OS/2 Strategy for 2000

Why an OS/2 Strategy for e-business?

IBM® has endorsed the strengths and benefits of Internet technologies and platform independence for several years and has encouraged customers worldwide to make the transition to network computing. To facilitate this transition, IBM has enhanced OS/2® to become an excellent platform for the deployment of e-business applications, while at the same time helping preserve investments in legacy applications. The pace of e-business and hardware technology is often measured in ″Web years″ of three to four months of calendar time, and industry standards, Internet technologies, and platform independence are IBM's strategic recommendations for coping with the rapid pace of software and hardware technology changes.

Exploitation of industry standards and Internet technologies hedges information technology investments, and platform independence preserves choices and options. Customers who have already made the transition to network computing have discovered that Internet technologies and platform independence can create a competitive advantage: they help reduce costs and facilitate the rapid deployment of new applications and services. The transformation to e-business could be a critical factor in a company's growth and prosperity, or a defensive strategy to protect a business from competitors. IBM has formalized its vision of e-business as the *Application Framework for e-business.* Although it is our intent to proceed as described here, because of the pace of technology, statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

What is the Application Framework for e-business?

The Application Framework for e-business is a multi-tier distributed information technology environment, based on open industry standards, that integrates Internet technologies with traditional information technology. In the typical three-tier distributed environment:

Three-tier Application Framework for e-business Distributed Environment

Network Infrastructure that uses industry standard APIs and protocols

External Services

Connectors

Web Application Servers

Clients

Content
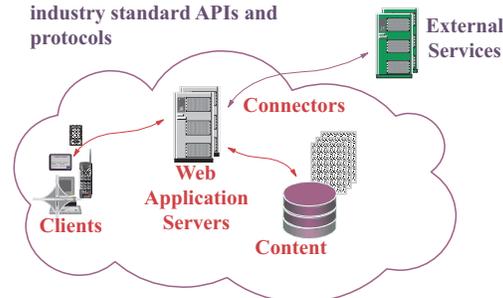
- The **client** tier provides user access to the network. Devices include digital wireless telephones, network computers and PCs along with Java® technologies that provide rich interaction among users and applications.
- The **Web application server** tier provides business logic and host data access using Internet and Java technologies.
- The **host server** tier provides data storage and transactional applications.

Solutions built within the Application Framework for e-business can help:
- facilitate multi-platform deployment because they use open standards

- shorten the time and lower the cost of deployment because they are server-centric and do not require client updates
- accommodate business growth because they are scalable
- protect investments because they can be integrated with existing solutions

For more information about the Application Framework for e-business, see http://www.ibm.com/software/ebusiness

What are the OS/2 Plans for 2000?

IBM plans to continue OS/2 support in the following areas:

- **e-business enabling enhancements:** IBM plans to provide IBM OS/2 Warp® 4, IBM OS/2 Warp Server for e-business, and IBM WorkSpace On-Demand enhancements that focus on e-business features and products such as TCP/IP, Java Virtual Machines, a browser (early release in 4Q2000, general availability in 2001) and the IBM WebSphere™ Application Server Standard Edition.
- **Convenience Packages:** IBM also plans to enhance Software Choice by providing CD-ROM Convenience Packages for OS/2 Warp 4 and Warp Server for e-business including:
  - Selected Software Choice features, such as Java, TCP/IP, WebSphere and browser enhancements
  - Fixes
  - Device Drivers and Universal Serial Bus (USB) enhancements
  - Common technology code base across the Warp client and server platform

  Convenience Packages help simplify upgrade by integrating previous fixes and features in one step. The Convenience Package for Warp 4:
  - Installs over either Warp 3 or Warp 4
  - Preserves desktop settings and preferences
  - Preserves previously installed applications

  The Convenience package for Warp Server for e-Business:
  - Installs over either Warp Server 4 or Warp Server for e-Business
  - Preserves desktop settings and preferences
  - Preserves previously installed applications
  - Preserves LAN Server settings and network settings

  IBM plans to provide electronic or telephone support for Convenience Packages through the next calendar year following the availability date. A Support Line contract is a prerequisite for electronic or telephone support.
- **Hardware and Device Driver Enhancements:** IBM plans to provide OS/2 compatible systems and device driver enhancements. We anticipate that over time some hardware device driver support will trend toward USB attachment, while some hardware and device driver support will continue in legacy mode. IBM posts hardware and device driver support information to the http://service.software.ibm.com/os2ddpak/ Web site.
- **Transition and product enhancement services:** IBM offers fee-based transition services such as assessment, deployment assistance, and implementation. IBM will also consider requests for product enhancement services such as footprint reduction, hardware compatibility test, or device driver development.
- **Defect support:** Limited warranty defect support will expire for OS/2 Warp 4 on 31 January 2001, Warp Server for e-business on 31 May 2002, and for WorkSpace On-Demand 2.0 on 31 January 2002. IBM plans to continue to offer special-bid,

fee-based Total Content Offering (TCO) defect support for OS/2 Warp 3, OS/2 Warp 4, Warp Server 4 and Warp Server for e-business. IBM plans to continue to offer special-bid, fee-based Service Extension defect support for OS/2 Warp 3 and Warp Server 4.

What are IBM's Recommendations?

IBM recommends that customers implement a phased transition from client-and-server environments to the Application Framework for e-business by exploiting the key e-business technologies that are enabled by OS/2:
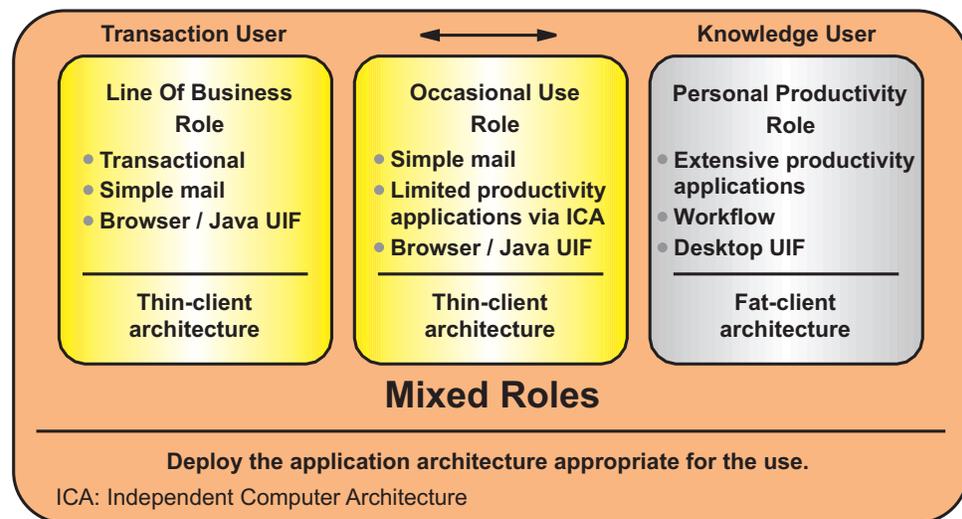
* Java—for program portability
* XML—for data portability
* Internet protocols—for data transmission and communication control
* Browser—for user interface
* Domino™ and WebSphere™—for application serving

Briefly, IBM recommends using Internet technologies on both internal and external networks with server-centric business logic delivered by thin-client applications. Customers should exploit OS/2 e-business enhancements and deploy new e-business technology applications concurrently with existing OS/2 applications until platform neutrality has been achieved, and then change the operating system. IBM recommends three overlapping phases—Prepare, Deploy, Transition—as a means to help smooth migration and leverage Internet technologies.

* **Prepare** for the Application Framework for e-business environment by:
  – Upgrading to current products that enable e-business application deployment concurrently with legacy applications:
    - OS/2 Warp® 4
    - Warp Server for e-business
    - WorkSpace On-Demand 2.0 for the management of OS/2, Windows® 95, Windows 98, and Windows NT® clients
  – Using WorkSpace On-Demand 3.0 for cross-system server-based management of client platforms and applications
  – Evaluating current solutions and determining future requirements
  – Selecting the most comprehensive packaged frameworks and solutions that preserve the greatest portion of the current host-based solution
  – Installing TCP/IP and upgrading communications bandwidth throughout the enterprise
  – Using Domino for mail, line-of-business forms, and knowledge management
  – Utilizing IBM services for release-to-release upgrade, readiness assessments, and planning
* **Deploy** applications in the Application Framework for e-business by:
  – Using frameworks and solutions that implement Java and Internet technologies such as multi-threading, distributed objects, transaction commit and check point restart, and directory and security services
  – Developing new e-business applications using Java, WebSphere, and Domino
  – Exploiting XML for the data interface between the server and the client
  – Using the browser for a standards-based, browser-neutral user interface (UIF)
  – Using:
    - Tivoli® solutions for systems management
    - MQSeries® for messaging and information management

- IBM DB2® Universal Data Base for data management
  - – Utilizing IBM services for deployment assistance
- Make the **Transition** of the operating system to an appropriate platform by:
  - – Basing the selection of the server operating system on server consolidation, performance, capacity, and configuration management taking into consideration:
    - Network bandwidth
    - Database
    - New Application Framework for e-business applications
    - Legacy transactional applications
 - – Basing the selection of the client operating system on a segmented view of user roles

The traditional user segmentation into transaction and knowledge users is reclassified below as Line-Of-Business, Occasional Use, and Personal Productivity. Most users operate in more than one role. Thin-client application architecture is platform neutral and is appropriate for most Line-Of-Business and Occasional Use applications. IBM recommends platform independent, thin-client application architecture, even if those applications are deployed on a fat-client operating system.

Transaction User	⟷	Knowledge User
Line Of Business Role • Transactional • Simple mail • Browser / Java UIF **Thin-client architecture**	**Occasional Use Role** • Simple mail • Limited productivity applications via ICA • Browser / Java UIF **Thin-client architecture**	**Personal Productivity Role** • Extensive productivity applications • Workflow • Desktop UIF **Fat-client architecture**

Mixed Roles

Deploy the application architecture appropriate for the use.

ICA: Independent Computer Architecture

OS/2 Warp 4 and WorkSpace On-Demand 2.0 provide you with the operating system platform for coexistence of legacy applications with new Java applications. IBM Services are available for assessment, planning, implementation, deployment, and defect support assistance.

WorkSpace On-Demand 3.0, provides you with cross-platform, server-based client management. Customers are discovering that centralized control of clients and applications can reduce help desk call volumes, speed application and update deployment, and lower costs. For example, customers with large deployments might have hundreds of desktop applications across the enterprise, many of which might not be management-approved. Server-based management allows administrators to decide which applications are authorized as shared, public

applications, to rapidly deploy the applications and to "lock-down" the desktop, eliminating unauthorized application proliferation while helping reduce the cost of ownership.
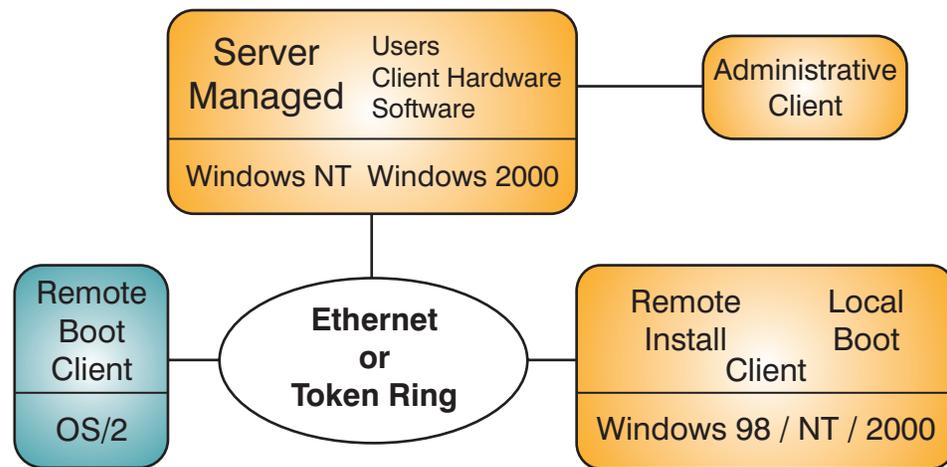
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What Transition Services are available?

IBM recommends that customers utilize IBM Services for consulting, implementation and, operation.

- Network Computing Software Services at http://www.ibm.com/java/assistance/ncs.html focuses on engagements for transforming OS/2 applications into e-business applications and provides:
  - Consulting services for:
    - Java Technology
    - Object-Oriented Approach
    - Multi-Tier Architecture Design and Analysis
  - Technical Services for transforming OS/2 applications into e-business applications
    - Proof of Concept
    - Prototype Development
    - Product Development
- Network Computing Operating System Services at http://www.ibm.com/software/os/services focuses on engagements for OS/2 and WorkSpace On-Demand deployment, release-to-release and platform migration and provides:
  - Project management
  - Software migration to the latest OS/2 releases
  - Deployment
  - Performance tuning of OS/2 systems and applications
  - Problem determination
- IBM Global Services (IGS) at http://www.ibm.com/services focuses on very large engagements and provides:
  - e-business Services:

- e-commerce Services
- Enablement Services for e-business
- Hosted Business Application Services
- e-business Accelerator
  - Business Consulting
  - IT Consulting
  - Business Transformation services
  - Total Systems Management services
  - Strategic Outsourcing services
- Lotus Professional Services (LPS) at http://www.lotus.com/home.nsf/welcome/lps for:
  - Consulting
  - Education
  - Getting Started and Acceleration Packages
- Tivoli Services at http://www.tivoli.com/services/ for architecting and implementing Tivoli management software.

Summary

In the past ten to fifteen years, companies have greatly benefited from client-and-server technology. However, the cost of maintaining and enhancing applications physically resident on every client has grown significantly. Solutions based on Internet and Java technologies in the Application Framework for e-business directly address many of the deficiencies responsible for driving expenses so high.

Changing an information technology system is a major undertaking. However, ignoring the relentless pace of technology and the networked economy could be perilous. Change is inevitable, and changes justified by long-term benefits or mandated by competitive pressures are vital investments in a company's future. IBM has been your client-and-server provider and we also intend to be your best choice among e-business providers.

For examples of customer experiences with Java and the Application Framework for e-business, see http://www.ibm.com/java/community/success-stories.html

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