MQSeries Everyplace for Multiplatforms™

GetStarted User's Guide

Version 1.2.6

First Edition (December 2001)

Note: Before using this information and the product it supports, be sure to read the general information under Appendix A, Notices

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About this book

This book is a User's Guide for the MQSeries Everyplace GetStarted SupportPac ED01. We will refer to this SupportPac as "GetStarted". It contains information on installing, configuring, and using the MQSeries Everyplace Postcard application (the "Postcard"), offers example demonstrations of uses of the postcard application, and describes the program included to help the user set up queue managers.

This book is intended to be used in conjunction with

MQSeries Everyplace for Multiplatforms, Introduction - a detailed description of the capabilities of MQSeries Everyplace,

MQSeries Everyplace for Multiplatforms, Programming Guide - guidance for programming with MQSeries Everyplace

MQSeries Everyplace for Multiplatforms, Programming Reference - detailed descriptions of the Java$^{(R)}$ version of the MQSeries Everyplace API

These books are available in softcopy form from Book section of the online MQSeries library. This can be reached from the MQSeries Web site, at URL: http://www.ibm.com/software/mqseries/library/

This document is continually being updated with new and improved information. For the latest edition, please see the MQSeries family library Web page at the Web site indicated above.

Who should read this book?

This book is intended for anyone who wants install and configure the MQSeries Everyplace postcard application.

Prerequisite knowledge

This documentation assumes that the reader has an understanding of MQSeries Everyplace as described in *MQSeries Everyplace for Multiplatforms, Introduction.*

An initial understanding of the concepts of secure messaging is an advantage. If you do not have this understanding, you may find it useful to read the following MQSeries book:

MQSeries An Introduction to Messaging and Queuing

This SupportPac and accompanying documentation may periodically be updated. For the latest edition, please see the MQSeries SupportPac site at: http://www.ibm.com/software/mqseries/txppacs/txpm4.html#mqe

Changes for this edition

1.2.6   This is the first edition of this book.

1. Installing the SupportPac

This chapter describes how to install the MQSeries Everyplace GetStarted SupportPac.

Prerequisite Software

The applications within the MQSeries Everyplace GetStarted SupportPac version 1.2.6 require

- a Microsoft Windows environment[1]

- IBM Java Virtual Machine or Sun Java Virtual Machine 1.2.2 or 1.3.x [2]

- Microsoft Java Virtual Machine (at a level of version 5.00.3155 or later).[3]

- MQSeries Everyplace for Multiplatforms 1.2.6 or later.[4]

    Note: If you intend to connect to MQSeries, the prerequisites are more stringent. See
                 Chapter 6, Connecting the Hub to MQSeries.

Installing the GetStarted SupportPac

To obtain the files for the MQSeries Everyplace GetStarted SupportPac, download **edo1.zip** from the category 2 section of the IBM MQSeries SupportPac website, at:

http://www.ibm.com/software/mqseries/txppacs/ed01.html

Extract the files from the zip to any directory then run InstallFirstSteps.exe.

Follow the instructions during the installation process to install the applications provided by the GetStarted SupportPac.

    Note: Once you have installed the MQSeries Everyplace GetStarted SupportPac,
                 uninstalling the Java Virtual Machine it uses will stop the GetStarted
                 applications from working. If you do this, un-install, then re-install the
                 GetStarted Supportpac.

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[1] The GetStarted SupportPac will work with the following versions of Microsoft Windows: 95, 98, NT, 2000.

[2] The IBM JVM is currently available for download at http://www7b.boulder.ibm.com/wsdd/wspvtjre-info.html, but you'll need to register.

[3] To determine the level of the Microsoft JVM, type JVIEW at a DOS prompt. If the command is not recognized then your machine does not have a Microsoft JVM installed and any other JVM is not acceptable. JVM SDK downloads to install or upgrade are available from http://www.microsoft.com/java/download.htm.

[4] The MQSeries Everyplace for Multiplatforms toolkit can be downloaded from
 http://www.ibm.com/software/mqseries/everyplace/

2.   Introduction

This chapter introduces the MQSeries Everyplace GetStarted SupportPac. It provides a brief overview of the concepts that you should understand in order to define and run queue managers with the MQSeries Everyplace GetStarted SupportPac and use or demonstrate MQSeries Everyplace using the MQSeries Everyplace Postcard application.

How to use this book

This section describes the topics covered in this book, and how to get the most out of the MQSeries Everyplace GetStarted SupportPac.

Installing the MQSeries Everyplace GetStarted SupportPac tells you how to install the MQSeries Everyplace GetStarted SupportPac, and how to configure your environment to run queue managers and the Postcard application.

This chapter introduces the concepts that you should understand in order to get the most out of this SupportPac.

First Steps describes how you can use the MQSeries Everyplace wizards to create a network of queue managers and run the Postcard application on them.

Using the MQSeries Everyplace Postcard describes the MQSeries Everyplace postcard application interface. It explains how to use the postcard application to send postcard messages between queue managers.

Using the MQSeries Everyplace Explorer with GetStarted describes the way you can use the MQSeries Everyplace Explorer to examine and change the configuration of the GetStarted network

Connecting the Hub to MQSeries describes the process of connecting the MQe network with MQSeries and sending and receiving postcards from the MQe Postcard to MQ Postcard Application.

If you experience problems trying to configure the MQSeries Everyplace GetStarted SupportPac, or are having trouble running the postcard application, Troubleshooting offers potential solutions.

Introduction to MQSeries Everyplace

MQSeries Everyplace is a member of the MQSeries family of business messaging products. It is designed to satisfy the messaging needs of lightweight devices, such as sensors, phones, Personal Digital assistants (PDAs) and laptop computers, as well as supporting mobility and the requirements that arise from the use of fragile communication networks. It maintains the standard MQSeries quality of service, providing once only assured delivery, and exchanges messages with other family members. Since many MQSeries Everyplace applications run outside the protection of an Internet firewall, it also provides sophisticated security capabilities.

Lightweight devices require the messaging subsystem to be frugal in its use of system resources. MQSeries Everyplace offers tailored function and interfaces appropriate to its customer set and does not aim to provide exactly the same capabilities as other members of the family. On the other hand, it does include unique function in order to support its particular classes of user, such as comprehensive security provision, message objects, synchronous and asynchronous messaging, remote queue access, and message push and pull.

MQSeries Everyplace is also designed to integrate well with other members of the IBM pervasive computing family and other components of the Websphere Everyplace Server.

For more information about MQSeries Everyplace, its concepts, and its relation to other MQSeries products, see ***MQSeries Everyplace for Multiplatforms, Introduction***

Terminology

In this document, MQSeries Everyplace may be shortened to MQe, and the MQSeries Everyplace GetStarted SupportPac may be shortened to GetStarted.

Throughout this document, the terms Hub and Satellite are used. These are terms that GetStarted uses to describe the role of the queue managers in the MQe network used by GetStarted. They are described further in the section "The MQSeries Everyplace example Queue Manager Network", below.

Objectives of the GetStarted SupportPac

The GetStarted SupportPac aims to demonstrate some of the features of MQSeries Everyplace using the Postcard application, with a simple example network of MQSeries Everyplace queue managers.

What is included in the GetStarted SupportPac

The SupportPac contains:
-   The MQSeries Everyplace First Steps application.
    This is a starting-off point for launching other parts of the SupportPac.
-   A collection of wizards to guide you through the creation and extension of an example network of MQSeries Everyplace queue managers.
-   The 'Postcard' application, described in more detail below.
-   The 'Hub' application, described in more detail later in this document.
-   The MQSeries Everyplace Explorer application, to view and manipulate the example network of queue managers.
-   A collection of wizards to connect your example network to one or more MQSeries queue managers and maintain those connections.

The MQSeries Everyplace Postcard Application

The MQSeries Everyplace postcard application allows you to compose and exchange text messages with other instances of the application or instances of the MQSeries postcard application, which is provided as part of the IBM MQSeries for Windows product.

Every instance of the postcard application has an MQSeries Everyplace queue manager embedded within it, providing the messaging transport, conveying messages from one queue manager to others on the MQSeries Everyplace and MQSeries network.

Using the postcard application, you can experiment with messaging in MQSeries Everyplace, and demonstrate some of the features of the MQSeries Everyplace product to others.

The MQSeries Everyplace example Queue Manager Network

The figure below illustrates a network topology of MQSeries Everyplace queue managers set up by one of the GetStarted wizards, and used by the MQSeries Everyplace postcard application. It shows the two types of queue manager; hub queue managers and satellite queue managers.
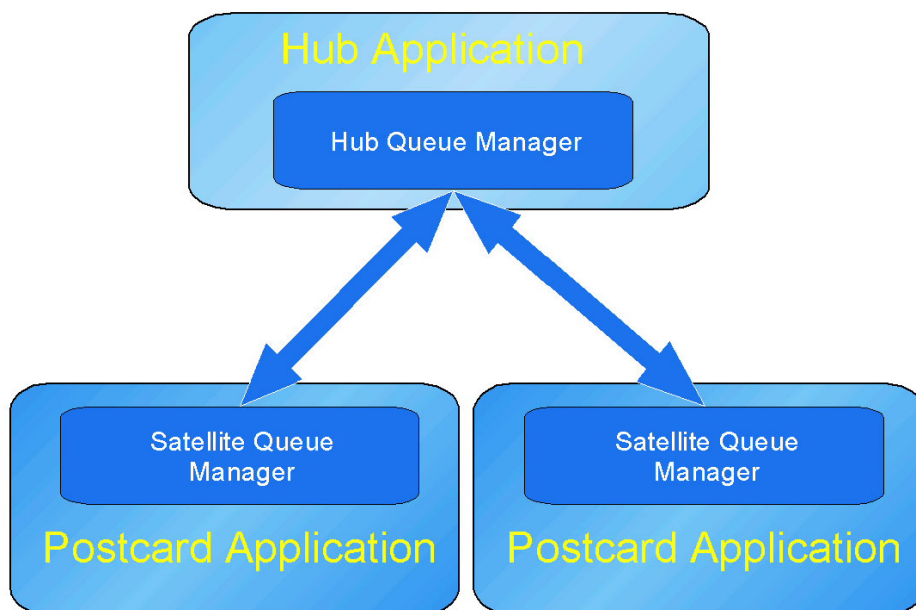

Figure 1: Queue manager network created by the "Get Started Fast" wizard.

In the network above, two satellite queue managers are connected via a third queue manager that routes messages between them. This is the hub queue manager, which stores messages for other queue managers and then allows these messages to be retrieved by the destination queue managers. When the Hub is run, it opens a window that is used to monitor any messages that pass through this hub queue manager. This is the default configuration for the MQSeries Everyplace postcard application. To create this default configuration, you can use the GetStarted Fast wizard, as described in Getting started

Applications on one satellite queue manager can exchange messages with applications on the other, via the hub. The MQSeries Everyplace postcard is a sample application that you can use to demonstrate this.

In the above network, the queue managers could all be on the same machine, or more than one machine. For example, the satellites queue managers could be running on portable devices.

It is also possible to use the wizards to connect the hub-style queue manager to an MQSeries queue manager, enabling the satellite queue managers in the example network to exchange messages with the MQSeries queue manager. This is demonstrated by using the MQSeries Everyplace postcard application with the MQSeries postcard application.

The main elements of the two types of queue manager used by the MQSeries Everyplace postcard application are explained below.

Satellite queue manager

Every instance of the Postcard application runs on an MQe queue manager. This is referred to in this Support Pac as a "Satellite" queue manager.   In order to exchange messages between two or more satellites, all the satellites need to be registered with the same hub. There are two kinds of Satellite queue manager, those set up to run asynchronously, in which case that satellite queue manager stores messages in it's own space, or those set up to run synchronously which store the messages on the Hub. If the satellite queue manager stores its mailbox on the hub queue manager (synchronous connection to the hub), the satellite needs to be able to connect to the hub in order to send and receive messages.

Hub queue manager

The hub queue manager acts as the focus for the network of queue managers in the MQSeries Everyplace Postcard application, allowing the satellite queue managers to connect to each other and exchange messages using the postcard application. The postcard application is not run on the hub queue manager, but the Hub application runs, monitoring the messages flowing between queue managers, and administration message responses to administration requests. If any satellite queue managers are registered as synchronous satellites with the hub, the mailbox for those satellites is stored on the hub.

3. First Steps

This chapter explains how to set up a simple network of MQSeries Everyplace queue managers and launch the MQSeries Everyplace postcard application to send and receive postcard messages.

First Steps Application

Included with the MQSeries Everyplace postcard application is a set of wizards that allow you to create a simple network of queue managers. You can use this network to run the postcard application, and exchange messages between queue managers.

To run the First Steps application, select the FirstSteps shortcut in the start menu. By default its location is Start $\Rightarrow$ Programs$\Rightarrow$ IBM MQSeries Everyplace GetStarted 1.2.6$\Rightarrow$ MQSeries Everyplace FirstSteps. If you selected to have a desktop icon during the install then the First Steps application can also be launched by double-clicking on that icon.

The following window appears:
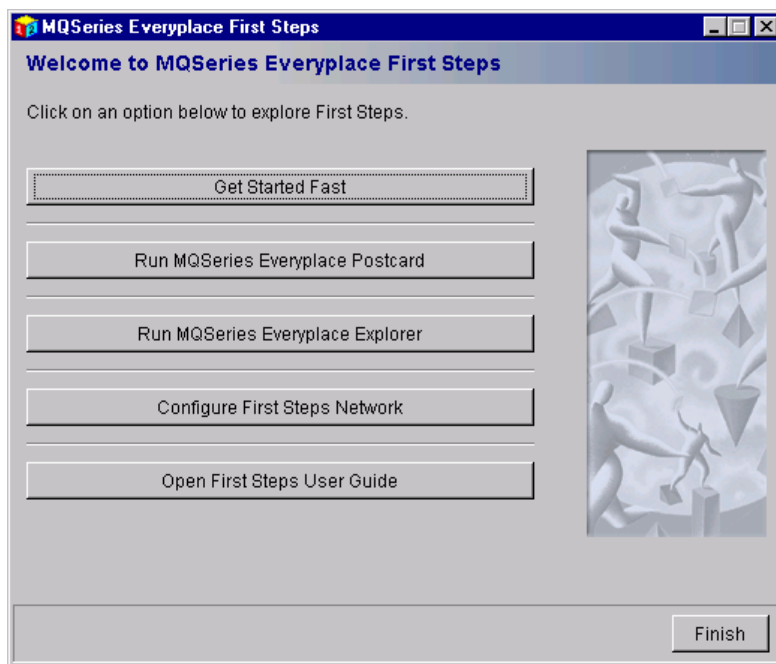
Figure 2 The MQSeries Everyplace First Steps wizard

From the First Steps wizard, you can run the other MQSeries Everyplace GetStarted wizards. Using these wizards allows you to create a simple network of queue managers.

The following wizards are available, and are explained in the sections below:

GetStarted Fast wizard

Run MQSeries Everyplace Postcard wizard

Run MQSeries Everyplace Explorer wizard

Configure the First Steps Network wizard

GetStarted Fast wizard

If you are running First Steps for the first time, you will probably want to run the GetStarted Fast wizard. Click on the GetStarted Fast button from the First Steps panel to run the GetStarted Fast wizard.

The following window appears:
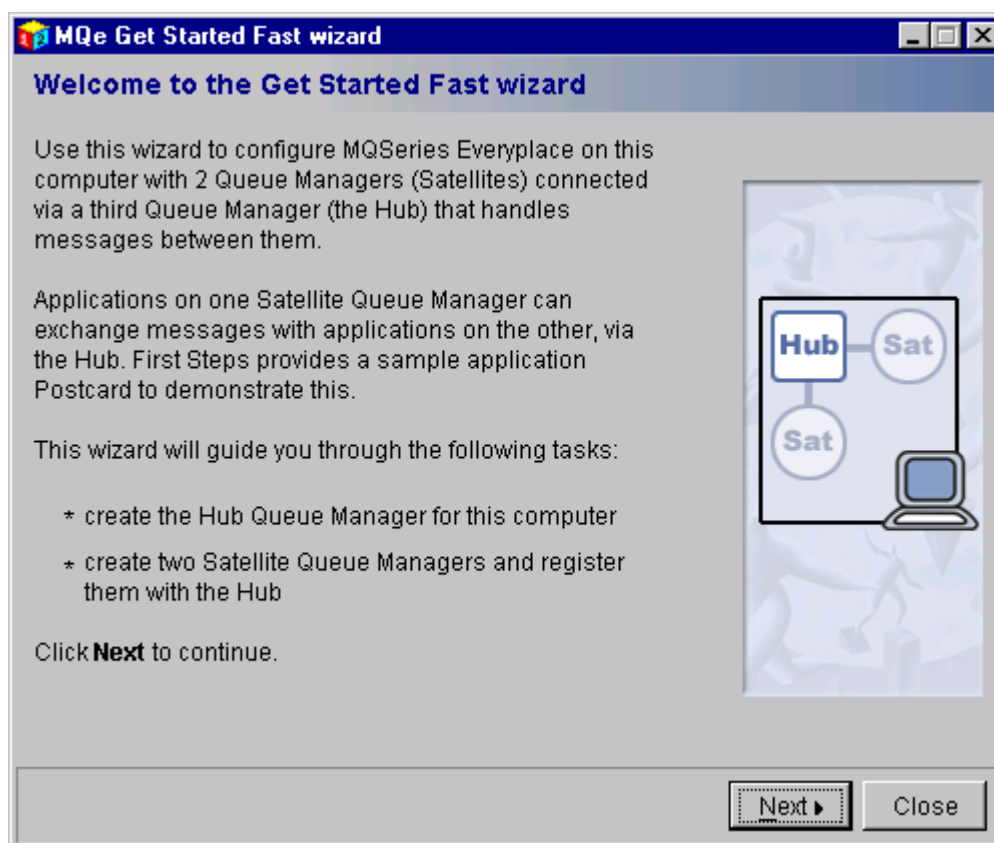
Figure 3 The MQSeries Everyplace GetStarted Fast wizard

Follow the instructions in the wizard to create a simple network of queue managers that you can use to run the postcard application. The GetStarted Fast wizard allows you to perform the following tasks:

Define a hub queue manager.

You can use the default queue manager name suggested, or choose another name for the queue manager.

Note: Ensure that you comply with the naming rules for queue manager names. Valid characters are A-Z, a-z, 0-9, "_", " / ", " %", "." Queue managers names are case sensitive.

Select a port for the hub queue manager to listen on.

The wizard automatically suggests a port number that is not currently in use on the machine or in use or reserved by another queue manager created by FirstSteps. You can use this port number, or choose another free port number. The Hub will route the postcard messages between Satellite queue managers.

Define two satellite queue managers.

You can use the default names suggested, or choose your own names.

    Note: Ensure that you choose two unique queue manager names that are not already in use on your machine or MQe Network. If you intend to connect to MQSeries queue managers, the names must be unique across both the MQ and the MQe network. Check in your MQSeries Explorer to see what MQSeries queue managers you have defined.

Select ports for the satellite queue managers to listen on.

You can use the default suggested, or choose another free port number. Satellites need ports so that the MQe Explorer can easily administer them.

Register the satellite queue managers with the hub queue manager.

Run the hub queue manager.

On the final panel there is a tick box that will run the hub queue manager if selected. This is selected by default and after you have selected finish the following window will appear:
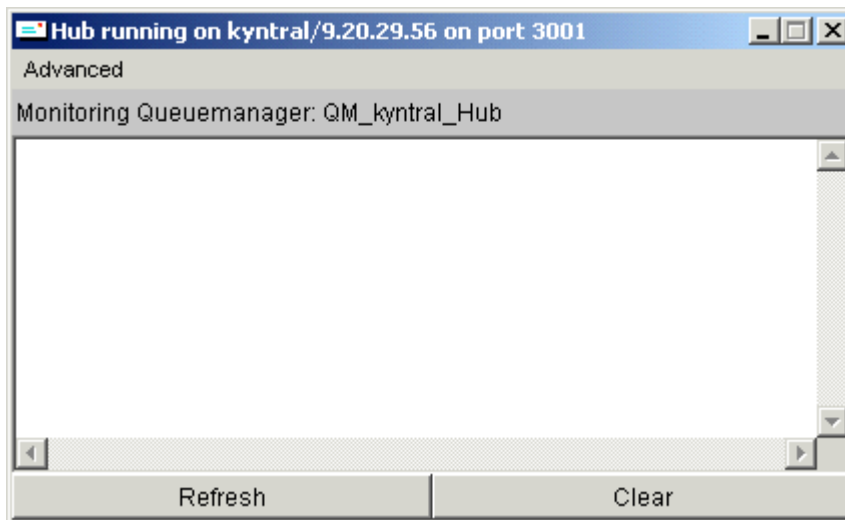

Figure 4The MQSeries Everyplace Hub application

This Hub window will show details of any messages that are sent to / via the Hub.

Run Postcard

Click on the **Run MQSeries Everyplace Postcard** button to launch the Run Postcard wizard.

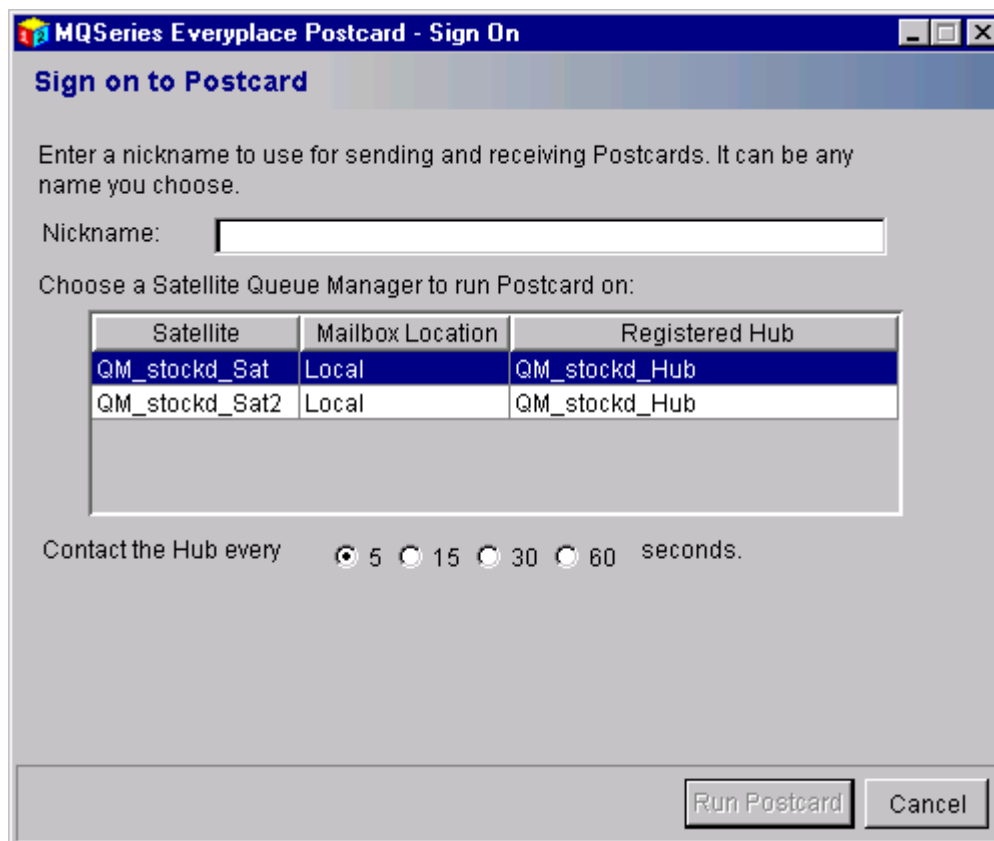The following window appears:

Figure 5 The MQSeries Everyplace Run Postcard wizard

The Run Postcard wizard allows you to perform the following tasks:

Choose a satellite to run the MQSeries Everyplace postcard application on.

You can only run one postcard at a time on a satellite so if you see a message informing you that all your satellites are in use, then you are already running postcards on them.

> Note: When selecting satellite queue managers, ensure that they are registered with the same hub in order to send and receive messages. If you are running the postcard application on a synchronous satellite queue manager, ensure first that the hub queue manager is running. If the hub is not running, you will not be able to send or receive messages. For a synchronous satellite, the "Mailbox Location" is "Remote" as the mailbox is stored on the Hub. Messages should be sent to the synchronous user as if they were running the postcard application on the Hub.

Choose a username for sending and receiving postcard messages.

Choose how frequently the postcard application on the queue manager checks for incoming messages.

Run the MQSeries Everyplace postcard application.

If you have not used the GetStarted Fast Wizard, or Configure the First Steps Network wizard to define any satellite queue managers on the machine you are using, you will be prompted to use either of these methods to define satellite queue managers.

For information on using the MQSeries Everyplace postcard application, see Using the MQSeries Everyplace postcard

Run Explorer

Click on the **Run MQSeries Everyplace Explorer** button to launch the Run Explorer wizard. The following window appears:

Figure 6 The MQSeries Everyplace Run Explorer wizard

The MQSeries Everyplace Explorer window will then appear:

Figure 7 The MQSeries Everyplace Explorer

For more information on the MQSeries Everyplace Explorer, see "MQSeries Everyplace for Multiplatforms – MQe_Explorer", es02.pdf in the getstarted\docsdirectory

Configure the First Steps Network wizard

Click on the **Run MQSeries Everyplace Explorer** button to launch the Run Explorer wizard. The following window appears:

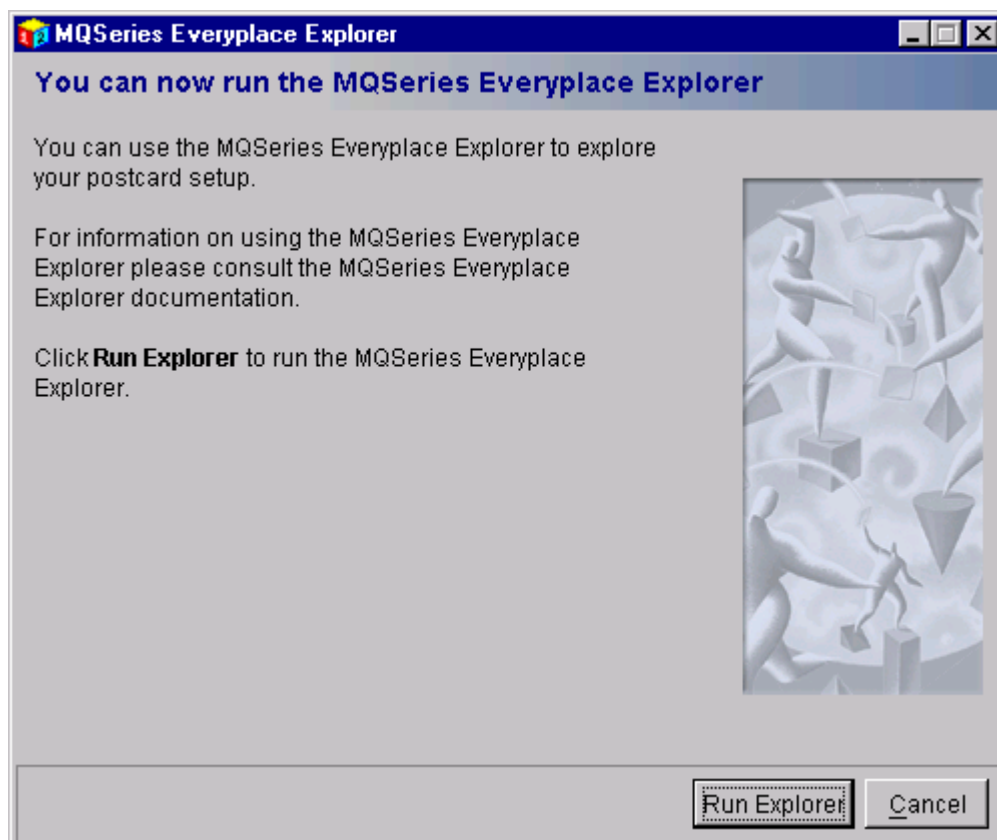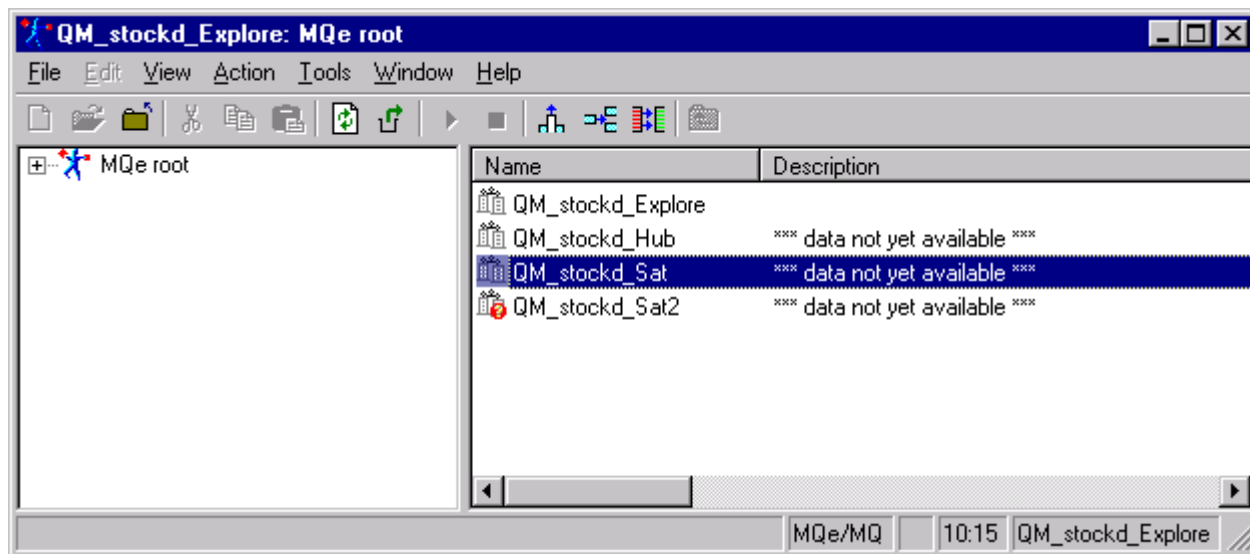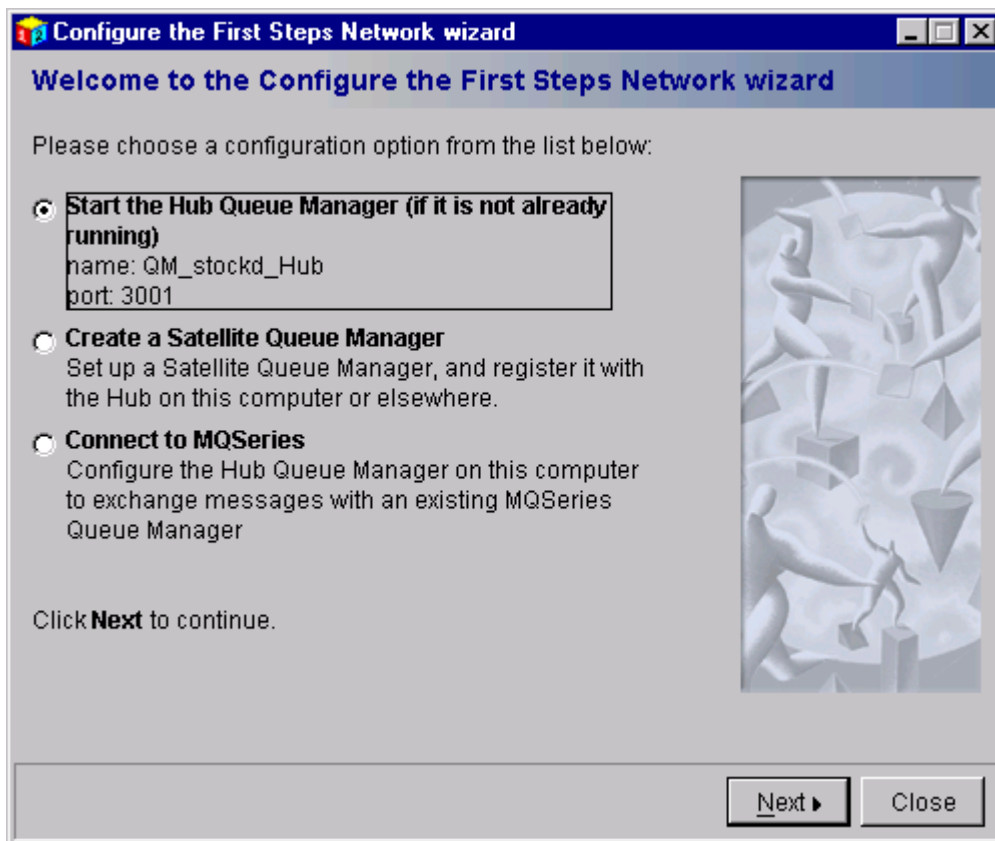Figure 8 The MQSeries Everyplace Network Configuration Wizard

The First Steps Network configuration wizard allows you to perform the following tasks:

Create and start a hub queue manager on this machine.

You can define a hub queue manager to listen on a free port if there is not one already defined on this machine.

Only one hub queue manager is allowed on any machine. If the wizard detects that a hub queue manager has already been defined on the machine you are using, you are instead given the option of running the existing hub queue manager if it is not already running. The hub can also be launched when first loading FirstSteps if it is detected and not already running. If you have already created and are running a hub then this wizard only displays the other options.

Create a satellite queue manager.

When you create a satellite queue manager, you are given the option of registering it with the hub on the machine you are using, or with another hub on another machine. You also choose to make the satellite a synchronous or asynchronous satellite.

Connect to MQSeries

Run the MQSeries bridge connection wizard to connect a queue manager to an MQSeries queue manager.

Delete Queue Managers

You can delete the queue managers you have created if you want to clean your MQe system. It is recommended that you delete all queue managers if you want to use this option.

Creating a Satellite Queue Manager

Select the **Create a Satellite Queue Manager** option to launch the wizard. The following window appears:
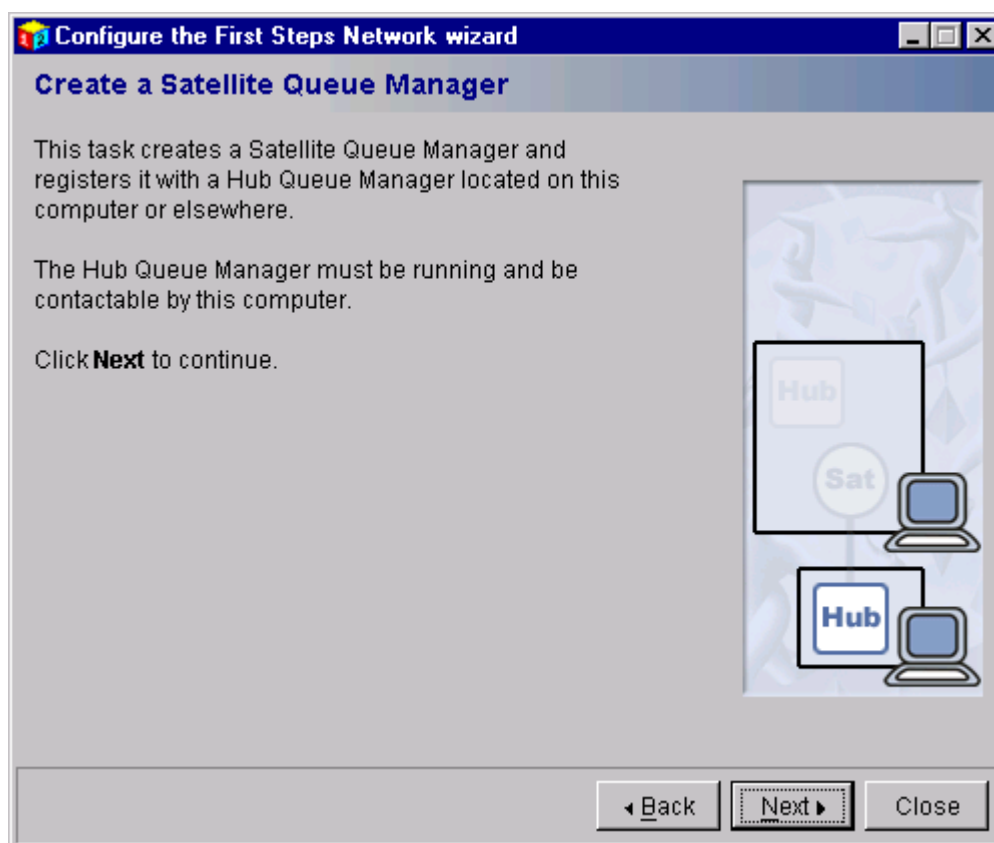
Figure 9 The MQSeries Everyplace Create a Satellite Queue Manager

The Create a Satellite Queue Manager wizard allows you to perform the following tasks:

Configure the message queuing.

You have the choice to create a synchronous or asynchronous satellite queue manager for the purposes of the Postcard application, see the section on Satellite Queue Managers for an explanation of the two types.

Define a satellite queue manager.

You can use the default name suggested, or choose your own name.

Select a port for the hub queue manager to listen on.

You can use the default suggested, or choose another free port number. Satellites have no need to listen on ports, the only reason that postcard satellites do is so that they can be easily administrated with the MQe Explorer.

Identify the hub queue manager to register the satellite queue manager with.

You can choose to register your satellite queue manager with a hub defined on the local machine or a remote hub on another machine. If you are registering your satellite with a remote hub queue manager then you must supply the name of the hub queue manager, the port that the hub queue manager listens on and the network address of the machine where the hub queue manager is registered. If you are uncertain what these are, look at the title bar of the running hub queue manager.

Note: If you choose to register your satellite queue manager with a hub on the local machine but a hub is not yet defined then the wizard will prompt you to create a hub queue manager on your local machine before you continue creating your satellite queue manager.

4. Using the MQSeries Everyplace Postcard

This chapter describes the user interface of the postcard application, and its functions. It explains how to send, receive, forward, and save messages. If you experience problems when running the postcard application, see Troubleshooting.

Postcard user interface
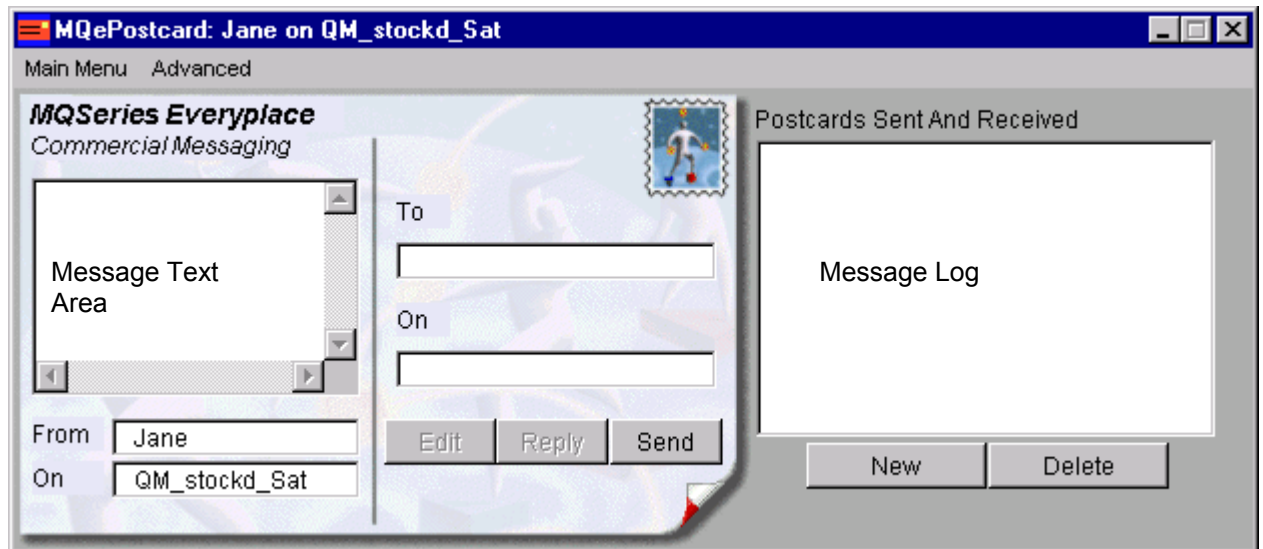
Figure 10 The MQSeries Everyplace postcard user interface

Message text area

Enter the postcard text here.

From / On

Shows the nickname and queue manager name of the postcard sender. If you are composing a message, these fields show your username and queue manager name. You can copy and paste the values in these fields to make sure you don't misspell the queue manager name.

To / On

Enter the nickname and queue manager name of the intended postcard recipient. If you are reading a received message, these fields show your username and queue manager name. On refers to the location of the mailbox. If you are sending to a synchronous queue manager, where the mailbox is on the hub, bear in mind that the On here should refer to the hub, not the queue manager that the postcard is being run on.

Edit

Allows you to edit a postcard you have previously sent. You can then resend the message, or forward it to another queue manager.

Reply

If you click **Reply** while you are reading a received postcard, you can enter a response and send it to the sender of the original message.

Send

Sends a postcard to the nickname on the queue manager specified in the To and On fields.

Message Log

The message log shows a chronological list of sent and received messages. For received messages, the sender of the message appears in the log, and for sent messages the intended recipient appears in the log. The current message is highlighted in the log. To read a message, click on the message in the message log.

New

Compose a new postcard.

Delete

Delete the highlighted message from the message log.

Sending a new message

To send a message from any of the queue managers, click in the text-entry box in the postcard window and type the text you want to send.
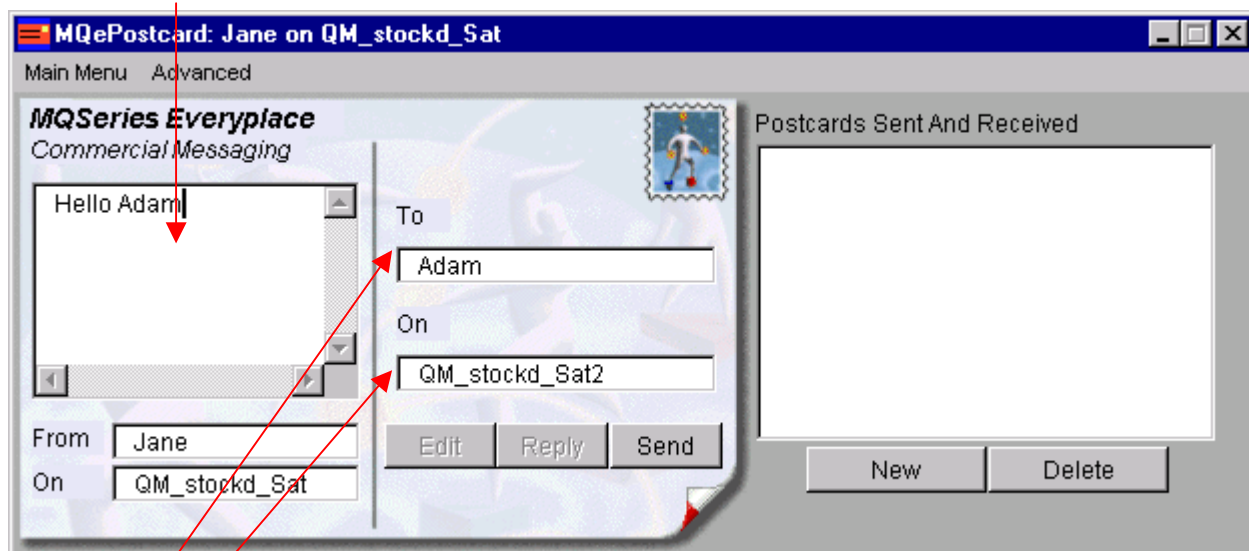
Figure 11 Writing a Postcard

In the 'To' field, enter the nickname of a user on one of the other queue managers.

In the 'On' field, enter the queue manager name for the nickname you have chosen. Click **Send**.

When you send a message, the message appears in the message log for the queue manager. You can send the same message to more than one recipient by selecting it from the message log, and clicking **Edit**. Enter the nickname and queue manager name you want to send the message to, and click **Send** to send the message.

Note: When entering the queue manager name you must enter it exactly, as it is case sensitive. If you are sending between two postcard applications on the same machine, copy and paste the queue manager name from the "From/On" field.

Reading a received Postcard

To read a message received from another queue manager, click on the message in the message log. The message text appears in the text area. The postcard is also marked with the time it was sent.
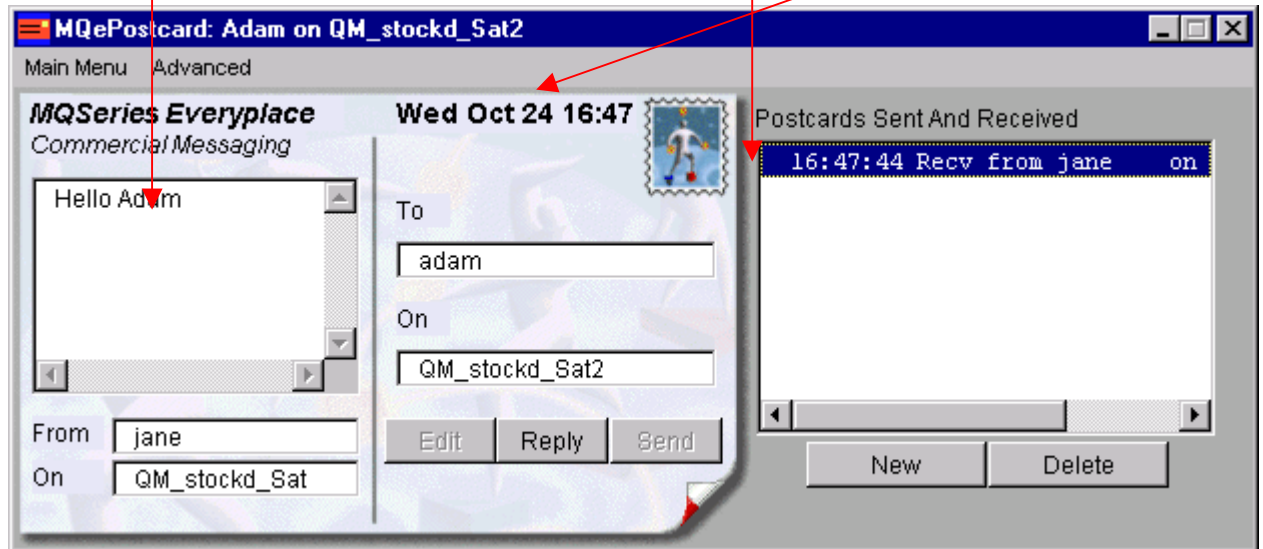

Figure 12 Reading a Postcard

Unread messages will also be marked with an "x", Messages that failed to send are marked with an "f" and messages that were saved, (if for example you were writing a message when you clicked on on that came in) are marked with an "s".

Replying to a Postcard

To reply to a message received from another queue manager, click **Reply** and enter the message text in the text-entry field. The 'To' and 'On' fields are automatically filled with the username and queue manager of the sender of the original message. When you are ready to send the message, click **Send** to send the message.
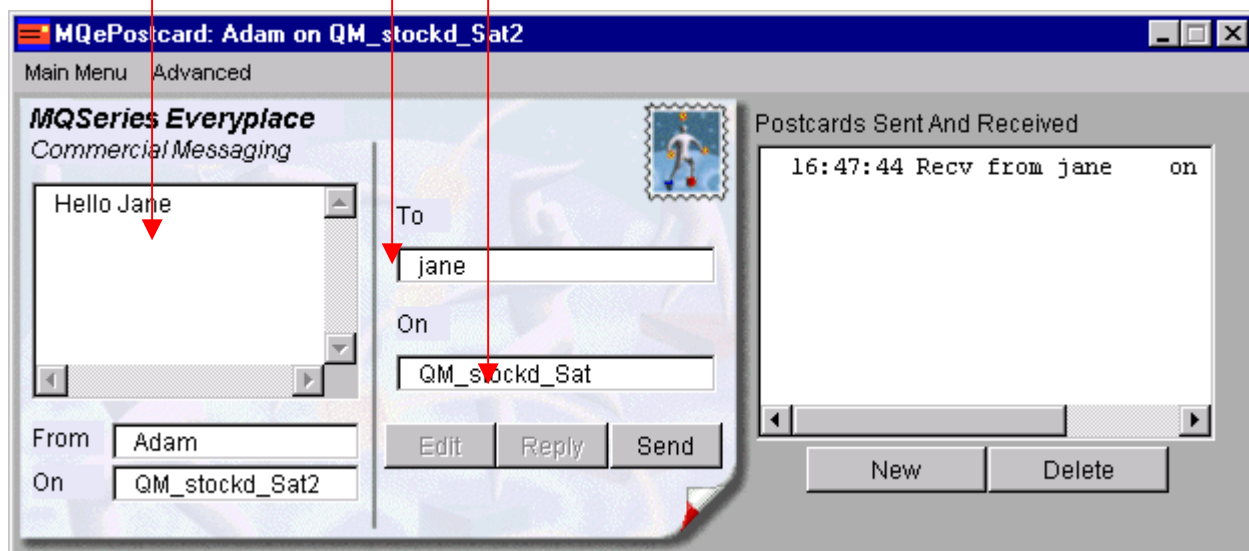
Note: When replying to a message, or forwarding a message, the message must be highlighted in the message log.

Closing the user interfaces

Closing the postcard windows or the hub queue manager window stops the appropriate queue manager. To start the queue manager running again see Run Postcard or Starting the hub.

To close any postcard window, select **Exit** from the main menu of the postcard window, or click the close button in the top right corner of the window.

To close a Running hub queue manager window click the close button in the top right corner of the window.

5. MQSeries Everyplace Explorer

This chapter explains how to use the MQSeries Everyplace Explorer to view and explore an MQSeries Everyplace postcard network of queue managers.

When the MQSeries Everyplace network is created using the First Steps application, an extra queue manager is created to allow administration of all the other queue managers through the explorer. This queue manager is usually called QM_<your machine name>_Explore. First Steps automatically connects every queue manager it creates, whether hub or satellite, to the explorer queue manager on the current machine.

When the explorer is started from the First Steps wizard, it opens with the explore queue manager. From here you can administer all of the other queue managers on the local machine if they are running. If they aren't running, or cannot be contacted for any reason, a question mark in a red circle will appear next to them.
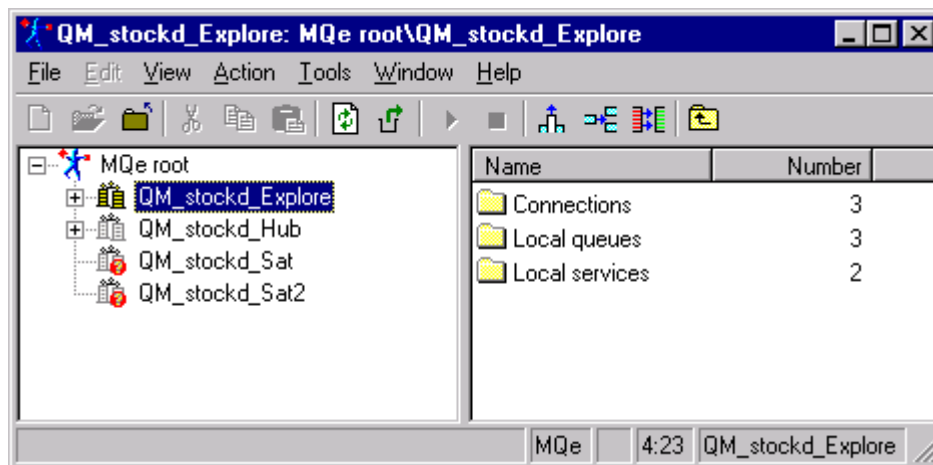
Using the explorer you can examine the connections between the queue managers and the configuration of the MQSeries Everyplace network. In the Postcard application, the asynchronicity is provided by "store and forward" queues. Postcards for synchronous satellites are stored on the hubs local queue "postcard", and they use a remote queue to access them.

When the postcard is running, by default it gets any postcard messages sent to it, so they won't be visible for very long in the explorer, and the explorer is unable to view messages on a store and forward queue.   If you want to examine a postcard message in the explorer, you can temporarily stop the postcard application from being able to receive messages.
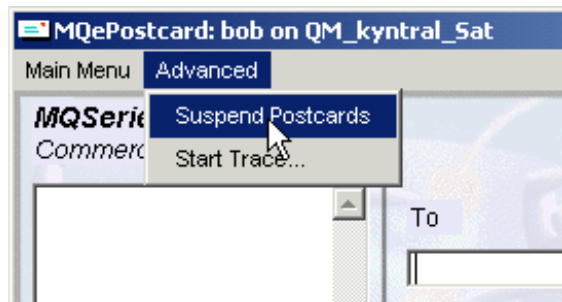
From the advanced menu in the Postcard application, select "Suspend Postcards".

"….SUSPENDED…." will appear in the bottom right of the window.

Now the postcard application will not get any postcards until "Suspend Postcards" is selected again from the Advanced menu, although you will be able to send postcards. This gives you chance to examine the postcard message from the explorer.

Send a postcard to this user on this queue manager. It will be delivered to the queue manager, but because you have suspended the Postcard application, it will not be taken off the queue manager or received by the application.

Start up the Explorer, by clicking on the Run MQSeries Everyplace Explorer from the First Steps taskguide. If you start the explorer from the icon on the start menu, it will not start up with the Explore queue manager open.

Go to the queue manager that the message was destined for. If it's been delivered, it will have appeared on the "postcard" queue and you'll be able to look at the fields in it.
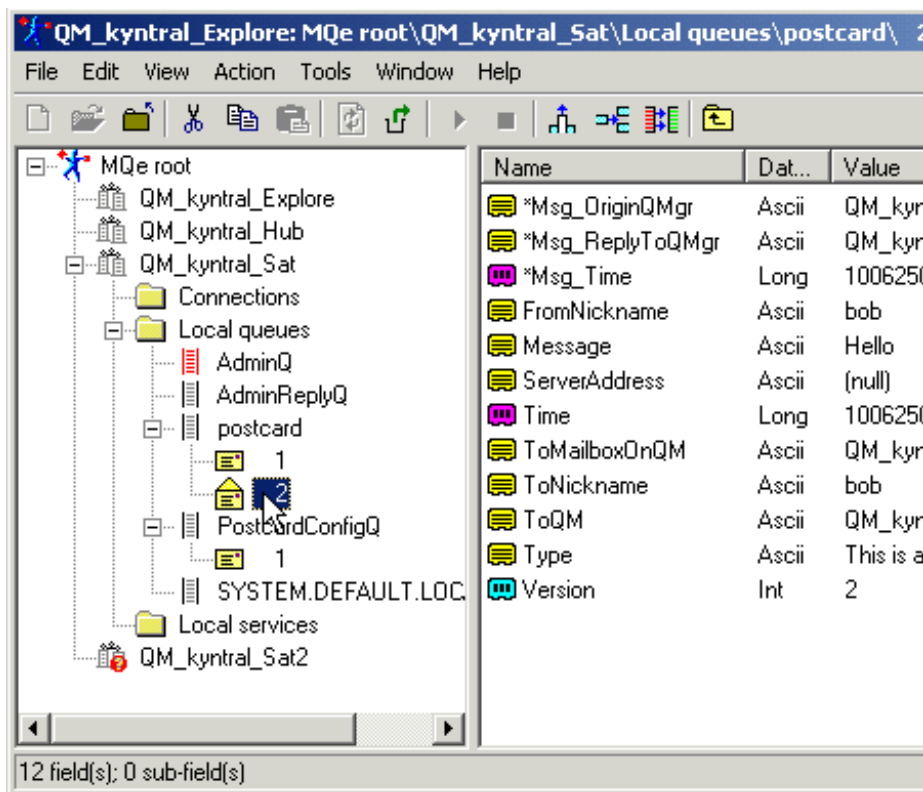
Figure 13 Looking at a Postcard in the Explorer

When you've finished using the explorer to look at the messages and the queues, you can unsuspend the postcard application by clicking Advanced – Suspend Postcards again, and watch them get taken off the queue and appear in the Postcard application.

Postcards sent to the wrong user name will not get taken off the queue, so you can check the user name is correct by using the explorer to look at the "ToNickname" field inside the message.

For more information on the MQSeries Everyplace Explorer, see "MQSeries Everyplace for Multiplatforms – MQe_Explorer", es02.pdf in the getstarted\docs directory.

6. Connecting the Hub to MQSeries

The GetStarted application will create a complete MQe network topology consisting of a hub queue manager connected (both synchronously and asynchronously) to a number of satellite MQe queue managers.

The application also optionally supports the direct connection of the hub queue manager to a number of MQSeries queue managers.

For example, after a single MQSeries queue manager has been connected to the Hub queue manager, the network topology would be as shown in the following diagram.
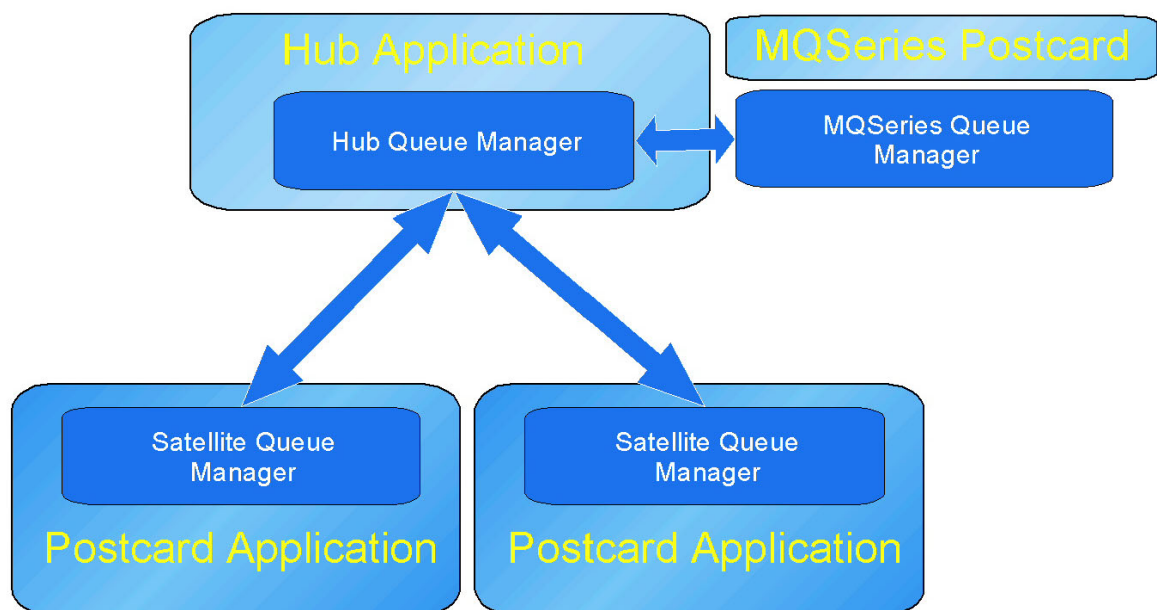
Figure 14: Example network topology with one MQSeries connection[5]

The application will configure both the MQe hub queue manager, and the MQSeries queue manager so they can exchange postcard messages.

If new MQe satellite-style queue managers are added to the topology, the application can also update the MQSeries queue manager which are already "connected" to the Hub queue manager, so the MQSeries queue managers can then exchange messages with the new satellite-style queue manager.

This section of the document details the way you can connect the Hub to an MQSeries queue manager.

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[5] Note that the MQSeries Everyplace postcard applications embed a queue manager, but the MQSeries Postcard application connects to the MQSeries queue manager.

Prerequisite Software

To connect to MQSeries, the GetStarted application has several software prerequisites that must be met, in addition to any prerequisite software listed elsewhere in this document.

The Hub MQe queue manager must exist, such that it can be connected to one or more MQSeries queue managers.

The MQSeries java client and bindings classes must be installed on the same machine as the hub MQe queue manager. These classes are supplied in the MA88 SupportPac, available as a free web download at http://www.ibm.com/software/mqseries/txppacs/ma88.html

The instructions within that software package document how to put .jar files onto the classpath. Make sure you follow these instructions, and add the following .jar files onto the classpath:

    com.ibm.mq.jar
    jta.jar
    com.ibm.mqbind.jar
    com.ibm.mq.iiop.jar

An MQSeries queue manager, which you wish to connect to the Hub MQe queue manager, and send postcard messages to. This MQSeries queue manager can be located on the same machine as the Hub MQe queue manager[6], or on a different machine[7].

The application uses Programmable Control Format (PCF) messages to configure objects on the MQSeries queue managers. Consequently MQSeries queue managers which do not support this feature cannot be configured by this tool (though you could configure them by hand of course). For example: At the time of writing, MQSeries for zOS queue managers do not support PCF are therefore not supported by this application.

A JVM of level 1.3 or above. We recommend the IBM JVM.

The application will check that these prerequisites have been satisfied before you can proceed to connect the Hub MQe queue manager to any MQSeries queue manager.

Note that the MQe network topology and the MQe product itself has no pre-requisite on the MQSeries product unless connection to an MQSeries queue manager is required.

Where to start

Use the "Configure First Steps Network" option from the First Steps panel.

The next panel allows you to select and use the "Connect to MQSeries" option.

The checking for software pre-requisites is then performed, to make sure the required environment for connecting the Hub MQe queue manager to an MQSeries queue manager is acceptable.

The following panel shows a list of those connections which have already been configured, and allows you to select two actions

- Create a new connection

---

[6] In this case, the MQSeries java bindings classes are used to communicate with the (local) MQSeries server.

[7] In this case, the MQSeries java client classes are used to communicate with the (remote) MQSeries server.

- Update all existing connections

Creating a new connection

Use the "Create a new connection" option to configure the Hub MQe queue manager[8] and an MQSeries queue manager[9] such that they can exchange Postcard messages.

To configure such a bi-directional connection it is necessary to ask for some details of the MQSeries queue manager.

The information required depends on whether the MQSeries queue manager is sited on the same machine as the Hub MQe queue manager, or a different machine.

If the MQSeries queue manager is on the same machine as the Hub MQe queue manager, ("local") then the following information is required:

- The MQSeries queue manager name.

If the MQSeries queue manager is on a different machine to the Hub MQe queue manager ("remote"), then the following information is required.

- The MQSeries queue manager name

- The I/P network address (eg: 127.0.0.1) of the machine on which the MQSeries queue manager is running.

- The port on which the MQSeries queue manager has an active listener.
  For example: 1414

- The name of an existing server connection channel. This channel will be used to send PCF messages to the MQSeries queue manager, to configure the path from the MQSeries queue manager to the Hub queue manager.
  For example: SYSTEM.DEF.SVRCONN

For "local" MQSeries queue managers, the application will ask for the name of a transmission queue which will be used to convey messages from the MQSeries queue manager to the Hub MQe queue manager. This transmission queue will be created by this application. If the transmission queue already exists, then that queue definition will be over-written.

For "remote" MQSeries queue manager the same "new transmission queue" name is required, in addition to the name of a new server connection channel.

This new server connection channel will be created by this application, and subsequently used by the Hub MQe queue manager to communicate with the MQSeries queue manager.

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[8] Objects configured to support the connection on the MQe queue manager are:a bridge, an MQSeries queue manager proxy, a client connection pool, a transmission queue listener, and a bridge queue definition called "postcard", referencing the postcard queue on MQSeries.

[9] Objects configured to support the connection on the MQSeries queue manager are:

a local "sync" queue, a transmission queue, a server connection channel and a number of remote queue manager aliases.

Update all existing connections

If a new MQe queue manager is connected to the Hub MQe queue manager, then details of the new MQe queue manager need to be "published" on all the MQSeries queue managers to facilitate the ability to send messages from MQSeries to the new queue manager (via the Hub).[10]

The "update all existing connections" does just that.

It queries the complete list of MQe queue managers which the Hub MQe queue manager knows about, and makes sure that all connected MQSeries queue managers are updated with the knowledge that to get to the new MQe queue manager, they have to send the message to the Hub MQe queue manager.

Failure to use this task will result in the MQe queue managers being able to post messages to connected MQSeries queue managers, but reply messages being blocked due to the lack of routing.

Exchanging postcard messages with the MQSeries Postcard application

The MQSeries for Windows product contains a postcard application. It can exchange messages with the MQSeries Everyplace postcard application.[11]

Use the MQe postcard to send a message to the MQSeries postcard application, and use the MQSeries postcard application to reply, and vice-versa.

Take care when typing the names of queue managers. They are case sensitive, and problems can arise when these are typed incorrectly.

The MQSeries for Windows Postcard application will sometimes simplify the name of the queue manager on which it is running, typically from "QM_<machine name>" to "<machine name>". The MQe Postcard application requires the actual name of the queue manager the postcard should be sent to in order to work. You can check the actual names of your MQSeries queue managers using the MQSeries Explorer.

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[10] This is done by creating a remote queue manager alias on the MQSeries queue manager, which directs traffic to the new MQe queue manager to the transmission queue from which the Hubs' bridge transmission queue listeners are pulling messages, and posting them to the MQe network.

[11] The formats of the two postcard applications are different. A "transformer" class configured into the bridge converts one message format to the other, and vice-versa, when messages flow over the bridge.

7. Frequently asked questions

The following section lists some commonly asked questions with their answers.

If I have two versions of MQSeries Everyplace classes installed on my machine, which version will the GetStarted programs use?

The GetStarted programs will use the system 'CLASSPATH' environment variable first. If your MQSeries Everyplace classes are on the CLASSPATH, then these versions of MQSeries Everyplace classes will be used in preference to others. If no MQSeries Everyplace classes are on the classpath, or .jar files containing those classes, then the GetStarted programs all use information within the registry to search for the numerically highest version of the MQSeries Everyplace code which has been installed inside an MQSeries Everyplace for Multiplatforms toolkit.

Why do my postcards from MQSeries have the wrong name in the From field?

MQSeries Postcard application sometimes simplifies queue manager names, the name in the From field is the actual name of your queue manager, while the one that MQSeries Postcard application displays is a simplified version.

8. Troubleshooting

This chapter contains solutions to problems that you may encounter in trying to use the programs contained in the MQSeries Everyplace GetStarted SupportPac.

The following errors are covered in this chapter:

Only one postcard application seems to be running

Postcard message sent but not received

The installer can't find my java virtual machine.

Only one postcard application seems to be running when I opened two

The postcard application windows appear on top of each other. Move the windows around.

I sent a message and it's not been received.

If you sent a message to a user who isn't running on the destination queue manager, or a queue manager that has not been created or to a user using a satellite registered with a different hub, the message will be stored until it can be delivered, e.g. if the user runs the postcard application on the destination queue manager, or the destination queue manager is created.

If you are uncertain about what you've done wrong, you can use the Explorer to follow the route the message would have taken, and see where it is.

The installer can't find my JVM

When running the setup.exe your machine is searched for a valid JVM to use. If a valid JVM is found then it will use it to run the install. It is possible, when running the setup.exe to direct the installer to use a particular JVM. To do this, run the install launcher as shown in the example below,

In the example the JVM we are directing the installer to use is located in c:\jdk1.3\ :

setup.exe -is:javahome c:\jdk1.3

9.   Appendix A. Notices

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