The report is based on

- presentations from experts and subsequent discussions in study group formed by IPA
- IPA’s survey results

➢ The target readers of the report are mainly “Cloud users” especially Non IT-professionals
  (e.g. Top management of an organization, managers of general affairs)
IPA’s report on Cloud Computing (2010FY) - Contents of the Report

- **Scope of the report**
  - what Cloud Computing enables to
  - risks we encounter
  - technical background

- **Contents of the report**
  1. Purpose of Study Group activity
  2. The present conditions of the cloud computing.
  3. The use form of the cloud and a concrete image of the penetration to industry and the society
  4. The use type and concern materials of the user
  5. Consideration matter as Cloud users
  6. A pending issues with the Cloud Computing systems development

  `<Reference>`

  The road map of the cloud on the technology.
At the beginning, minor troubles happened on Saturday afternoon. We found these are due to system upgrade / running patch at Friday night (in US time). After series of negotiation, Salesforce (S/F) decided to provide servers for Asian customers (S/F changed upgrade time for the servers).

The support service of overseas cloud vendors is poorer than domestic vendors. But we concluded that is the trade-off matter with cost. We don’t need the ‘best’ quality if it is not expensive.

We solved the privacy concern by encrypting and slicing personal data. The procedure makes each personal data not ‘personal’ any more. (So we could allow to save the data in overseas storage.)
IPA’s report on Cloud Computing (2010FY)
- Result of Survey: Critical points in adopting

- little difference for attitude to Cloud Computing found between SMEs and large enterprises

- Critical points / NOT critical points

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<thead>
<tr>
<th>Critical</th>
<th>NOT Critical</th>
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<tr>
<td>data loss</td>
<td>vendor lock-in</td>
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<tr>
<td>privacy</td>
<td>location of storage (domestic/overseas)</td>
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<tr>
<td>availability</td>
<td></td>
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<tr>
<td>data leakage</td>
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<tr>
<td>security level</td>
<td></td>
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<td>support quality in trouble</td>
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Issues on Cloud Computing in Japan
- Issues to promote use of Cloud Computing

- Cloud Users
  - which business area should be shifted to Cloud Computing
  - what care is necessary for Cloud Computing operation

- Cloud Vendors
  - balancing cost and service
  - better trouble management
  - ensuring interoperability between Cloud and on-premise

- Public Sector
  - what role to play as a leading user
    (e.g. to provide advanced procurement policy)
  - what role to play as a promoter
    (e.g. to provide guideline of SLAs)
Issues on Cloud Computing in Japan
- METI’s Report summary

**Innovation**
Creating new business and services utilizing large-scale data

- Economic Growth and New Services
- Solution for Social and Global Challenge
- Cross-border Partnership for Integrated Cloud Services

**Rules**
Institution-building for Cloud Computing and data-driven innovation

**Platform**
Establishing Cloud service platform

METI’s Report: August 16, 2010
IPA Activities on Cloud Computing in 2010FY - METI’s Policies & IPA’s Activities

**METI’s Policies**

**IPA’s Principal Fields**

Activities from viewpoint of “Security and Reliability“ of Cloud Computing

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<td>1</td>
<td>Security</td>
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IPA Activities on Cloud Computing in 2010FY
- IPA Activities summary

**Security Center**
- study and analysis of CC security including incident information
- participation in international activities on Cloud Computing security
- support to SMEs' use of Cloud Computing

**Software Engineering Center**
- supporting activity for the safety assessment and Non-functional requirements of Cloud Computing
- supporting activity for the regional and local small business

**Open Software Center**
- survey, evaluation and standardization of OSS application in developing Cloud Computing

**IT Human Resources Div.**
- provide skill list necessary for Cloud Computing
  - for cloud users
  - for cloud vendors
IPA Activities on Cloud Computing in 2010FY - Security Center

- study and analysis of Cloud Computing security including incident information
- participation in international activities on Cloud Computing security
- support to SMEs' use of Cloud Computing

Keynote speech at IPA Global Symposium 2010: CSA
Executive Director Mr. Jim Reavis
IPA Activities on Cloud Computing in 2010FY
- Open Software Center

- survey, evaluation and standardization of OSS application in developing Cloud Computing
- Publishing ‘Open Sources Software Catalogue’

Open Source Software Catalogue for Cloud Computing: : Eucalyptus

http://ossipedia.ipa.go.jp/
IPA Activities on Cloud Computing in 2010FY - Software Engineering Center

- Supporting activities for the safety and security in Cloud Computing utilization
  - Issues survey for cloud computing utilization in the regional and local small business
    Target: IT coordinators independent or within IT vendors
  - Study of non-waterfall-style development to deal with extreme change of business environments
  - Assessment of cloud service capabilities and SLA based on Non-functional requirements grades

Non-functional requirements

Verification and Risk Assessment

SLA
IPA Activities on Cloud Computing in 2010FY - IT Human Resources Div.

- provide skill list necessary for Cloud Computing
  - for cloud users
  - for cloud vendors

- publish ‘White paper on IT professionals 2010’

Prospect of industrial change (IT company)
SaaS /Cloud Computing will change business widely
Toward the sound development of IT society

- IPA's study frontier, expanding the perspective of Cloud Computing, focuses on
  The new era of IT function in social and human life.

- 'IPA Global Symposium 2011' to be held on 26 May, 2011 will discuss (or present) the results of such studies.

Focusing on the new era of IT function in social & human life
http://www.ipa.go.jp

Thank you!