NetMotion Wireless

Mobility XE Client
Windows XP
Windows 2000
Windows CE
Pocket PC
Windows Mobile 5

Mobility XE Server
Windows 2000 Server
Windows Server 2003

NetMotion
MobilityXE

Quick Start Guide

Getting Started with NetMotion Mobility XE

NetMotion Mobility XE™ is standards-compliant, client/server-based software that extends the enterprise network to the mobile environment. It gives mobile users on both wide area and local area networks reliable, secure access to enterprise applications and information.

Using Mobility XE, TCP/IP network applications can operate without modification over wireless connections. When a mobile device goes out of range or suspends operation, Mobility XE maintains the session status and resumes the session when the device returns to service. If the mobile device returns to service at a different point on the network or connects from a new location, Mobility XE relays data to the new address, even if it is on a different subnet or a different network. Mobility XE addresses the problems of slow, unreliable links over IP-based wireless wide area networks, adding features that include bandwidth optimizations, compression, and encryption.

Mobility XE also extends the centralized system management capabilities of wired networks to wireless connections, integrating with existing network security and providing tools that a system administrator can use to configure, manage, and trouble-shoot remote connections.

This guide outlines the basic procedures for installing the Mobility server and Mobility client software, and establishing an initial connection.

For a discussion of Mobility XE deployment in a production environment, see the NetMotion Mobility XE *System Administrator Guide*.

Installation Roadmap

These are the basic steps for integrating Mobility XE into your network environment:

1. Before you install Mobility XE, confirm that you have connectivity on your wireless network, and that a mobile device connected to the network can successfully ping network resources.

2. If the Mobility server will use DHCP for client IP address allocation, verify that DHCP services are available on all subnets where Mobility clients and servers will operate, and that there are enough IP addresses for client virtual and point of presence addresses.

3. Install a Mobility warehouse and Mobility server (see page 3 for details).

4. Install the Mobility client on one or more supported mobile devices (see page 5).

For a discussion of network design considerations, see "Designing a Mobility XE Network" in Chapter 3 of the NetMotion Mobility XE *System Administrator Guide*.

For information about upgrading to Mobility XE from an earlier version of NetMotion Mobility, see page 8.

System and Product Requirements

The Mobility XE server requires:

- A PC with an x86-compatible Pentium III processor or better.

- Microsoft Windows 2000 Server (Service Pack 3 or later required, Service Pack 4 recommended), or Microsoft Windows Server 2003.

- Minimum 512 MB RAM. 2GB recommended for heavily loaded servers.

- About 60 MB of disk space for program files, plus additional temporary disk space needed during setup.

- Internet Explorer version 6.x or similarly capable browser with JavaScript enabled, for access to the Mobility console.

See Chapter 3 of the NetMotion Mobility XE *System Administrator Guide* for more detailed server hardware guidelines.

The Mobility warehouse requires:

Hardware as specified for the Sun™ ONE Directory Server (http://docs.sun.com/source/816-6697-10/hardware.html), with minimum 300 MB of disk space. Recommend 500 MB, of which directory server log files may require 400 MB.

The Mobility XE client for Windows 2000, Windows XP, or Windows XP Tablet requires:

- A PC with about 3 MB of disk space, plus additional temporary disk space needed during setup.

The Mobility XE client for Windows CE requires:

- A Windows CE device with a StrongARM 1100 or compatible processor (e.g., XScale). For a list of supported devices, see Technical Note 1515 at www.netmotionwireless.com.

- Microsoft Windows Mobile 2003 for Pocket PC, Microsoft Windows CE version 4.2 and above, or Microsoft Windows Mobile 5.0 for Pocket PC.

- Approximately 1 MB of storage memory.

To integrate Mobility XE into a wireless network environment, you must have at least one of the following:

- A wireless LAN adapter installed on a mobile device and wireless access points installed on the wired network.

- A wireless WAN device installed on the mobile system and available wireless WAN service (for example, an account with a service provider).

- A mobile device with a network adapter that provides NDIS and IP support.

Installing the Mobility XE System

A Mobility XE server system comprises two components: the Mobility server, and a Mobility warehouse for storage of configuration settings and client policies. Both components are required, although a pool of servers will share a single warehouse. The Mobility warehouse can be collocated with a Mobility server, or reside on a separate system. In order to complete Mobility server installation and configuration, the server must be able to connect to a Mobility warehouse.

The Mobility server operates as a system service. To install or configure it, you must be logged in with administrator privileges on the system. Before installing new software, it is good practice to perform a system backup.

To install Mobility XE, choose **Mobility XE Server** in the Mobility installation program. This program (Cdsetup2.exe) starts automatically when you insert the Mobility product CD in the CD-ROM drive. If you are installing from a download, run the self-extracting executable file on the PC where you want to install the Mobility server software.

In the Server Setup dialog box:

To install...	Choose this option:
Mobility warehouse and Mobility server on the same PC.	**Mobility XE System**
Mobility warehouse on a PC that will not host a Mobility server.	**Mobility XE Warehouse only**
Mobility server that will connect to a Mobility warehouse residing on a different PC.	**Mobility XE Server only**

Mobility Warehouse Installation

When you install a Mobility XE system or stand-alone Mobility XE warehouse, the Mobility warehouse portion of the Setup program prompts you to enter a password for the administrative accounts it creates. The password must be at least 8 characters long. You will need to enter these credentials to administer the warehouse, or when you configure a Mobility server to register with this warehouse.

Mobility Server Installation

In a Mobility XE System installation, Mobility server setup begins automatically after the warehouse is installed.

Initial Mobility Server Configuration

After you install the Mobility server software and restart the PC, the Mobility Configuration Wizard guides you through the initial steps to configure the web-based user interface, connect the server to a Mobility warehouse, determine how IP addresses will be assigned to Mobility clients, and configure user authentication options.

The Mobility server's default settings may be acceptable for most configuration options, but you will need to provide the following information about your network:

▸ Warehouse settings—The name (in the form of a fully-qualified domain name) or IP address of the Mobility warehouse that stores the configuration settings and client policies for this server, and administrative credentials for access to the warehouse. If you are installing the Mobility server on the same PC as the warehouse, this will be the server's name or IP address.

▸ Server's external address settings—The IP Address and port that a Mobility client device will use to connect to this Mobility server through your existing firewall, router, or NAT. On a network that uses network address translation (NAT), a Mobility client that is connecting to the Mobility server from outside the firewall may need to use an IP address that is not assigned to a physical or logical network interface on the server.

▸ Virtual IP address scheme—If the Mobility server will allocate client IP addresses from a pool of addresses reserved for that purpose, you will need to define the address pool and provide name server information.

▸ User authentication method—If you choose NTLM authentication to a Windows domain (this is the default), the wizard will prompt you to identify users that are allowed access to Mobility XE services. If you choose RADIUS authentication, you will need to enter the IP address, port, NAS ID, shared secret, and filter ID, if any, for the RADIUS server.

The Mobility server is initially licensed for up to 100 Mobility client devices during a 30-day trial period. Contact your NetMotion Wireless partner or sales representative if you need to extend your trial period. To connect more than 100 devices during the evaluation period, or to eliminate the time limitation, you will need to add client device licenses. Client Policy Management requires a separate license.

For detailed information about options in the Configuration Wizard or about adding licenses, see the Mobility server online help.

Creating a Server Pool

Enable Mobility XE's server pooling features, including load balancing and failover between servers in the pool, by adding server licenses for the number of servers that will be in the pool.

During Mobility server setup, the Configuration Wizard lets you add the server to a server pool by registering with the Mobility warehouse for the pool. After installation, use the Mobility Warehouse page of the Startup Settings utility to register a Mobility server with the warehouse for a server pool.

Installing the Mobility Client

Windows 2000 or Windows XP

To install the Mobility client software, choose **Mobility XE Client** in the Mobility installation program. This program (Cdsetup2.exe) starts automatically when you insert the Mobility product CD in the CD-ROM drive. It automatically detects the operating system and installs the correct version of Mobility client. If you are installing from a download, run the self-extracting executable file on the device where you want to install the Mobility client software.

The Setup program prompts you to identify the Mobility server the client will connect to. You can enter the server IP address, or get the server address from DHCP. If you choose the DHCP option, the DHCP server must be configured to provide this information.

During installation, the Mobility client creates a 'virtual adapter', a software-only driver that appears as a network interface on the client device. The Setup program may display messages warning you about installing unsigned drivers. You can safely dismiss the warnings to continue with Mobility client installation.

After you install the software and restart the PC, the Mobility client can connect to a Mobility server.

Windows CE

There are two ways to install the Mobility client software on a device running Windows CE:

▸   Install from a partner PC, using ActiveSync. This option requires that a partnership be established between the CE device and a desktop machine.

▸   Install from a .cab file without using ActiveSync.

To install the Mobility client using ActiveSync:

▸   On a PC with ActiveSync installed, run the Mobility installation program and choose **Mobility XE client for Windows CE Client (ActiveSync)**. The setup program automatically detects the mobile device processor and operating system, and installs the correct version of Mobility client the next time you synchronize the Windows CE device. The Setup program prompts you to identify the Mobility server the client will connect to. You can enter the fully-qualified server name or IP address, or indicate that you want the client device to get the server address from DHCP.

To install the Mobility client from a .cab file:

1. On the NetMotion Wireless web site (www.netmotionwireless.com) or the NetMotion Mobility XE product CD, locate the .cab file that contains the correct Mobility client files for the operating system and processor of your CE device.

    See Technical Note 1515 on our web site for a current list of tested devices, supported processor types, and supported Windows CE versions.

    The following table shows which .cab file to choose for common Windows CE operating systems:

Windows CE version	CAB file
Windows Mobile 2003 for Pocket PC (4.20.1081) (the About box on the mobile device displays "Microsoft Pocket PC")	nmc_PPC2003.ARM.cab
For devices that are not running the Windows Mobile operating system (the About box on the mobile device does not display "Microsoft Pocket PC").	nmc_ce42.ARM.cab

2. Copy the .cab file to a folder on the Windows CE device, or to a memory card you can insert into the device.

3. On the CE device, run the .cab file to install the Mobility client. The Setup program will prompt you to enter a name or IP address for your Mobility server (this is the default), or to choose to acquire the server's IP address from DHCP. If you select the DHCP option, the DHCP server must be configured to provide this information. You will see a confirmation dialog box when setup is finished.

4. Reset the CE device when prompted to do so. If your system does not support auto-reset, reset the device manually to make the necessary changes to your Windows configuration.

The Mobility client is configured by default to connect at startup to the Mobility server you specify during installation. To change the Mobility client software configuration or to customize Mobility client installation on a Windows CE device, see the NetMotion Mobility XE *System Administrator Guide*.

Upgrading Mobility XE

To upgrade an existing Mobility XE installation, choose the **Mobility XE Server only** setup option—do not reinstall the Mobility warehouse. The Mobility server must have access to the primary warehouse both during the software upgrade and after the upgraded server is restarted, to successfully complete the upgrade process.

It is good practice to perform a system backup before installing new software. If you revert to NetMotion Mobility version 5.x or earlier after upgrading to Mobility XE, settings configured for the earlier version are not restored. For upgrades to Mobility XE version 6.5 from version 6.0 or 6.01, the NetMotion Mobility XE *System Administrator Guide* describes procedures for backing up the Mobility warehouse.

During the upgrade, the Setup program stops the service and clients that were connected to the server continue to try to connect. When the upgrade is complete and you restart the Mobility server, the clients will connect automatically if there are sufficient licenses.

Note: The security and feature enhancements in Mobility XE affect the compatibility of this version with earlier releases. See "Upgrading Mobility XE" in Chapter 4 of the NetMotion Mobility *System Administrator Guide* for more information.

Upgrading Server Pools

Mobility XE version 6.6 servers will coexist with older Mobility XE servers in a server pool; you do not need to upgrade all servers in a pool at the same time.

Note: Do not add a Mobility XE version 6.01 or older server to a pool that includes Mobility XE version 6.5 or 6.6 servers. The older server will not function correctly, and the event log will display "Object class violation" errors.

Connecting with Mobility XE

When a Mobility client connects to a Mobility server, a logon dialog box opens, prompting the user to enter a user name, a password, and the domain in which these credentials are valid. The Bypass button will only appear if the system administrator allows the client device to bypass Mobility XE.

On Windows 2000 or Windows XP, the Mobility client logon is integrated into the Windows login procedure. You will only see a Mobility Logon dialog box if Mobility XE requires different credentials than your Windows login, or if the user name or password you entered are invalid.

When the Mobility server is configured to use the SecurID protocol for RADIUS user authentication, the user enters Windows credentials in the Log On to Windows dialog box, and then enters the SecurID user name and passcode in the Mobility Logon dialog box that follows.

For information about other Mobility client connection options, see the online help or the NetMotion Mobility XE *System Administrator Guide*.

On the Mobility client, the Mobility XE icon in the system tray reflects the status of the connection between the client and the Mobility server.

When the icon is:	The client is:
Green	Connected to a Mobility server.
Yellow	Establishing a Mobility server connection.
	The Mobility client's IP address or network adapter has changed. The client may be roaming to a new subnet, or returning from out of range.
	Unable to reach the server.
	Disconnected from the server.
	Bypassing Mobility. All Mobility features are disabled.

Once you have established a connection to a Mobility server and are running your TCP/IP applications, try the following activities and watch what happens to the Mobility XE icon:

▸ Leave and re-enter a wireless coverage area

▸ Suspend and resume the mobile device

▸ Move to a wireless LAN access point on a different IP subnet

▸ Stop the network adapter and eject, remove, or unplug the device

For More Information About Mobility XE

For detailed information about Mobility XE installation, configuration, and management, see the product documentation:

▸ The online help for the Mobility server provides "how-to" procedures, explanations of specific settings and configuration options, and troubleshooting tips for the Mobility server, warehouse, and client components. Online help for client options is installed on the client.

▸ The NetMotion Mobility XE *System Administrator Guide* provides an overview of Mobility XE architecture, network design considerations, setup, configuration, maintenance, troubleshooting issues, and detailed reference information for network administrators who deploy and support Mobility XE software.

▸ There is also a ReadMe file with last-minute information pertinent to this release.

Technical Support

The NetMotion web site (www.netmotionwireless.com) has Technical Notes, answers to frequently asked questions, troubleshooting tips, and links to other Mobility XE technical information.

If you need further technical assistance, contact your NetMotion Mobility XE reseller or solution provider. Please be prepared to provide the following information:

▸ Exact error message and/or symptoms you observed

▸ Version of Mobility server and Mobility client software

▸ Operating system versions, including OSR or service pack level

▸ Wireless network hardware vendor and model

▸ Mobility XE event logs and/or Setuplog.txt files on client and server