WebSphere® software

Workplace Client Technology, Micro Edition — Enterprise Offering.

Highlights

■ *Helps extend many enterprise business processes to server-managed laptop computers and desktop systems*

■ *Works in concert with companion product IBM Workplace Client Technology, Micro Edition, which is aimed at the device space, to deliver a comprehensive, end-to-end software-to-services computing model that enables a more seamless link between devices and the enterprise*

■ *Reduces the complexity of provisioning and managing the diverse array of computing devices that enterprises and mobile workforces now use to meet their individual needs*

■ *Integrates components from other IBM software products, such as DB2® Everyplace®, WebSphere® Message Queue Everyplace, and Service Management Framework*

■ *Provides a services-oriented framework for use by network and system administrators*

■ *Operates with Windows® 2000 Professional, Windows XP, or Red Hat® Enterprise Linux V3.0 operating systems*

Enabling On Demand Business

When employees can access information instantly and on demand, their work lives are more productive. The challenge lies in integrating business processes across a wide spectrum of devices — from smartphones and personal digital assistants (PDAs) to laptops and desktops — and making them work together seamlessly. Further complicating matters have been proprietary technology and a lack of standardization.

IBM is now driving the next evolution for network-centric computing with a non-proprietary, industry standards-based component architecture. With its Workplace Client Technology software, IBM provides an open, secure, unifying platform for extending business processes out to server-managed laptop computers, desktop systems and other pervasive devices. By integrating the middleware and testing with server software, IBM provides the foundation to mobilize the on demand enterprise.

ON DEMAND BUSINESS™

Foundation for expediting business processes

Workplace Client Technology addresses the growing demand for dynamic, powerful applications (the rich-client experience) that can be deployed and managed affordably across a broad range of client devices and operating systems. It simplifies how you build an On Demand Business — easily linking devices to content, information and existing business processes.

This platform is designed to assist device manufacturers, service providers, enterprise information technology (IT) organizations and independent software vendors (ISVs) in forming a wireless ecosystem where the spectrum of devices have access to services across wireline, wireless or cellular networks.

Because of the way Workplace Client Technology shares code and processing work between clients and middleware servers, adopters benefit from the flexibility of client-side applications combined with the server-side control and cost-savings traditionally associated with the Web model of network-based computing. Effectively, they will have the best of both worlds.

Workplace Client Technology, Micro Edition — Enterprise Offering

Workplace Client Technology, Micro Edition — Enterprise Offering extends IBM's server-based WebSphere programming model to server-managed laptop and desktop computers. It uses industry standards and middleware to combine the convenience of pervasive devices with the power of e-business and the productivity of IBM Workplace software. As a platform for growth, Workplace Client Technology, Micro Edition — Enterprise Offering provides a sturdy foundation that provides three categories of services that expedite business processes:

Interaction services
People on the job need a user interface that is intuitive and in tune with the work they are performing. Workplace Client Technology, Micro Edition — Enterprise Offering provides the capability to tie together multiple sources of information (data, transactions, applications) to keep the information in the context of the end–user's tasks at the moment. This can help reduce distractions, provide focus on the task at hand, and increase productivity.

Workplace Client Technology, Micro Edition — Enterprise Offering enables multiple modes of end-user interaction to build applications that expedite information through business processes:

- *The Eclipse Rich Client Platform user interface can provide a desktop workbench that accepts various application plug-ins. The development team can use this functionality to build combinations of applications that are tailored to the needs of different types of users, such as customer service representatives, mobile sales forces, or executives. Eclipse is an award-winning, open source platform for the construction of powerful software development tools and rich desktop applications. More information about Eclipse can be found at www.eclipse.org.*
- *Browser-based applications are possible utilizing the embedded servlets and embedded Java Server Pages that enable client browsers to render content, without the need of server connectivity.*

Access services

Workplace Client Technology can provide the infrastructure where people have access to the information they want, when they want it, and where they need it. Business processes are accelerated by expediting the information from where it is created and out to the people who make decisions, by taking orders from customers or by keeping the supply chain running. Workplace Client Technology, Micro Edition — Enterprise Offering uses industry standards and middleware to extend existing business and consumer content as well as business processes across various networks, connecting server-managed end-user machines. The architecture delivers the platform integrity needed so that client devices that are connected, disconnected or intermittently connected can access high-value data services.

- *Java services, enabled on a Java Runtime Environment, allow applications to be built to run locally, avoiding network latency and providing faster response.*
- *Web services support can enable content, hosted throughout the network , to be easily accessed from the client.*
- *Relational database access delivers the capability for devices to persist data locally onto the device for later synchronization with the server. If the end-user machine loses power or a connection is lost, the data stored locally is not lost.*
- *Assured messaging can enable clients to queue messages on the machine and forward onto the server, as a connection becomes available – often critical for financial transactions and workflow applications.*

By using the same application programming interfaces (APIs) that are used widely within an industry today, the Workplace family preserves a familiar programming model, enabling millions of available developers to build, test and deploy applications based on their currently available skills. This can reduce risk while simultaneously speeding the time to market for new and innovative applications to deliver end-user productivity.

Client management services

Workplace Client Technology, Micro Edition — Enterprise Offering client management services can provide the ability to provision, update, maintain and remove applications and middleware on end-user machines. This enables system administrators to push applications to end-users' systems, with minimal need for intervention by the end user. Conversely, end users could also order new applications from a catalog list of available offerings.

The APIs that assist developers in the creation, testing and deployment of server-managed software to semi-connected devices include:

- *Platform management extensions enable software bundles to be provisioned to, updated, maintained and withdrawn from client machines.*
- *Systems management extensions enable system administrators to monitor and control the loads of software on specific clients.*
- *Operating systems support is provided on desktop and laptop computers running Windows and Linux.*
- *Security Services are also supported to provide data encryption and decryption, as well as authentication and authorization.*

Middleware integrity

The high-value data services enabled by Workplace Client Technology, Micro Edition — Enterprise Offering are only part of the story. Along with the enablement of these services, it is also essential that people can approach their interaction with assurance regarding the integrity of the application. To provide this trust, Workplace Client Technology, Micro Edition — Enterprise Offering integrates proven device middleware-based services that can provide the integrity that is needed for mission-critical applications.

Data integrity

IBM DB2 Everyplace software provides data management services on client machines. It provides the means of storing information locally for later synchronization with the server. This enables data to be stored locally when the client is disconnected from the network; then when connectivity is achieved, information can be forwarded appropriately to the server. Even if a device loses power or a connection is lost, the data stored locally is not lost.

Using open standards and technologies such as Java™ and Extensible Markup Language (XML), DB2 Everyplace works well within existing corporate IT infrastructure. DB2 Everyplace also boasts industry-leading indexing and query performance. DB2 Everyplace provides the middleware to ensure data integrity to employees that need to obtain and update enterprise data (inventory control, sales data, asset monitoring).

Transaction integrity

For transaction services, IBM WebSphere MQ Everyplace (MQe) software provides the ability to integrate end-user machines to assured messaging systems, business integration systems and financial transaction systems worldwide. MQe enables messages and transactions to be queued up on the client for delivery as the client obtains a connection to a server. This is important for semi-connected clients where financial transactions, medical information or other critical data must be forwarded once, and only once, to a server.

Client management integrity

IBM Service Management Framework is an implementation of the Open Service Gateway initiative (OSGi™) Service Platform specification and provides for the provisioning (network delivery and management) of applications and services — independent of device operating system and instruction set architecture (ISA).

Service Management Framework provides the ability to install, start, stop, update and uninstall applications (bundles of software) without affecting other applications executing on the end-user machine. This provides the fundamental underpinnings for pervasive On Demand Business — enabling new applications and services to be added or updated, dynamically, on a networked client. Applications can either be pushed to client machines by service providers or network administrators or they can be pulled to clients by end users.

Productivity enhancing tools

IBM has a wide range of tools that can assist the development community in the creation and testing of higher-value data services.

IBM WebSphere Studio Device Developer software is an integrated development environment (IDE) that allows teams of developers to build, test and deploy Workplace Client Technology, Micro Edition — Enterprise Offering applications. A member of the WebSphere Studio family of application development products, and powered by Eclipse technology, WebSphere Studio Device Developer delivers productivity by enabling device applications to be integrated with existing enterprise business processes running in production today.

IBM toolkits provide tools and run-times that can support the rapid development of modular, portable and hardware-independent software. IBM uses the Eclipse.org extensible architecture to create domain specific toolkits that speed development of new and innovative services.

Micro Edition Toolkit for WebSphere Studio software enables developers to extend enterprise applications to end-user machines. As a set of extensions to WebSphere Studio, this toolkit builds on the support for open Web standards (including Java, Java Server Pages, XML, database wizards, Web services, and rich media). It also contains the tools needed for the creation and testing of both IBM Extension Services for WebSphere Everyplace software and for Service Management Framework-based applications and services.

IBM opens new opportunities for extending enterprise applications

With Workplace Client Technology, Micro Edition — Enterprise Offering, IBM is helping to create the new on demand environment by extending enterprise processes to server-managed end-user machines. With the infrastructure-optimized offerings of the broader family of WebSphere Client Technology software, IBM extends its platform for On Demand Business from pervasive devices, such as PDAs and smartphones, to laptop computers and desktop systems. IBM can help you develop, deploy, maintain and manage applications and services to a wide spectrum of devices, both now and in the future.

For more information

To learn how your company can benefit from the WebSphere Client Technology, Micro Edition — Enterprise Offering portfolio of products, contact your local IBM sales representative or visit our Web site at:

ibm.com/software/wireless

IBM®