

Orchestrating the Stack

Next-Generation Developments in Enterprise Computing

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The Stack for Enterprise Computing

**Business
Layer**

Consulting Services
Transaction Applications
Analytical Applications
Communications & Collaboration Applications

**Compute
Processes**

Application Server Infrastructure
Systems Management Infrastructure
Database
Operating System

**Compute
Engines**

Mainframes
Servers
Storage
Network
Microprocessor

Desktops
Mobile Devices
Printer/MFPs

The Enterprise Gorilla Game: 2004

Category	Gorilla	Chimps
Consulting Services	---	IBM, Accenture, EDS, Infosys
Transaction Applications	SAP	Oracle, Siebel, Peoplesoft
Analytical Applications	---	Cognos, Bus Obj, Hyperion, SAS
Communications & Collaboration	Microsoft	IBM, Adobe
Application Infrastructure	---	IBM, BEA, Microsoft
Utility Infrastructure	---	CA, IBM, BMC, Veritas, Symantec
Database	Oracle	IBM, Microsoft
Server Operating System	---	Microsoft, Linux, Sun, HP
Mainframes	IBM	---
Servers	---	Dell, HP, Sun, IBM
Storage	EMC	Hitachi, HP, Dell, Fujitsu
Network	Cisco	Juniper, Foundry, Extreme
Microprocessor	Intel	AMD, Sun

Openings and Instabilities

- **Open-source products**
- **Security**
- **Voice/data/image convergence**
- **Mobile computing**
- **Content applications**
- **Non-relational databases**
- **Inter-enterprise applications**
- **Outsourcing & offshoring**
- **Grid computing**
- **Embedded computing**
- **Etc.**
- **Etc.**

An Overriding Instability

Services-Oriented Architecture

- **The current stack represents Internet-enabled client-server architecture**
 - Heavily dependent on large, monolithic structures
 - Minimal use of the Internet as a bus
- **The next generation stack will be anchored in services-oriented architecture**
 - The network becomes the bus
 - Structures draw heavily on shared services
- **The new stack will privilege new layers**
 - Which layers of the stack will host shared services?
 - What are the next-generation platforms?

Battle for the Enterprise 2004-2010

Disrupter Strategy

- **Exploit Architectural Advantage**
 - Target openings and instabilities
 - Use niche tactics to accelerate adoption
 - Target gorilla status in emerging layer
- **Leverage *Innovator's Dilemma***
 - Attack markets that gorillas under-serve
 - Avoid frontal assaults on market positions gorillas must defend

Battle for the Enterprise 2004-2010

Chimp Strategy

- **Use niche strategy to neutralize gorillas**
 - Dominate one vertical market
 - Establish defensible positions in two more
 - Block platform status for gorilla
- **Exploit openings and instabilities to**
 - Secure a gorilla position in an emerging layer
 - Escape from gorilla pressure in home layer

Battle for the Enterprise: 2004-2010

Gorilla Strategy

- **Consolidate power in home layer**
 - Marginalize the chimps and monkeys
 - Transform layer into platform for services
- **Orchestrate the rest of the stack to**
 - Garner platform status for home layer
 - Enter into additional layers
 - Marginalize layers not entered

The *Agenda at Vortex*

- **Examine eight stack strategies in progress**
 - Cisco
 - EMC
 - HP
 - IBM
 - Microsoft
 - Oracle
 - SAP
 - Sun
- **Augmented by commentary from**
 - Disrupters
 - Analysts
 - Investors
 - CIOs
 - Special guests

The Big Eight's Strategies:

My Point of View

- **Key sources of information**
 - Rumor
 - Innuendo
 - The Web
- **Methodological principles**
 - Guess first
 - Ask questions later
- **Overall intent**
 - Start the dialog
 - Provoke a response
 - Get to the real answers sooner

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- Construct a vertically integrated stack top to bottom, excepting applications and the network
- Leverage the end-to-end stack to differentiate on accountability
- Reinforce accountability via service commitments, penetrating accounts via consulting projects, securing them through a utility computing model

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- Transform ERP from a category of application to a platform
- Annex analytical applications, folding it into app platform
- Establish a vendor-independent infrastructure to buffer impact of that layer

Microsoft

Home

Target

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- Create ubiquity through a volume operations strategy touching as many points of presence as possible
- Leverage ubiquity to play defining roles in complex systems that involve multiple nodes
- Keep competitors out of home layers by aggressively expanding footprint of proprietary technology

Oracle

Home

Target

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- Leverage the database and its installed base as a platform
- Vertically integrate all layers above the database, competing directly against IBM using the same weapons
- Commoditize everything below the database to move more dollars into the target offer zone

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- Acknowledge that storage per se is in danger of being commoditized
- Leverage data center experience to enter systems management software and non-relational content management (*database)
- Position information rather than applications as the primary focus of systems management

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- Integrate the network to transform it into a platform for web services
- Leverage the platform to to enter systems management, beginning with security
- Leverage data center experience and network technology to annex enterprise storage
- Use visionary consulting to influence emerging architecture of service-oriented enterprise stack

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- Be the SOA disruption accelerator
- Evangelize next-generation technologies that facilitate SOA
 - Java
 - SunTone
 - N1 grid engine
- Speed transition with architecture-focused consulting
- Absorb lower-cost infrastructures including x86 and Linux

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- Target the systems management layer as the critical platform
- Leverage the OpenView franchise
- Minimize, not maximize, the footprint to leave room for partners
- Reinforce the platform through other major initiatives
 - Adaptive Computing
 - Outsourcing Services

Recap

- **Enterprise IT: Current State**
 - Organized around client-server stack
 - Dominated by entrenched gorilla positions
- **Enterprise IT: Future State**
 - Disrupted by Services Oriented Architecture
 - Characterized by a new set of platforms
- **Key Questions to Answer**
 - Which layers are the most strategic?
 - What platform architectures make the most sense?
 - Which vendors are the most credible?

Let the games begin!

Thank You