INFORMATION TECHNOLOGY EVOLUTION
From Products To Services

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Overview

Agenda

— Oracle’s standards engagement
— Standards impact on Oracle’s business evolution
— Changing role of services at Oracle
— Standards and Cloud Computing
— Conclusion – The World is Changing
Rationale for Standards Engagement

Customer requirements drive Oracle participation in external Standards Setting Organizations (SSOs)

- Open standards provide interoperability
- Customers feel comfortable that they are not “locked-in”

Open standards benefit Oracle

- Save time and money to invest in capabilities that improve our products versus competition:
  - Increase performance
  - Value added features

Standards conformance differentiates us from competitors
Metrics for Oracle’s Standards Engagement

- **300+ Employees** Engaged in Standards Globally
- **Representation in 400+ Technical Working Groups and 60+ Administrative or Policy Committees**
- **270+ Leadership Positions**
- **Participate in more than 100 Standards Setting Organizations**
Role of Standards in Oracle’s History

**Early Years:** Oracle = SQL Relational Database (RDBMS)
- Software Development Labs founded in 1977
- Participated on equal basis with then dominant multinational companies in developing the SQL standard
- Released first commercial SQL product, ORACLE

**Middle Years:** Oracle = Enterprise Software Vendor
- Expanded portfolio of software products: Middleware Infrastructure, Applications Suites, Systems Management
- Standards facilitated growth through acquisition
- Internet changed everything
- Interoperability is essential and requires standard interfaces
Oracle Today

Software, Hardware, Services – Engineered to Work Together
  — Sun acquisition added hardware to product mix

Growth through acquisition continues
  — Vertical Industry Market Focus

Standards play key role in continued success

The IT world is changing again => Cloud Computing
  — Different product deployment and business model
  — Pervasive impact in IT companies including Oracle
Changing Role of Services

Oracle services traditionally supported products
- Pre and post sales support
- Product implementation and customization

Transition from product to cloud services focus
- Full range of cloud offerings:
  - SAAS = Software as a service
  - PAAS = Platform as a service
  - IAAS = Infrastructure as a service

- Standards-based components in all 3 service tiers

Products on-premises compatible with cloud services
=> Customer Choice
Oracle Cloud SaaS And PaaS

100% Upward Compatibility with On-Premises Enables Easy Coexistence and Migration

Coexistence and Migration

On-Premises

Same Architecture
Same Standards
Same Products

Oracle Cloud

Transparently move workloads between On-premises and public cloud
Cloud Computing Standards – Providers View

No consensus among technology providers

— Whether/which standards are needed beyond those already established or being developed for components of Cloud Computing deployment
— Where willing to cooperate versus compete

Why so many Cloud Computing standards effort?

— Demand pull from eager potential customers
— New and newly invigorated stakeholders, especially governments
— Want standards now to support near-term move to cloud
ISO/IEC JTC 1 SC 38
Cloud Computing and Distributed Platforms

Published initial Cloud Computing (CC) standards
- ISO/IEC DIS 17788: Overview and Vocabulary
- ISO/IEC DIS 17789: Reference Architecture

Progressing multi-part standard for Cloud Computing Service Level Agreement (SLA)
- Part 1: Overview and Concepts
- Part 2: Metrics
- Part 3: Core Requirements

Recently initiated projects
- Interoperability and Portability
  Data and their Flow across Devices and Cloud Services
Conclusion - Cloud Computing Standards

Work To-Date Foundational/Non-Technical
  — Mis-match of skills/processes
  — No "green-field" technical standards development

Demand for standards that
  — Facilitate acquisition of Cloud Computing services
  — Reduce user risk
  — Increase competition among CC service providers

Management system and process standards rather than technology interoperability standards
Conclusion – The World is Changing

Moving IT business focus from products to services
- Driven by users, especially governments
- Users want standards to support transition

Increased role/influence of governments
- Some governments seeking to regulate Cloud services as a new or telecommunication industry

Impacting all aspects of IT, including standards
- Mis-match of standards setting forums and participants’ skills with CC standards requirements
QUESTIONS?

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