



Strategic & Product Roadmap

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Agenda

- JBoss Overview
- JBoss Strategic Directions
- JBoss Project Roadmaps
- Q&A



JBoss Background

- Professional Open Source
 - ✓ New Safe Choice for Enterprise Customers
 - ✓ 24X7 Support & Indemnification
- Robust Partner Program
 - ✓ HP, Unisys, CA, Novell, etc.
- Financially sound and fast growing
 - ✓ Matrix, Accel, Intel recent investors
 - ✓ Operating on a cash flow positive basis



JBoss Success

- #1 in development
 - ✓ More than 5 Million downloads in last two years alone
 - ✓ >40% Market share in TogetherSoft User Survey
- #1 in ISV/OEM
 - ✓ Adobe, Aether, Ascential, Autodesk, BMC, Borland, Brightline, Compiere, Compuware, Computer Associates, e.Piphany, EMC, Filenet, HP, Informatica, Intuit, Iona, Ivis, Jamcracker, Librados, Mercury, PingID, Siebel, Sterling Commerce, Unify, Unisys, WebMethods and many more all use JBoss today
- Standard for System Integrators: #1 in App Server growth
 - ✓ CRN survey puts JBoss Certified Consultant at #2 in fastest growing certification with large systems integrators (Symantec is first)
- # 3 in IT production – 27% market share
 - ✓ BZResearch survey – 13% in 2002, 27% in 2003, largest growth of all servers
 - ✓ JDJ survey: 70% of users go to Deployment.



JBoss Market Adoption

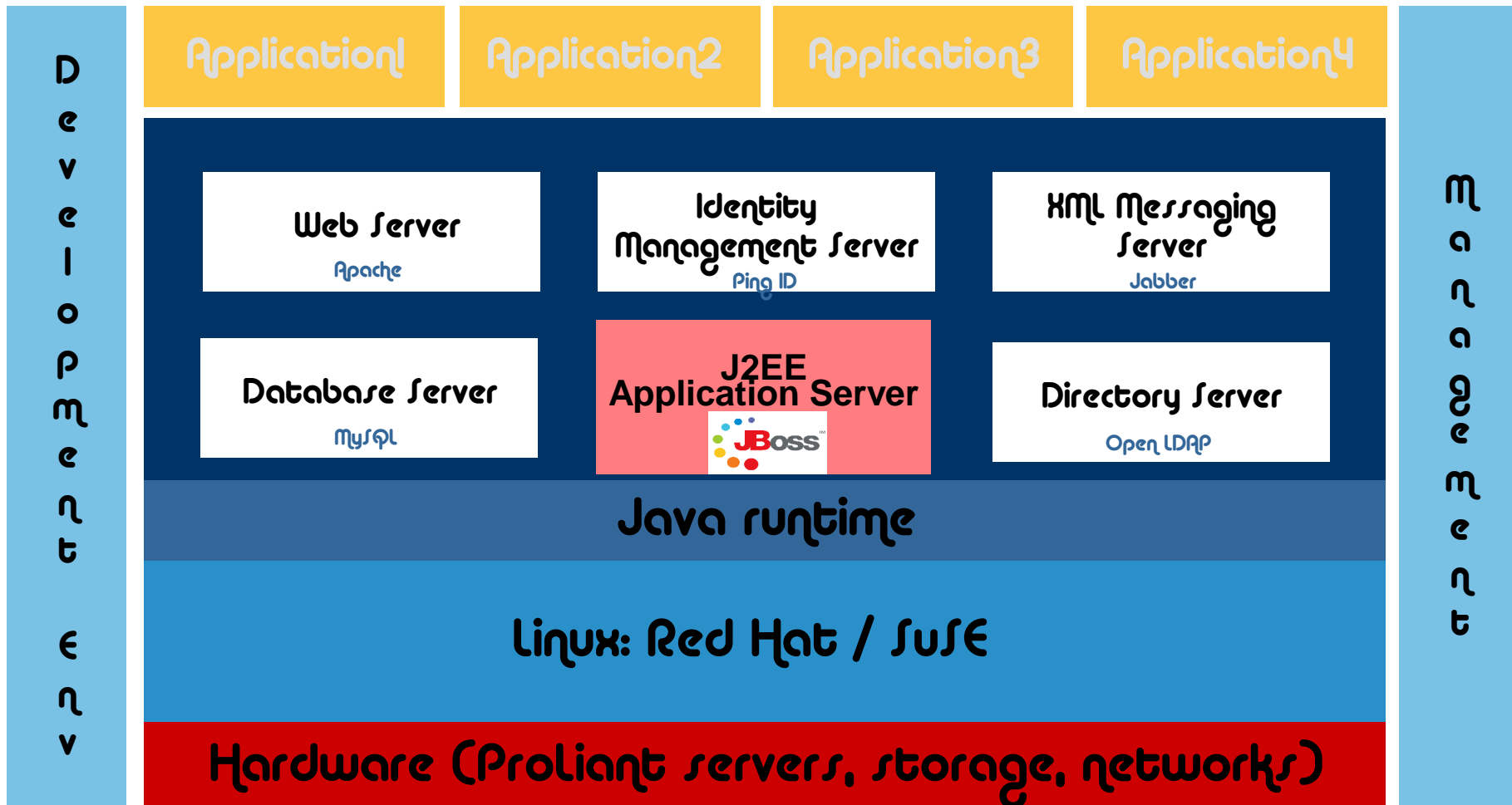
Gartner

February 25, 2004

- "JBoss uses its technical and business innovation in the J2EE application server market to take on the software industry giants."
- "JBoss delivers the best of both worlds: It is free, portable and standards-based, and it enjoys popularity among a growing number of developers."
- "JBoss has been growing its name recognition, its partnerships and its production deployments — all at the expense of its massively larger competitors. This unlikely phenomenon is a direct result of the insightful business vision of JBoss' leadership and the excellent technical skills of its engineering team."
- "Unisys and Hewlett-Packard have both announced that they will be working with JBoss."
- "JBoss is an open-source J2EE application server, scheduled to be J2EE-certified in 2004. Although not yet certified, the product is largely compatible with the commercial (and certified) implementations of J2EE. In addition to the basic J2EE application programming interfaces, JBoss offers extensions and enhancements that include its support for AOP, a simple Eclipse-based integrated development environment, clustering, caching, content management and basic portal functionality."



HP Linux Reference Architecture: Open Source Middleware





J2EE Update

- JBoss has passed the J2EE 1.4. Certification Test Suite
- Partners who have helped JBoss with the Certification effort include
 - Atos Origin
 - Borland
 - Hewlett Packard
 - Iona
 - Intel
 - Unisys
 - WebMethods
 - Sonic



JBoss Strategic Direction

- Professional Open Source
- Build out an entire Middleware Stack over the next 1-2 years
- Loosely-coupled Projects
 - ✓ Will work with other Application Servers, or work outside of an application server where appropriate
 - ✓ Easier Plug & Play



JBoss Projects Roadmap

JBoss 5.x Product Roadmap



Ivelin Ivanov – Director of Product Development – <mailto:ivelin@jboss.com>

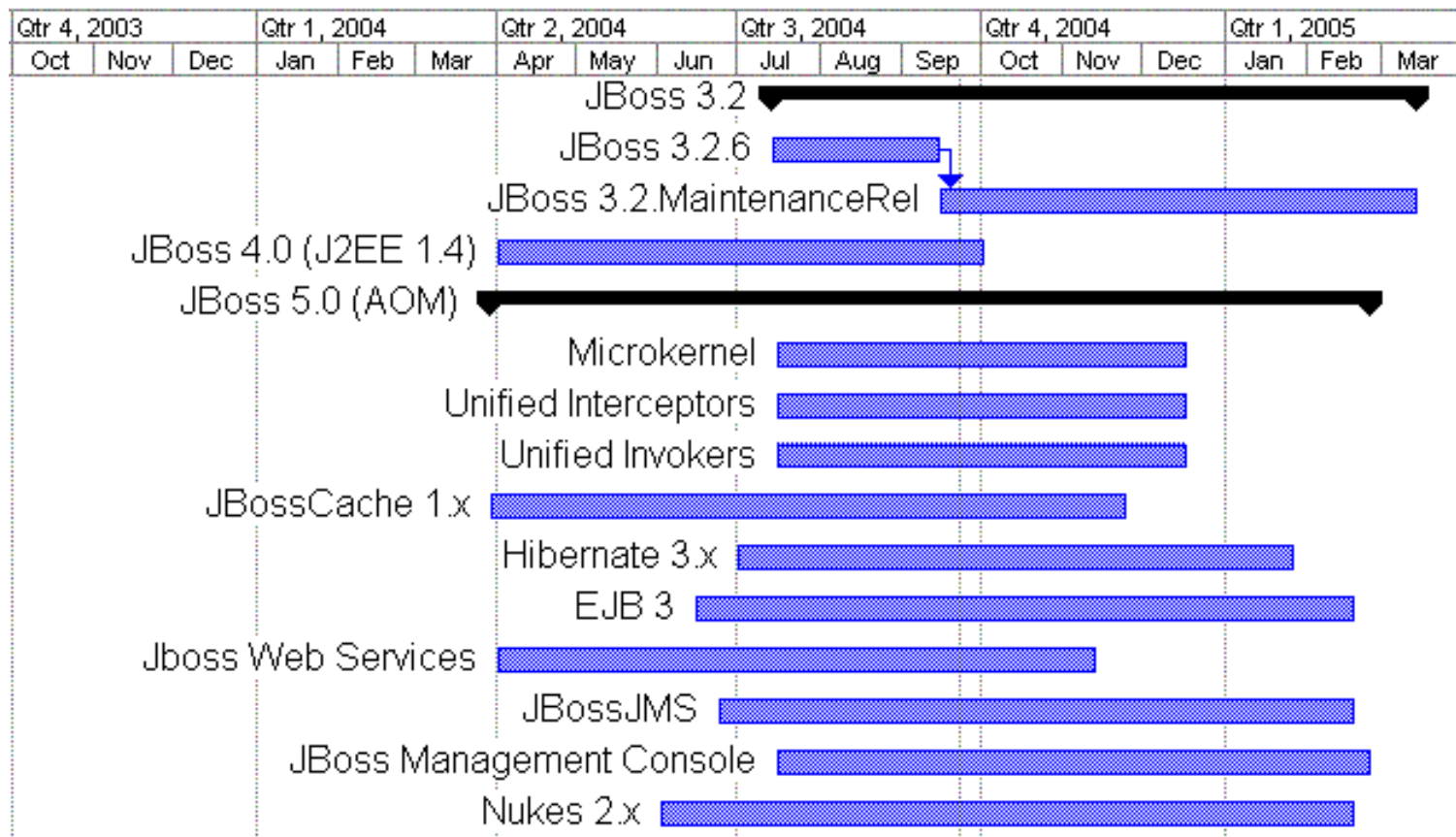


Products

- **JBoss Products:**

- ✓ Application Server: J2EE Container
- ✓ JBossMicrokernel: JMX based service composition platform
- ✓ JBossAOP: Aspect oriented programming framework
- ✓ Tomcat: Web container
- ✓ Hibernate: Object-Relational persistence service
- ✓ JBossCache: distributed, transactional cache service
- ✓ JBossNukes: Portlet container
- ✓ JBossWS: web services
- ✓ JBossJMS: enterprise messaging service
- ✓ JBossIDE: JBoss Application Development Tool
- ✓ JBossMail: Email server
- ✓ JBoss Management Console: User friendly administration tool
- ✓ JGroups: Reliable multicast service
- ✓ Javassist: bytecode manipulation library
- ✓ JBossXB: High performance XML data binding

- JBoss Schedule Summary





JBoss 5.x Infrastructure

- Microkernel
 - ✓ Enhanced service model
 - Formal state machine
 - Life cycle for distributed services
 - ✓ Enhanced dependencies
 - Constructor level
 - Reverse dependencies
 - Distributed dependencies
 - ✓ Service startup mode
 - Enabled: start immediately
 - On demand: start only when needed; port access, JNDI lookup
 - Disabled: registered; no resource consumption



JBoss 5.x Infrastructure

- Microkernel (cont.)
 - ✓ Service cluster mode
 - Standalone: each node runs an independent instance
 - Singleton: only one node runs the service; automatic failover
 - Distributed: load is balanced among nodes in cluster
 - ✓ Bootstrap configuration service
 - Configuration persistence and versioning
 - Federated service definition
 - ✓ Virtual File System
 - Local FS, JAR, WebDav, FTP
 - More flexible deployment



JBoss 5.x Infrastructure

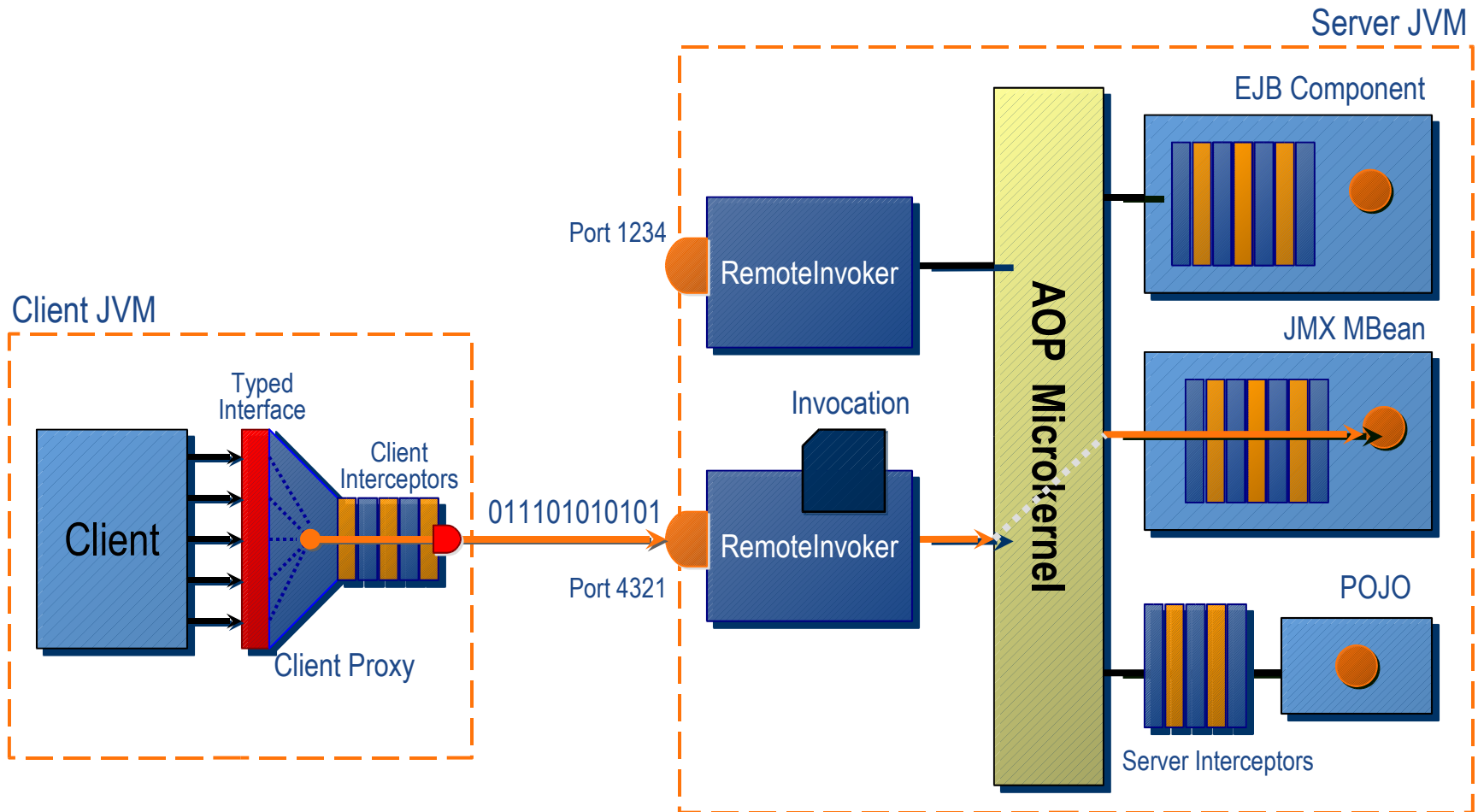
- Unified Interceptors
 - ✓ Shared across AOP/JMX/EJB/JMS/WS
 - ✓ Declared via annotations or XML descriptors
 - ✓ Rich Palette of System Aspects
 - Transactional: Transparent JTA
 - Security: Transparent JAAS
 - Remoting: Pluggable transports
 - Cache: Distributed, transactional shared memory
 - Pool
 - ✓ Connections
 - ✓ Threads
 - ✓ Sockets
 - ✓ Other external resources



JBoss 5.x Infrastructure

- Unified Interceptors (cont.)
 - ✓ Rich Palette of System Aspects
 - Instrumentation
 - ✓ Monitoring
 - ✓ Management
 - ✓ Notifications
 - ✓ Recovery actions
 - Profiling
 - ✓ Production time CPU and Memory utilization statistics
 - ✓ Runtime selection of profiling target
 - ✓ No performance impact for code that is not being profiled
 - ✓ Minimal performance impact for the code being profiled
 - ✓ Completely transparent to applications
 - Logging
 - ✓ Application tracing without explicit logging code
 - ✓ Runtime selection of logging target
 - ✓ Minimal performance impact

- Unified Interceptors & Invokers





JBoss 5.x Infrastructure

- Unified Invokers
 - ✓ Shared across JMX/EJB/JMS/WS/JNDI/RMI/Tomcat/SMTP
 - ✓ Detached invokers
 - Non-blocking calls
 - Connection pooling
 - Thread pooling
 - ✓ Remoting on demand
 - Auto select protocol
 - High Availability
 - Pluggable Load Balancing
 - ✓ Synchronous and asynchronous
 - ✓ Symmetric: Client Initiated and Server Callback



JBoss 5.x Infrastructure

- Unified Invokers (cont.)
 - ✓ Improved transports
 - direct reference
 - Smart RMI
 - SOAP
 - IIOP
 - Multicast RPC
 - Security aspect (SSL, SRP)
 - ✓ Dynamic push to client
 - Transport protocol
 - Client interceptors
 - ✓ Transport metadata
 - Target: Object and Method
 - Arguments
 - Aspect Payload
 - ✓ Advise around non-blocking calls (high perf, NIO)



JBoss Management

- User Friendly Console
- Configuration persistence
- Configuration versioning
- Federated management
- JSR 77 – J2EE management
- JSR 88 – J2EE deployment
- JSR 160 – JMX Remoting



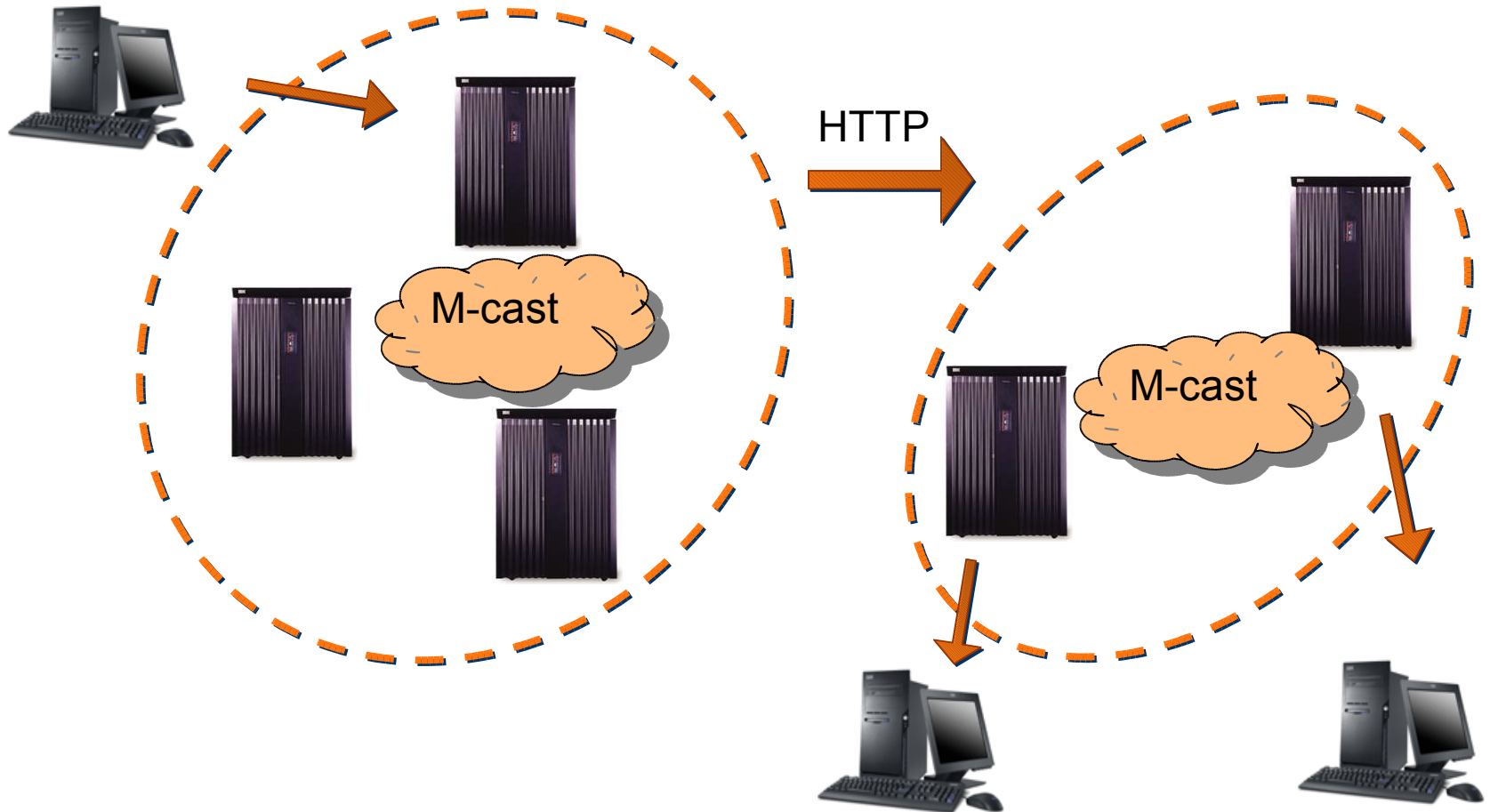
EJB 3.0

- J2EE a la carte
 - ✓ Code annotations
 - ✓ XML is optional
 - ✓ Transactions
 - ✓ Security
 - ✓ Asynchronicity
 - ✓ Web Services
 - ✓ Pooling
 - ✓ Cache
- POJO Persistence
- Enhanced EJBQL
- Java Server Faces friendly



JBossJMS

- High Availability
- High Performance
- Load Balancing
- Integration
 - ✓ SOAP
 - ✓ Mail
- Highly distributable
 - ✓ Collocated or remote cluster nodes
 - ✓ LAN: High performance multicast
 - ✓ WAN: Multiple protocols (RMI, SOAP)





JBossCache

- Easy to use – Collections like API
- Transactions
- Clustering over LAN, WAN, and mixed
- High availability
- High performance
- Firewall routing
- Load balancing
- Transparent replication via AOP
- Persistence
- Used by JNDI, JMS, EJB, HttpSession

- POP server
- IMAP server
- SMTP server
- High Availability
- Scalable Persistence



JBossIDE

- AOP
 - ✓ Right-click method aspects
 - ✓ Auto generate AOP declarations
 - ✓ Build time vs. run time aspects
 - ✓ Interceptors and advises
- EJB3
 - ✓ Smart annotations
 - ✓ Hot deployment
 - ✓ EJBQL scratchpad
 - Execute
 - Analyze performance
 - Query by example
 - ✓ Visual CMP mapping
- Service Archive (SAR) automation
- Monitoring and Management
- Profiling
 - ✓ In-depth real time monitoring
 - ✓ Detached production analysis



Nukes Portal 2.x

- JSR 168 compliant container
- WSRP support
- Single sign-on, Users, Roles
- Personalization
- Customizable Look and Feel
- Professional looking theme palette
- Built-in portlets
 - ✓ Forums
 - ✓ Wiki
 - ✓ Blog
 - ✓ CMS



JBoss Quality Assurance

- Professional QA team
 - ✓ Ensures continuous quality
 - ✓ Coordinates community contributions
- Continuous builds on a variety of platforms
 - ✓ Linux
 - ✓ Windows
 - ✓ IBM Mainframes
 - ✓ Unisys Mainframes
 - ✓ Others welcome



JBoss Quality Assurance

- Complete Automated Test Suite
 - ✓ Standards Compliance
 - ✓ Benchmarking
 - ✓ Unit testing
 - ✓ Integration testing
- QA Partners
 - ✓ Unisys
 - ✓ HP
 - ✓ Intel
 - ✓ AMD
 - ✓ WebMethods
- Join JBoss QA
 - ✓ Latest reports: <http://testsuite.jboss.com>
 - ✓ <mailto:qa@jboss.com>
 - ✓ Forums: <http://jboss.org/index.html?module=bb&op=viewforum&f=169>



JBoss Documentation

- Professional Tech Writer
 - ✓ Ensures coherent and complete manuals
 - ✓ Coordinate community contributions
- Several Education Resources
 - ✓ Free Online Docs: <http://jboss.org/docs/index>
 - Cookbook for Application Developers and Administrators
 - Advanced Developer's Guide
 - ✓ Training: Intro, Admin, Advanced
 - ✓ Community whiteboard: <http://wiki.jboss.org>
 - ✓ Community Forum:
<http://jboss.org/index.html?module=bb&op=main&c=8>
 - ✓ Mailing list: <mailto:docs@jboss.com>



Summary

- Strategic Roadmap
 - ✓ Professional Open Source Business Model
 - ✓ Build out Comprehensive, Loosely Coupled Middleware Stack
- Product Roadmap
 - ✓ Increasing clarity, communication and community involvement
 - ✓ JBoss Products
 - <http://www.jboss.org/products/index>
 - ✓ JBoss Roadmap
 - <http://www.jboss.org/developers/roadmap/>
 - ✓ Contribute - <http://www.jboss.org/developers/join>
- Q&A