

dcml

Data Center Markup Language

Setting the Standard for Utility Computing

Welcome and Introductions

Marc Andreessen, Chairman, Opsware Inc.

October 14, 2003

TCP/IP

- Before TCP/IP...
- Tower of Babel
 - IBM SNA, DEC DECnet, Microsoft NetBEUI, Novell IPX, Mac Appletalk, Lotus Notes, ...
 - No universal language
- **TCP/IP came along and boom, Internet**
- Common language unleashed latent power
- Now everything speaks TCP/IP

HTML

- Before HTML...
- Tower of Babel
 - Gopher, FTP, Adobe Postscript, Microsoft Word, Apple Hypercard, Lexis/Nexis, Dialog, Quark, ...
 - No universal language
- **HTML came along and boom, Web**
- Common language unleashed latent power
- Now everything speaks HTML

Fast forward to today

- 8 years into 25-year shift to web architecture
- 700M Internet users; 1B PC's sold in 8 years
- **Explosion of technology and complexity in the datacenter**
 - Servers: 5M shipped this year; up 10x in 8 years
 - Web applications everywhere
 - New technologies: Linux, Intel, Java, BEA, ...
 - An enormous amount & diversity of *stuff*

The new Tower of Babel

- **The new Tower of Babel is the datacenter**
 - Thousands of components
 - Jumble of technologies
 - Constant change
 - Very expensive
 - Hard to secure
 - Virtually impossible to make reliable

DCML

- **Data Center Markup Language**
- DCML does for the datacenter...
 - What TCP/IP did for networking
 - What HTML did for content
- Universal language for the datacenter

What DCML is

- **XML-based language**
 - Describes datacenters and their component parts
- **Open**; anyone can adopt it
- **Answers three big datacenter questions:**
 - How do you know what you have
 - How do those things know about each other
 - How do you change it or rebuild it
- **Common language** for all elements of a modern datacenter

DCML makes things easy

- Examples:
 - Security patches
 - Scaling
 - Creating new systems quickly
 - Rolling out a new monitoring system
 - Pushing code across lots of servers
 - Recovery from mistakes and bugs
 - Disaster recovery

DCML unleashes potential

- **Servers** easy to provision, secure, scale
- **Applications** easy to roll out, change, recover
- **Datacenters** easy to run, consolidate, move, and recover
- **Web technology** easy to field
 - However you want, whenever you want

- **Latent potential is there**
- **DCML unleashes it**

DCML turbocharges industry trends

- **DCML enables Linux and Intel-based servers**
- **DCML enables utility computing**
- **DCML enables “best of breed”**
 - TCP/IP made networking lock-in impossible
 - HTML made content lock-in impossible
 - DCML makes datacenter lock-in impossible
- **DCML doesn't require massive investment**
 - Existing hardware, software, datacenters
 - From lots of different vendors
 - From “toe in the water” to “total immersion”

What you'll see coming out

- **DCML specification**
 - Already in development; complete early 2004
- **DCML open source reference implementation**
- **DCML open source reference descriptions of common datacenter components**
 - Server hardware, OS's, app servers, ...
- **Support of DCML in commercial products from DCML partners throughout 2004**
 - E.g. DCML-compliant Opsware in early 2004
- **25 companies here today; more will join**

Where are the other players?

- **Big companies adopt standards late**
- IBM
 - “Everything from IBM” vs “best of breed”
 - We believe they’ll adopt in response to customer demand – like they did with TCP/IP & HTML
- HP
 - Already getting DCML via Opsware & BEA
- Microsoft
 - Focused on SDM – Windows-only
 - We believe they’ll adopt to bridge to the rest of the world – like they did with TCP/IP & HTML

The thing about standards

- **What's Not**

- X.500
- X.400
- COTS
- OSI
- CMIP
- DCE
- CORBA
- OpenDOC
- OSF Unix
- Telescript
- ASN.1

- **What's Hot**

- TCP/IP
- HTML
- HTTP
- LDAP
- SMTP
- IMAP
- SSL
- SNMP
- NNTP
- SQL
- XML

How successful standards happen

“We reject kings, presidents and voting.
We believe in rough consensus and
running code.”

– Dave Clark, IETF

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Jeff Heller, President & COO, EDS

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Partnerships the Produce Results

- DCML initiative based on partnerships
 - Concept authored by EDS and Opsware
 - Specification evolving through the collection of leading utility computing vendors
- Open industry effort
 - Initiative focused on evolving the DCML specification
 - Organization formed by industry leaders
 - Open membership and participation
 - Royalty-free intellectual property rights for members

Innovating Solutions

- Assembled group committed to innovation
- Take past experiences and knowledge... combine with new points of view
- Time to innovate this solution is now
- Clients already demanding returns on the utility promise

DCML Organization Members

Governing Members



Founding Members



General Members





Computer Associates®

Larry Shoup
Chief Technologist



Vivek Ranadive
Chairman & CEO



Oren Ariel
Chief Technology Officer

Agenda

- 9:30 a.m. – 10:15 a.m. – Welcome and Introductions
- 10:15 a.m. – 10:45 a.m. – Evolution to the Real-Time Infrastructure
 - Donna Scott, Gartner Inc.
- 10:45 a.m. – 11:05 a.m. – Customer Drivers for DCML
 - Jeff Kelly, Executive Vice President, EDS Infrastructure Services
 - Larry Lozon, Global Offering Executive, EDS Hosting Services
- 11:05 a.m. – 11:15 a.m. – Break
- 11:15 a.m. – 11:45 a.m. – DCML Technical Overview
 - Tim Howes, CTO, Opsware Inc.
 - Darrel Thomas, Chief Technologist, Web & Application Hosting, EDS
- 11:45 a.m. – 12:30 p.m. – Partner Panel
 - Moderator: Donna Scott, Gartner Inc.
 - Governing Members and Founding Members executives
- 12:30 p.m. – 3:00 p.m. – Lunch / Media room

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