IBM

WebSphere software

IBM WebSphere Everyplace Connection Manager, Version 4.2

IBM WebSphere® Everyplace™ Connection Manager, Version 4.2 is a distributed, highly scalable, multi-purpose UNIX® communications platform. It supports optimized, security-rich data access by both WAP and non-WAP clients over a wide range of international wireless network technologies, local area networks (LANs) and wide area networks (WANs).

Highlights

- *Offers e-business applications to mobile users over wireless and wired networks*

- *Provides mobile access, messaging and Wireless Application Protocol (WAP) services*

- *Helps reduce data transmission costs over wireless networks*

- *Allows uninterrupted connectivity to critical applications*

- *Accommodates a wide selection of wireless and wired network connectivity choices*

- *Includes a Java™ technology user interface gatekeeper to set up and configure across multiple platforms*

WebSphere Everyplace Connection Manager supports and optimizes applications using Transmission Control Protocol/Internet Protocol (TCP/IP) interface, with no change to the operating system, TCP/IP or to the application. The interface shields network-specific details from the user application and provides authentication and data encryption and optimization. WebSphere Everyplace Connection Manager consists of three key services: mobile access, messaging and WAP.

Mobile access services

An encrypted tunnel secures wireless connections between the WebSphere Everyplace Connection Manager and the Everyplace Wireless Client. Everyplace Wireless Client, in conjunction with WebSphere Everyplace Connection Manager, offers enhanced functionality, improved performance and a high level of security. WebSphere Everyplace Connection Manager supports applications using industry-standard sockets programming interfaces provided by the operating system, so developers don't need to learn special programming interfaces or proprietary tools and protocols.

Gatekeeper

Gatekeeper, a Java application, provides a portable and remote administrator console for WebSphere Everyplace Connection Manager. Gatekeeper administrator has the capability for remote definition, configuration of the wireless gateways, registration of users and mobile devices, and performing routine administrative tasks. The

administration and configuration data is stored conveniently in a Lightweight Directory Access Protocol (LDAP) directory. You also have the flexibility to define multiple Gatekeeper administrators, which can allow you to distribute administrative permissions and responsibilities among them. Upon administrator login, the interface dynamically displays only the resources to which that administrator ID is authorized to access. If you use WebSphere Everyplace Connection Manager to exclusively support WAP clients, you can configure the Gatekeeper to display only WAP-related resources, which can simplify the administration process.

Clustering

WebSphere Everyplace Connection Manager provides a highly scalable architecture enabled via gateway clustering. Gateway clustering distributes load geographically across multiple sites and scales with the mobile needs of the customer. By supporting High Availability Cluster Multiprocessing (HACMP), WebSphere Everyplace Connection Manager helps to obtain high reliability.

WebSphere Everyplace Connection Manger seamless roaming: Supported networks		
Cellular Networks:	**LAN Connections:**	**Public packet — Radio Networks:**
CDMA	Wireless LAN — 802.11	GPRS (GSM Worldwide)
AMPS and N-AMPS	Ethernet	CDPD and CS-CDPD
GSM	Token Ring	DataTAC 4000 (US)
iDEN		DataTAC 5000 (Europe)
PCS1900	**Internet Connections:**	Modacom (Germany)
PDC (Japan)	Cable Modem	DataTAC 6000 (Asia)
PHS (Japan)	DSL	DataTAC/IP
TDMA	ISDN	Mobitex (Worldwide)
	ISP	Mobitex/IP (US)
		PDC-Packet (Japan)
SMS-C Connections:	**Dial Connections:**	
SMPP	DIAL/TCP	
SMTP	ISDN	**Packet Satellite Network:**
SNPP	PPP	Norcom
UCP	PSTN (POTS)	

Seamless cross-network roaming
WebSphere Everyplace Connection Manager can allow mobile users to maintain session persistence when the mobile device changes network connections from an IP subnetwork or enterprise intranet to a wireless network outside the firewall or enters an area with intermittent or no connection. WebSphere Everyplace Connection Manager supports a variety of communication protocols for cellular, packet radio, satellite, 802.11a, 802.11b, ethernet and token ring networks. This dynamic roaming feature can enable access across physical networks without breaking the application's end-to-end TCP sessions and can provide mobile users with uninterrupted connectivity to critical applications.

Security
WebSphere Everyplace Connection Manager provides strong authentication, authorization and encryption. Authentication supports the RSA SECURE ID authentication solution. Customers can choose from an extensive cryptographic library, which includes DES, Triple DES, RC5[1] and AES[2], to provide end-to-end encryption of data between the mobile device and the intranet network.

Data optimization
WebSphere Everyplace Connection Manager can reduce data transmission costs over wireless networks since it provides very efficient data compression and optimizes session transport for IP-based wireless networks, including 2.5G and 3G networks. WebSphere Everyplace Connection Manager enables optimized IP transport over non-IP wireless packet networks, thereby improving data throughput, enhancing reliability of wireless communication and improving the end-user experience.

Mobility Client
The Mobility Client software runs locally on mobile devices. With an authenticated network connection, you can assign a client intranet or Internet IP address. IP applications can run on a wireless network using the standard TCP/IP provided by the operating system on the mobile device. The WebSphere Everyplace Connection Manager supports standard IP routing — even over non-IP wireless bearer networks — to help provide unbroken, end-to-end TCP sessions between mobile devices and application servers. A Mobility Client SDK toolkit is provided for wireless aware application or application solution integration.

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[1] RC5 is a fast block cipher designed by Ronald Rivest for RSA Data Security (now RSA Security) in 1994. It is a parameterized algorithm with a variable block size, a variable key size, and a variable number of rounds.

[2] Advanced Encryption Standard (AES) is an encryption algorithm for securing sensitive but unclassified material by U.S. Government agencies and, as a likely consequence, may eventually become the de facto encryption standard for commercial transactions in the private sector.

Messaging services

You can use the Gatekeeper to configure WebSphere Everyplace Connection Manager for messaging services. The messaging services support delivery and receipt of short messages to and from client devices. When you configure the WebSphere Everyplace Connection Manager for messaging services, you allow a Web application server to send messages to a client, such as a pager or a phone in a wireless network. The messaging gateway supports several types of messaging modes, including Short Message Service (SMS), e-mail using Simple Mail Transfer Protocol (SMTP), WAP push, message delivery over proprietary networks such as Mobitex or Motien, and Simple Network Paging Protocol (SNPP).

WAP

WebSphere Everyplace Connection Manager when configured as a WAP gateway can provide connectivity for multi-vendor WAP 1.1 and WAP 1.2 client services. WebSphere Everyplace Connection Manager fully supports the WAP Wireless Session Protocol (WSP) which links the microbrowser with cellular phones and Personal Digital Assistants (PDAs). WebSphere Everyplace Connection Manager functions as a WAP Push Proxy Gateway allowing external applications the ability to push various content down to WAP devices. The Gateway stores cookies on behalf of the WAP client and can deliver them to Web servers when requested. Wireless Transport

Layer Security (WTLS) secures the connection from the gateway to the WAP client device. Secure Sockets Layer (SSL) is used to establish a secure connection from the gateway to back-end Web servers. WebSphere Everyplace Connection Manager optimizes and compresses WAP data to reduce transmission costs and increase data efficiency. WebSphere Everyplace Connection Manager provides a dynamic disconnection and reconnection when not in use to help lower connection fees.

WebSphere Everyplace Connection Manager provides end-to-end security, data optimization and encryption
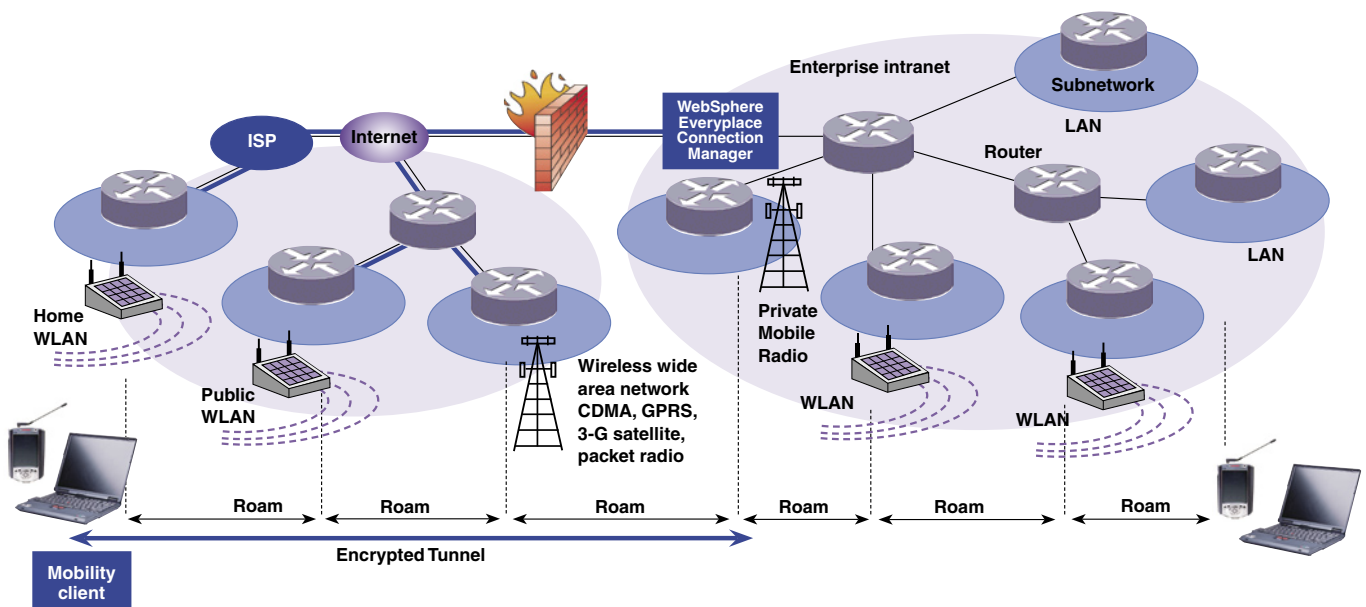
WebSphere Everyplace Connection Manager at a glance

WebSphere Everyplace Connection Manager hardware requirements

IBM AIX operating environment
- IBM RS/6000® 7043-150 tower
- 250MHz 32-bit 604e processor
- 128MB memory
- 9.1GB internal disk storage

Solaris operating environment
- Ultra 10
- 1GB RAM
- CD-ROM
- Minimum 9GB hard disk drive

WebSphere Everyplace Connection Manager software requirements

IBM AIX and Solaris operating environments
- IBM AIX, Version 4.3.3 or IBM AIX, Version 5.1 plus AIXLink 1.1.5.0 or higher to use an X.25 adapter
- Solaris 8, Trusted Solaris 8
- Open database connectivity (ODBC)-compliant relational database
- IBM DB2 Universal Database™, Version 7.1 or Oracle, Version 8.1.5, Version 8.1.6 or Version 8.1.7
- Merant DataDirect Connect ODBC, Version 3.6.0 (only for Oracle 8.1.5 and 8.1.6)
- Merant DataDirect Connect ODBC, Version 3.7.0 (only for Oracle 8.1.7)
- LDAP database, both server and client, Netscape Directory, Version 4.1.X; iPlanet Director Server, Version 5.x; IBM Directory Server
- HTTP Proxy Server (if using WAP proxy or access services)

WebSphere Everyplace Connection Manager supported software platforms

- IBM AIX, Version 4.3.3 or IBM AIX, Version 5.1
- Solaris, Version 7 or 8 and Trusted Solaris

Client platforms

- Microsoft Windows XP, Windows 2000, PocketPC 2002, Windows Me, Windows 98, Windows 95, Windows NT 4.0*, WinCE 2., WinCE 3.0
- Palm OS* (Version 3.5, 4x), embedded RTOS*
- Linux x86 client and Sharp Zaurus Client

* *Not all WebSphere Everyplace Connection Manager operating systems platforms include roaming support today*

IP networks and client

- LAN and WAN, 802.11, ethernet, 3G, CDMA, 2.5G, CDPD, PDC-P, iDEN

- Support of several non-IP wireless WANs

Gatekeeper at a glance

Gatekeeper hardware requirements

- On Intel® platforms, 400MHz or greater Pentium® processor
- On RS/6000 platforms, 375MHz or greater processor
- Minimum of 128MB RAM
- Minimum of 36MB disk space (Windows), 47MB for AIX, 62MB for Solaris, 48MB for Linux

Gatekeeper software requirements

- TCP/IP protocol installed
- IBM AIX, Version 4.3.3; IBM AIX, Version 5.1
- Microsoft, Windows 98, Windows NT, Windows 2000, Windows ME, Windows XP
- Solaris 7, Solaris 8, Trusted Solaris 8
- Linux, Red Hat Linux 7.2, Turbolinux Workstation 7.0, SuSE Linux 7.2

Mobility Client at a glance

Minimum disk space requirements

- TCP/IP protocol installed

- 1 to 3MB available disk space on Windows 98, Windows NT, Windows ME, Windows 2000, Windows XP, Windows CE, Palm OS Version 3.5.3 platforms

- 1.5MB available disk space on Windows CE

About IBM

Pervasive computing products from IBM can empower both enterprises and Service Providers to create and deploy applications for the new generation of mobile computing. With WebSphere Everyplace Connection Manager, we have created a platform that can enable you to easily extend e-business to mobile users over wired and wireless networks.

For more information

To learn more about IBM pervasive computing solutions visit **ibm.com**/pvc or call your local IBM representative.

e business software