Version 6.1.0

MessageWay Installation Guide

Document History

Part Number	Product Name	Date
MW610-575	MessageWay Installation Guide	05/2013
MW610-575	Same as above	11/2013
MW610-575	Same as above	05/2015
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MessageWay Installation Guide

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Introduction

Overview

MessageWay® is a server-based solution for message and file transfer in the business-to-business electronic commerce environment. It automatically manages the file communications traffic between remote end-points and the server-processing environment. It also functions as an intelligent network router between LAN/WAN servers, the host and remote end-points. Simply, MessageWay automates the sending and receiving of electronic commerce message and data files.

Purpose and Scope

This document covers the installation procedures for MessageWay on the host server, and the installation of the manager on remote workstations. It also includes instructions to update a MessageWay system and to install MessageWay perimeter servers and other options.

Audience

This document is intended for users who want to install MessageWay on their server, the MessageWay Manager on a remote computer, additional adapters or services or any of the MessageWay options.

Whoever installs MessageWay should be familiar with their operating system and database.

MW Translator Service

The MW Translator service included with this installation is based on MW Translator version 6.1.

IMPORTANT: If you plan to use Edikit 4.0 or 4.2 in addition to or instead of MW Translator 6.1, please contact the Support Center before running the upgrade. They will provide instructions for saving your previous Edikit environment and then configuring it to work with MessageWay 6.1.0.

Product Platform Support

MessageWay version 6.1 supports various operating systems, databases, browsers, distributed architectures and includes some dependencies.

Hardware Requirements for MessageWay Servers

To install and run MessageWay servers, we recommend the following hardware configurations. *Minimum* specifies the resources that MessageWay needs to work as a basic system, that is with 5 concurrent users. *Recommended* specifies the resources that MessageWay needs to adequately perform for 500 concurrent users or more.

	Minimum	Recommended
CPU Speed	2.4 GHz	3.3 GHz
Number of cores	2	4
Available RAM	8 GB	16 GB
Available Disk Space	50 GB	200 GB

NOTE: Disk space requirements are highly dependent on where the data is stored (on disk or in the database), as well as on the average message size, average daily message volume and desired message retention.

Operating Systems for MessageWay Servers

MessageWay version 6.1 supports the following operating systems for the MessageWay servers and perimeter servers:

- Red Hat Enterprise Linux (RHEL) v6.x and v7.x
- Solaris 10
- SUSE Linux Enterprise Server (SLES) v11 and v12
- Windows Server 2012 Standard R2 64-bit edition
- Windows Server 2016 Standard
- Windows Server 2019 Standard

The following systems are *not* supported for MessageWay 6.1:

- SUSE v10.x
  (If you want to run on SUSE v10.x, please contact MessageWay support.)
- Windows Server 2003

NOTE: No international versions of operating systems are required for MessageWay software.

Operating Systems for MessageWay Manager, MW Translator Workbench and Operator Program

MessageWay version 6.1 supports the following operating systems for the MessageWay Manager and the MW Translator Workbench and Operator Program:

- Windows Server 2019 Standard
- Windows Server 2016 Standard
- Windows Server 2012 Standard R2 64-bit edition
- Windows 10 SP1 32-bit and 64-bit editions (clients run here as legacy 32-bit applications)
- Windows 7 SP1 32-bit and 64-bit editions (clients run here as legacy 32-bit applications)

NOTE: No international versions of operating systems are required for MessageWay software.

Operating Systems for MessageWay Remote Execution Server (RES)

MessageWay version 6.1 supports the following operating systems for the MessageWay Remote Execution Server (RES):

- Windows Server 2019 Standard
- Windows Server 2016 Standard
- Windows Server 2012 Standard R2 64-bit edition
- Windows 10 SP1 32-bit and 64-bit editions (clients run here as legacy 32-bit applications)
- Windows 7 SP1 32-bit and 64-bit editions (clients run here as legacy 32-bit applications)
- Solaris v10
- Red Hat Enterprise Linux v5.6, 6.x and 7.x
- SUSE v11 and v12
- IBM AIX V6 6.1 and V7 7.1

The following systems are *not* supported for MessageWay 6.1:

- SUSE v10.x
  (If you want to run on SUSE v10.x, please contact MessageWay support.)
- Windows Server 2003

NOTE: No international versions of operating systems are required for MessageWay software.

Databases and Database Drivers for the MessageWay Server

MessageWay version 6.1 supports the following databases for the MessageWay Messaging Server.

Microsoft SQL

- Microsoft SQL Server 2012 Enterprise Edition on 64-bit platforms, clustered and standalone
- Microsoft SQL Server 2016 Enterprise Edition on 64-bit platforms, clustered and standalone
- Microsoft SQL Server 2019 Enterprise Edition on 64-bit platforms, clustered and standalone
- MessageWay supports both Windows authentication and SQL authentication

MySQL

- MySQL 5.5.x on 32-bit and 64-bit platforms
- MySQL 5.7.x on 32-bit and 64-bit platforms
- Standalone only (no clusters)
- UNIX/Linux operating systems

Oracle

- Oracle Database 10g Release 2: 10.2.0.1—10.2.0.5, clustered and standalone
- Oracle Database 11g Release 2: 11.2.0.1, clustered and standalone
- Oracle Database 12c Release 2: 12.2.x, clustered and standalone
- Oracle Database 19c Release 3: 19.3.x, clustered and standalone (Linux only)
- UNIX/Linux operating systems

The following table shows the relationship between databases and operating systems.

	Solaris 10	RHEL 6.x	RHEL 7.x	Suse 11	Suse 12	Win2012R2 x64	Win2016x64	Win2019 x64
Database								
MSSQL_2012_x64						x		
MSSQL_2016_x64							x	
MSSQL_2019_x64								x
MySQL_5.5_x32 & x64	x	x		x				
MySQL_5.7_x32 & x64			x		x			
Oracle 10g & 11g	x	x		x				
Oracle 12c & 19c			x		x			

The following table describes the driver versions for the various databases and platforms that have been tested with Unicode.

IMPORTANT: All drivers must be 32-bit for 64-bit databases.

Database	Platform	Drivers Tested
MSSQL 2012	Windows Server 2012	Native client 11.0
MSSQL 2016	Windows Server 2016	ODBC Driver 13 for SQL Server
MSSQL 2019	Windows Server 2019	ODBC Driver 17 for SQL Server
MySQL	Linux	General release version of MySQLConnector 5.1.8
MySQL	Solaris 10	General release version of MySQLConnector 5.1.8
Oracle 10g & 11g	Linux	DataDirect 8.0 Oracle Wire Protocol
Oracle 12c & 19c	Linux	DataDirect 8.0 Oracle Wire Protocol
Oracle 10g & 11g	Solaris 10	Contact Technical Support

NOTE: Oracle is not supported on Windows.

Distributed Architectures

MessageWay version 6.1 supports the following distributed architectures:

- MessageWay Server (Failover or "Active/Passive") HA based on Microsoft Cluster Services
- MessageWay Perimeter Servers (Webfarm or "Active/Active") HA supported on all supported OS platforms

Critical Dependencies

Critical dependencies include versions of software that users must install prior to installing MessageWay software, or it will not install or operate successfully. This software is not packaged with MessageWay installations.

MessageWay version 6.1 has the following critical dependencies:

MessageWay Component	Dependency
AS2 Interface	- Java version 8.x - Apache Tomcat version 7.x, 8.x or 9.x
MWMQ Adapter	MQ Client 6, 7 or 9, 32-bit
Remote Execution Server (RES) on IBM AIX	- bos.rte.libc 5.3.7.1 libc - bos.rte.security 5.3.7.1 libcrypt, libpam - bos.rte.libpthreads 5.3.7.0 libpthreads - xlC.rte 9.0.0.1 libC (C++ library)

Web Client	Please refer to the "Critical Dependencies" topic in the separate document *MessageWay Web Client Installation and Configuration*
MWSFTPD Server (Windows only)	Cygwin version 3.1.6 or newer

MessageWay Ports and Server Locations

The following topics show what MessageWay uses as default values for ports and server locations.

MessageWay Default Ports

The following tables describe the default ports used by MessageWay. For more information, refer to documentation for a specific service.

MessageWay and Other Supporting Perimeter Servers (DMZ Tier)

These are the default ports for MessageWay and other supporting perimeter servers (DMZ tier):

Server	Port #	Description
MessageWay AS2 Interface	8080	HTTP Listener
MessageWay FTP Perimeter Server	20/21	Clear FTP channels: data (active)/command (active and passive)
	989/990	SSL implicit FTP channels: data (active)/command (active and passive)
	2189/2190	SSL explicit FTP channels: data (active)/command (active and passive)
	2000-2010	Passive FTP port range data channels
MessageWay FTP Proxy Server	6220/6221	Clear FTP channels: data (active)/command (active and passive)
	6289/6290	SSL explicit FTP channels: data (active)/command (active and passive)
	6298/6299	SSL implicit FTP channels: data (active)/command (active and passive)
	2000-2010	Passive FTP port range data channels

Server	Port #	Description
MessageWay SFTP Perimeter Server	6222	FTP SSH listener
MessageWay SFTP Proxy Server	6223	FTP SSH listener

MessageWay Servers and Clients (Application Tier)

These are the default ports for MessageWay servers and clients (application tier):

Server	Port #	Description
MessageWay User Server	6237 (UDP)	MessageWay Discovery Protocol
	6237	Clear listener
	6239	SSL listener
MessageWay Manager	6238	MessageWay Discovery Protocol
MessageWay Service Interface(MWSI)	6280	Clear listener
	6243	SSL listener
MessageWay E-mail adapter	25	SMTP
	110	POP3
MessageWay Remote Execution Client	6235	HTTPS

Customer Internal Servers (Application Tier)

These are the default ports for customer internal servers (application tier) that communicate with MessageWay.

The following table shows the default ports for connections to internal database servers:

Server	Port #	Description
MSSQL	1433	Connection to an MSSQL database server
Oracle	1521	Connection to an Oracle database server
MySQL	3306	Connection to a MySQL database server

The following table shows the default ports for other internal servers:

Server	Port #	Description
E-mail	25	SMTP connection
	110	POP3
LDAP	389	Clear
	636	LDAPs

This is the default port for the MessageWay Remote Execution Server (application tier):

Server	Port #	Description
MessageWay Remote Execution Servers (RES)	6235	HTTPS Listener

MessageWay Servers Default Locations

The following are the default locations where MessageWay files are installed. The locations vary depending on the system, Windows or UNIX/Linux.

MessageWay Files and Locations for Windows

The following table shows the default locations where MessageWay installs files that support its servers on a Windows system.

Description	Locations and Files

Messaging Server and support files	C:\Program Files\MessageWay (32-bit)
	- or -
	C:\Program Files (x86)\MessageWay (64-bit)
	  \bin
	    executables
	    messageway.lic
	    MWayMessages.dll
	    NOTICE.TXT
	  \ftp
	  \proxy
	  \tz
	    tzload.exe
	    timezone files
	  \updates
	    MessageWay install Readme files
	  \utils
	    convertarchive.exe
	    dbconvert.exe
	    dbconvert.log
	    mwadmin.exe
	    mwexp.exe
	    mwimp.exe
	    mwkeygen.exe
	    mwlogdump
	    mwres.exe
	    mwrestart.exe
	    mwtrace.exe
	  INSTALL.LOG
	  UNWISE.EXE

Description	Locations and Files

	C:\Users*MessageWayUser*\AppData\Roaming\messageway
	    messageway.conf
	    mwres.conf
	    mwsi.conf
	    mwuser.conf
	    \certs
	        \cert
	            testcert.pem
	        \private
	            testkey.pem
	        agents.sample

General support files	C:\MessageWay
	    \archives
	    \audit
	    \db
	    \msgstore
	        \data
	            output location directories
	        \staging
	    \server
	        1 folder for each adapter or service with state logs
	        \temp
	        trace files
	        mway.sys

Remote Execution Server (RES)	C:\Program Files\MessageWay\res (32-bit)
	- or -
	C:\Program Files (x86)\MessageWay\res (64-bit)
	    INSTALL.LOG
	    MWayMessages.dll
	    mwresd.exe
	    NOTICE.TXT
	    readme.txt
	C:\ProgramData\messageway
	    mwresd.conf

Description	Locations and Files

AS2 Interface	*webserverappsdirectory*
	   \mwayas2
	      \WEB-INF
	         \classes
	            GetMWayAS2Ver.bat
	            GetMWayAS2Ver.class
	            MWayAS2In$About.class
	            MWayAS2In$SessionContent.class
	            MWayAS2In.class
	            MWayAS2Out$About.class
	            MWayAS2Out$SessionContent.class
	            MWayAS2Out.class
	         \lib
	          ipworksedi.jar
	          log4j-1.2.14.jar
	          mwayservice.jar
	        mwas2.conf
	        web.xml
	\Windows\System32\NTEventLogAppender.dll

FTP SSL Server	C:\Program Files\MessageWay\ftp (32-bit)
	- or -
	C:\Program Files (x86)\MessageWay\ftp (64-bit)
	   INSTALL.log
	   MWayMessages.dll
	   mwftpd.exe
	   NOTICE.TXT
	   readme.txt
	C:\ProgramData\messageway
	   mwftpd.conf
	   \certs
	      \cert
	         testcert.pem
	      \private
	         testkey.pem
	      \Updates

Description	Locations and Files

FTP SSH (SFTP) Server	*CygwinInstallDirectory*
	   /opt/messageway/sftp
	      MWSFTPInstall.log
	      mwsftp-server.exe
	      mwsftpd.exe
	      NOTICE.TXT
	      readme.txt
	      ssh-keygen.exe
	      /authorized-keys
	         public key files for users
	      /certs
	         /cert
	         /private
	      /keys
	         6 generated keys
	   /etc/messageway
	      banner
	      mwsftpd.conf
	      mwsftpd_config
	      /init.d
	         mwsftpd

SSH Proxy Server	C:\Program Files\MessageWay\proxy (32-bit)
	- or -
	C:\Program Files (x86)\MessageWay\proxy (64-bit)
	   INSTALL.log
	   MWayMessages.dll
	   mwproxy.exe
	   NOTICE.TXT
	   readme.txt
	   /bin
	      msvcp80.dll
	      msvcr80.dll
	C:\ProgramData\messageway
	   mwproxy.conf

MessageWay Files and Locations for UNIX/Linux

The following table shows the default locations where MessageWay installs files that support its servers on a Linux or UNIX system.

Description	Locations and Files

Messaging Server and support files	/opt/messageway
	    /bin
	        executables
	        messageway.lic
	        NOTICE.TXT
	    /init
	        server startup scripts
	    /ftp
	    /proxy
	    /tz
	        tzload
	        timezone files
	    /updates
	        MessageWay install Readme files
	    /utils
	        convertarchive
	        dbconvert
	        mwadmin
	        mwexp
	        mwimp
	        mwkeygen
	        mwlogdump
	        mwres
	        mwrestart
	        mwtrace
	    MWayInstall.log

Description	Locations and Files

General support files	/var/opt/messageway
	    /archives
	    /audit
	    /msgstore
	        /data
	            /*output location directories*
	        /staging
	    /pipe
	    /server
	        /*1 folder for each adapter/service with state logs*
	        /run
	            PID files
	        /temp
	        trace files
	        mway.sys
	/etc/messageway
	    messageway.conf
	    mwres.conf
	    mwsi.conf
	    mwuser.conf
	    /certs
	        /cert
	            testcert.pem
	        /private
	            testkey.pem
	        agents.sample

Description	Locations and Files

Remote Execution Server (RES)	/opt/messageway/res
	    mwresd
	    MWRESInstall.log
	    pam examples
	    NOTICE.TXT
	    readme.txt
	/etc/messageway
	    mwresd.conf
	    /rc.d *(AIX only)*
	        /init.d
	            mwresd
	    /init.d *(All other Linux/UNIX)*
	        mwresd

AS2 Interface	*webserverappsdirectory*
	    /mwas2
	        /WEB-INF
	            /classes
	                GetMWayAS2Ver.class
	                GetMWayAS2Ver.sh
	                MWayAS2In$About.class
	                MWayAS2In$SessionContent.class
	                MWayAS2In.class
	                MWayAS2Out$About.class
	                MWayAS2Out$SessionContent.class
	                MWaAS2Out.class
	            /lib
	                ipworksedi.jar
	                log4j-1.2.14.jar
	                mwayservice.jar
	            mwas2.conf
	            web.xml

Description	Locations and Files

FTP SSL Server	/opt/messageway/ftp
	    MWFTPInstall.log
	    mwftpd
	    NOTICE.TXT
	    readme.txt
	/etc/messageway
	    /certs
	        /cert
	            testcert.pem
	        /private
	            testkey.pem
	    mwftpd.conf
	/etc/init.d
	    mwftpd

FTP SSH (SFTP) Server	/opt/messageway/sftp
	    MWSFTPInstall.log
	    mwsftp-server
	    mwsftpd
	    NOTICE.TXT
	    readme.txt
	    ssh-keygen
	/etc/messageway
	    /authorized-keys
	        public key files for users
	    /certs
	        /cert
	        /private
	    /keys
	        6 generated keys
	    banner
	    mwsftpd.conf
	    mwsftpd_config
	/etc/init.d
	    mwsftpd

Description	Locations and Files
SSH Proxy Server	/opt/messageway/proxy
	MWProxyInstall.log
	mwproxy
	NOTICE.TXT
	readme.txt
	/etc/messageway
	mwproxy.conf
	/etc/init.d
	mwproxy

Technical Support

The MessageWay Technical Support hub is an information and diagnostic center available for customers to:

- Obtain advice on proper product installation, configuration, and operation
- Report any product problems and receive timely resolutions
- Request a software enhancement
- Request software updates
- Inquire about software release contents and status
- View publications
- See how to contact Technical Support
- See hours of availability for Technical Support

To visit the MessageWay Technical Support hub, please follow the below link:

https://www.progress.com/support/messageway

The Technical Support Web site is available 24/7, portions of which require a valid Progress ID. If you have not already done so, you can follow the instructions in the following URL to obtain a valid Progress ID:

https://knowledgebase.progress.com/articles/Article/how-to-create-a-progress-id

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Installing or Upgrading the MessageWay Manager

You install the MessageWay Manager on Windows. You must perform this step with every fresh install or upgrade.

CAUTION: The manager must be installed by a system administrator or power user, or by a normal user who uses the *Run As* option and enters an administrator or power user ID and password.

When you are ready to install the manager, also called the MessageWay Client, the first step is to run the installation program:

1   Locate and run the install program from the install package sent by Progress:

   …\messageway_6.1.0\manager\mwclient-6.1.0-win32-install.exe

2   Click **OK** to begin the installation.

   An installation window appears as shown below, followed by a notice regarding the location of the MessageWay documentation files.
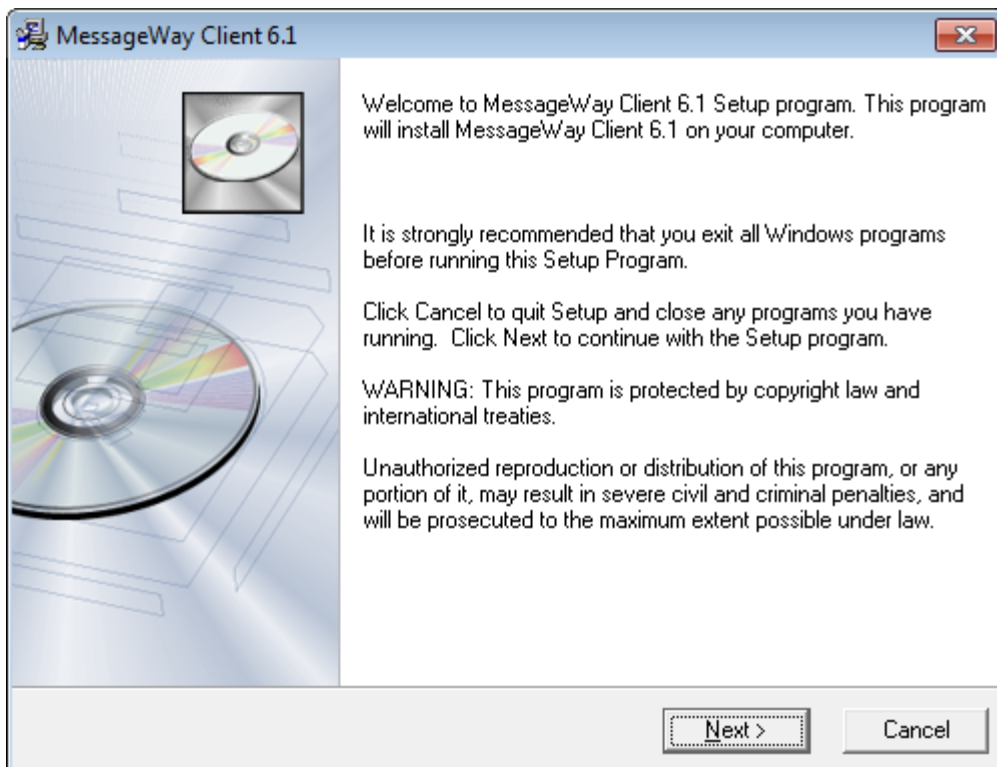
3   Click **Next** on this screen and the screen that follows it.

The MessageWay Directory screen appears.

4   Accept the default installation directory or change it, and then click **Next** to continue the installation.
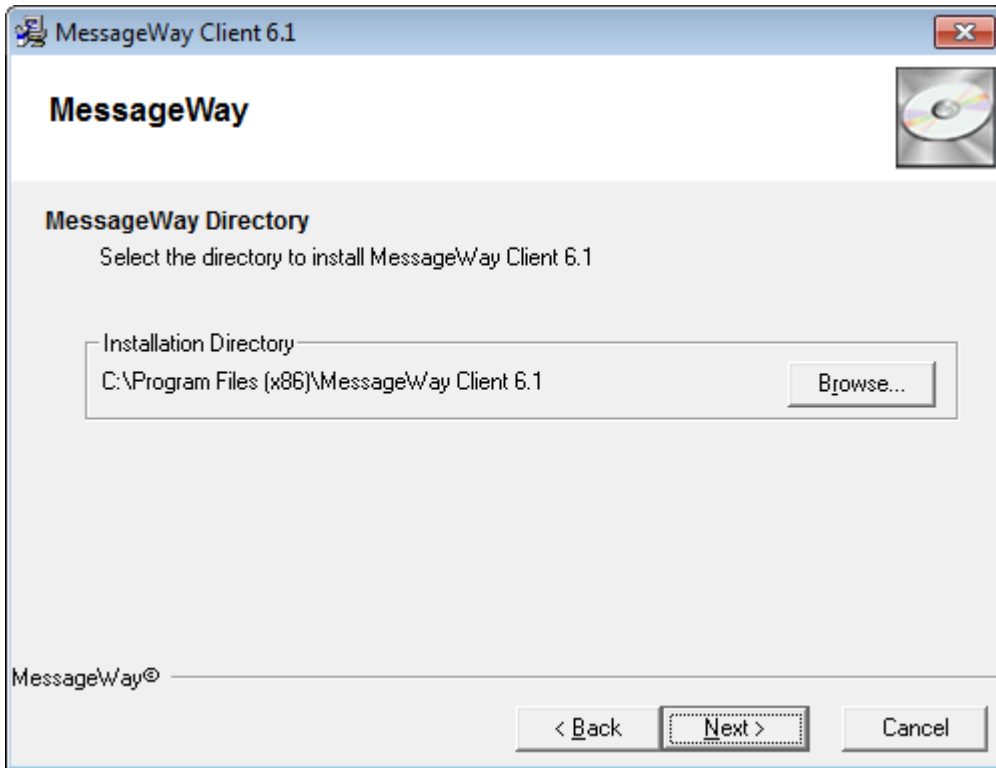
The Start Installation screen appears.

5 This screen allows you to cancel the installation, if necessary. To continue, click **Next**.
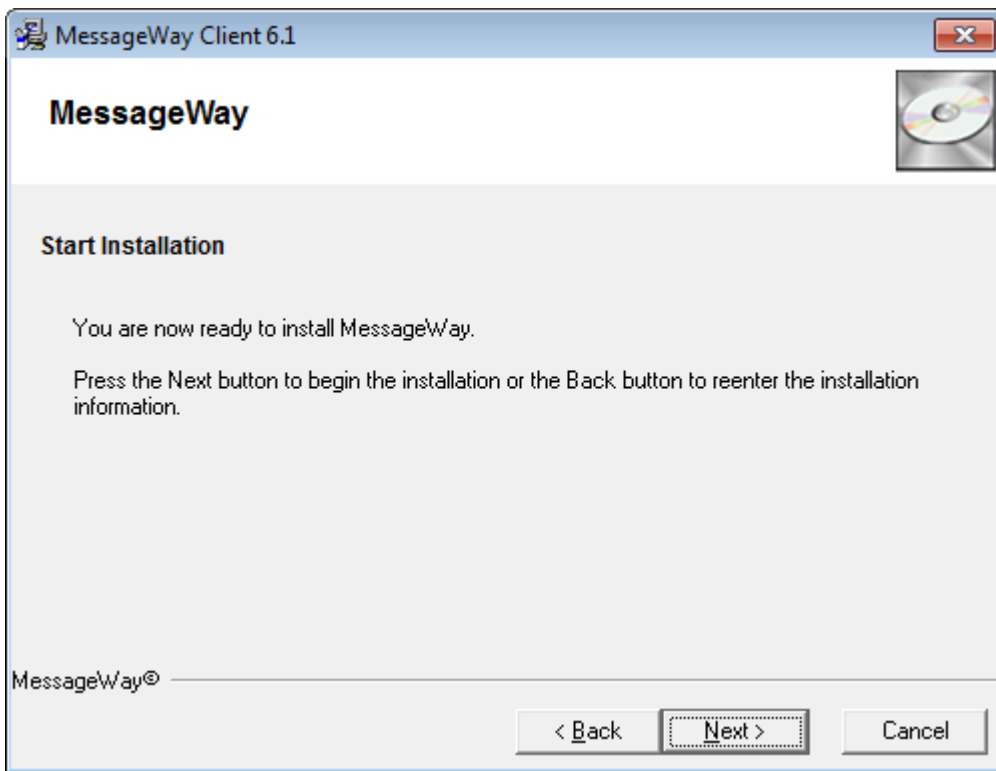
6 When the installation is complete, the final screen will appear.

7 Click **Finish** to exit the MessageWay installation procedure.

IMPORTANT: When you install a MessageWay Manager hotfix on a Windows 7 or later system, the system may display the following notice from the Program Compatibility Assistant: "This program might not have installed correctly." This is an erroneous notice generated by the Microsoft Program Compatibility Assistant. If you receive this message, click the option "This program installed correctly."

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Installing a MessageWay System

This section includes instructions to install a new MessageWay system. The Messaging Server may be installed on Windows, UNIX or Linux.

Pre-requisites to Install Optional Adapters or Services

Users may choose to install optional adapters or services during the initial MessageWay install or later. They must make sure that they fulfill the following pre-requisites before they install the adapter or service.

Installing the WebSphere MQ Adapter

CAUTION: Before you install the MQ adapter, you must first install the IBM WebSphere MQ Client, version 6, 7 or 9. For more information, refer to the appropriate IBM site.

These are the basic steps you will need to follow to first install the WebSphere MQ Client and then the MQ adapter.

1 Download the IBM WebSphere MQ Client version 6, 7 or 9 from the IBM Web site.

2 Copy the install file to the directory where you want to install the client. For Linux this might be /home/mway/mq.

> **IMPORTANT:** You must install the MQ Client on the same system as the MessageWay Server.

3 Follow the WebSphere MQ Client instructions for the appropriate platform to install the MQ client.

4 Use the MQ Manager to configure the MQ connections as required.

5 Test the connection between the MQ Client and MQ Server.

6 Finally, to install the MessageWay MQ Adapter, refer to the topic:

- *Installing Additional Adapters or Services for Windows* (on page 147)

    - or -

- *Installing Additional Adapters or Services for Linux and UNIX* (on page 151)

Installing the SFTP Adapter on SELinux

When you install the MessageWay SFTP Adapter on a Security-Enhanced Linux (SELinux) system, you must turn off enforcement.

- To Temporarily disable enforcement on a running system:

    # /usr/sbin/setenforce 0

- or -

▪   To permanently disable enforcement during a system startup, set SELINUX=disabled in /etc/selinux/config, and reboot

Installing the Server on Windows

The installation process for MessageWay Windows leads the user through a sequence of steps to install the software. The user must respond to prompts that appear, and those responses are used to automatically install the MessageWay software and database structures.

CAUTION: The MessageWay installation program automatically installs the database and ODBC connection for MSSQL 2008 running on the MessageWay application server using Windows authentication. For any other database, MSSQL database version, authentication method, or remote database on a different server, you *must* manually pre-install the database *before* you start the MessageWay installation program. For detailed instructions, refer to the topic, *Installing a MessageWay MSSQL Database Manually* (on page 29).

The following table describes the instructions required to install MessageWay, depending on the MSSQL database server or database access users need:

Database Option	Instructions
MSSQL Server 2008 installed on same system as MessageWay (uses Windows authentication)	*Install MessageWay on Windows* (on page 37)
SQL database is on different system from where MessageWay is installed (remote database), all versions of the database	*Installing a MessageWay MSSQL Database Manually* (on page 29)
SQL Server Authentication required, all versions of database	*Installing a MessageWay MSSQL Database Manually* (on page 29)

Best Practice   With version 5.0 or later, users have the option to store messages on disk or in the MessageWay database. Best practice is to store messages on disk, particularly for large files. When users need MessageWay encryption or compression, they may prefer to store content in the database. The install process sets parameters to store messages on disk by default, but users may change that option from the MessageWay Manager. The option may be set at the system level or the location level. For more information, search in online help for "Message content".

IMPORTANT (MySQL database): If you are using a MySQL database on Windows, you must pre-install that software, create a database named *MessageWay* and configure ODBC drivers to connect to a DSN named *MessageWay_DSN*. Then you must build the MessageWay tables by running the appropriate table creation script that is stored in the MessageWay install package sent by Progress. This process is similar to the tasks described to pre-install an MSSQL database manually.

Pre-installation Tasks for Windows

The following pre-installation tasks may be optional, depending on your needs. They allow you to do the following:

▪ Install the MessageWay Server as a local user when you do not have authority to install MessageWay from a domain

▪ Pre-install a MessageWay MSSQL database manually

> **CAUTION:** The MessageWay installation program automatically installs the database and ODBC connection for MSSQL 2008 running on the MessageWay application server using Windows authentication. For any other database, MSSQL database version, authentication method, or remote database on a different server, you *must* manually pre-install the database *before* you start the MessageWay installation program. For detailed instructions, refer to the topic, ***Installing a MessageWay MSSQL Database Manually*** (on page 29).

> **IMPORTANT:** To avoid driver failure during heavy MessageWay traffic when connecting to MSSQL Server 2012, 2016 or 2019, make sure that you use the appropriate driver to create the MessageWay_DSN.
>
> For MSSQL Server 2012, use driver: SQL Native Client version 11.
>
> For MSSQL Server 2016, use driver: ODBC Driver 13 for SQL Server.
>
> For MSSQL Server 2019, use driver: ODBC Driver 17 for SQL Server.

Installing the MessageWay Server on Windows As A Local User

When a user does not have the authority or permission to install the MessageWay server on the production system, they can configure a user on the local machine to perform the installation.

To Create a Local User with Administrative Rights

To install the MessageWay server as a local user, first you will create a local user with administrative rights. This process varies, depending on the version of Windows. These instructions are for a system running Windows 7.

1 From the **Start** menu, type **Computer Management** in the 'Search programs and files' box, then select Computer Management from the displayed list of programs.

 The Computer Management window appears.

2 From the left pane, under the **System Tools** folder, expand **Local Users and Groups**.

3 Under the folder, **Local Users and Groups**, right-click **User**, and select **New User** from the menu.

 The **New User** dialog box appears.

4 At minimum, do the following:

a) In the **User Name** box, type **MessageWay**.

b) In the **Password** box, type **password**.

c) In the **Confirm password** box, retype **password**.

d) Uncheck the box, **User must change password at next logon**.

e) Select the box, **Password never expires**.

f) Select **Create** and **Close**.

5 In the right pane, double-click the new user, **MessageWay**.

The properties window for the user MessageWay appears.

6 Select the **Member Of** tab, and select the **Add** button.

The **Select Groups** dialog box appears.

7 Do the following:

a) Make sure that the box, **From this location**, contains the name of your local machine, not the domain. If it is not correct, select the **Location** button to select the name of the local machine.

b) In **Enter the object names to select**, type the following:

*machine name***\Administrators**

c) Select **Check Names** and then **OK,** and finally exit from the Computer Management window.

If the object name is valid, the properties window appears with **Administrators** added to the **Member Of** tab.
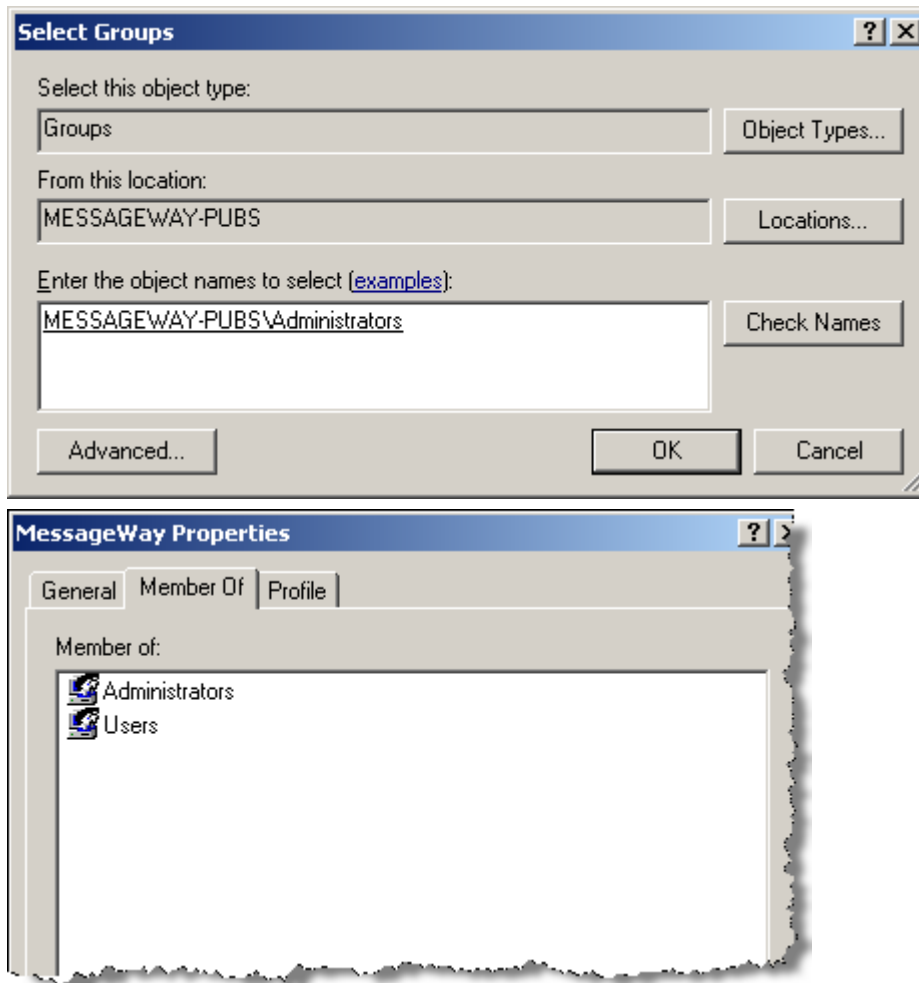
To Assign Rights to the Local User

After completing the previous task that created a local user with administrative rights, you will now assign special rights to this new user. This process varies, depending on the version of Windows. These instructions are for a system running Windows 7.

IMPORTANT: When you change local settings for access rights as described here, the settings may not take effect. Check to make sure that local settings are not overridden by group, domain or domain controller settings. Domain controller settings usurp domain settings, which usurp group settings, which usurp local settings.

---

1   From the **Start** menu, type **Local Security Policy** in the 'Search programs and files' box, then select Local Security Policy from the displayed list of programs.

The Local Security Policy window appears.

2   In the left pane, within the **Local Policies** folder, select **User Rights Assignment**.

3 In the right pane, double-click **Log on as a service**.

The Log on as a service window appears.

4 Select the **Add User or Group** button.

The Select Users or Groups window appears.

5 Do the following:

a) In **Enter the object names to select**, type the following:

machine name**MessageWay**

b) Select **Check Names** and then **OK** twice to return to the Local Security Settings window.

If the object name is valid, the properties window appears with **MessageWay** added to the **Member Of** tab.
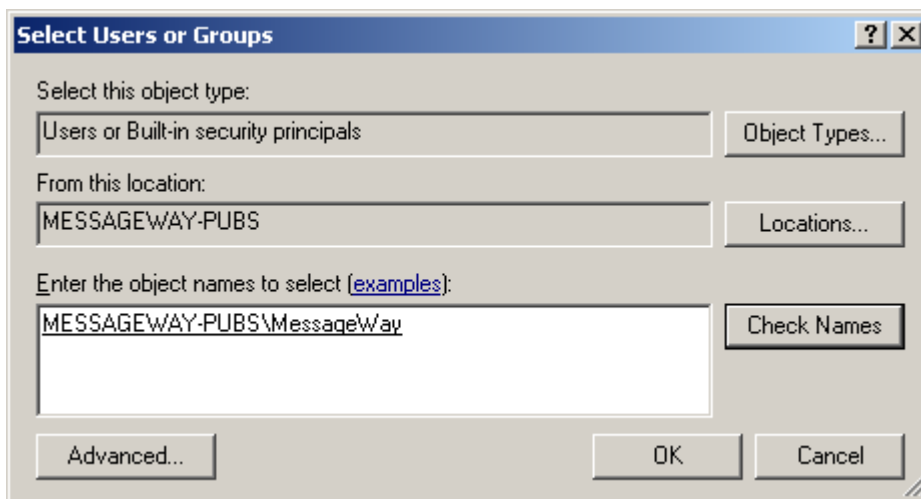
c) Click **OK** to exit to the operating system.

6 Log off the system.

7 Log on to this local system with the new user ID, **MessageWay**.

8 Proceed with the installation of the MessageWay Server.

To Use Windows Authentication for a Domain User

To have Windows authenticate the user that accesses the MessageWay database, proceed as follows:

1 Logon to the MessageWay server using an administrator level id and add the domain user mway to the Administrators user group.

To access the Administrators group, from the desktop go to My Computer|Manage|Local Users and Groups|Groups folder.

2 Using MSSQL Enterprise Manager, make sure the MSSQL server allows SQL Server and Windows Authentication. To set this property:

a) On the Security tab of the SQL Server Properties window, select **SQL Server and Windows Authentication**.

b) Save the change, and restart the server.

3 To add the login ID for the domain:

a) Using MSSQL Enterprise Manager, go to Security|Logins.

b) In the right pane, right-click, and select **New Login**.

c) Select or type an ID for the login (Name).

d) Select **Windows Authentication**.

e) Select or type a domain name that will be used to install MessageWay.

f) Select the Server Roles page for your new Login, and check the **dbcreator** box.

Installing a MessageWay MSSQL Database Manually

You must pre-install the MessageWay database manually under the following conditions:

- When database is on a system different from the one where the server is installed
- When using MSSQL authentication rather than Windows authentication
- When database server is MySQL

IMPORTANT: To avoid driver failure during heavy MessageWay traffic when connecting to MSSQL Server 2012, 2016 or 2019, make sure that you use the appropriate driver to create the MessageWay_DSN.

For MSSQL Server 2012, use driver: SQL Native Client version 11.

For MSSQL Server 2016, use driver: ODBC Driver 13 for SQL Server.

For MSSQL Server 2019, use driver: ODBC Driver 17 for SQL Server.

To install the database manually, you have two options:

- Use Windows authentication for a domain user
  - or -
- Use MSSQL authentication

Using Windows Authentication for a Domain User

To have Windows authenticate the user that accesses the MessageWay database, proceed as follows:

1 Logon to the MessageWay server using an administrator level id and add the domain user *mway* to the Administrators user group.

To access the Administrators group, from the desktop go to My Computer|Manage|Local Users and Groups|Groups folder.

2 On the MSSQL server system, create the folder, *drive***MessageWay****db**.

3 Using MSSQL Enterprise Manager, make sure the MSSQL server allows *SQL Server and Windows Authentication*.

To set this property:

a) On the **Security** tab of the SQL Server Properties window, select **SQL Server and Windows Authentication.**

    b) Save the change, and restart the server.

4   To add the login ID for the domain:

    a) Using MSSQL Enterprise Manager, go to Security|Logins.

    b) In the right pane, right click, and select **New Login**.

    c) Select or type an ID for the login (Name).

    d) Select **Windows Authentication**.

    e) Select or type a domain name that will be used to install MessageWay.

5   To create a new database:

    a) Using MSSQL Enterprise Manager, create a new database on the MSSQL server.

    b) Name the database **MessageWay**.

    c) Specify the owner as the ID created in step 4.

    d) Specify a default size as appropriate for your environment. Be sure it is set to **Can Grow**.

    e) Point the file location for the data and the log to *drive***\MessageWay\db** (See step 2).

6   If you are not running MessageWay and the database on the same machine, you need to enable TCP/IP and Named pipes:
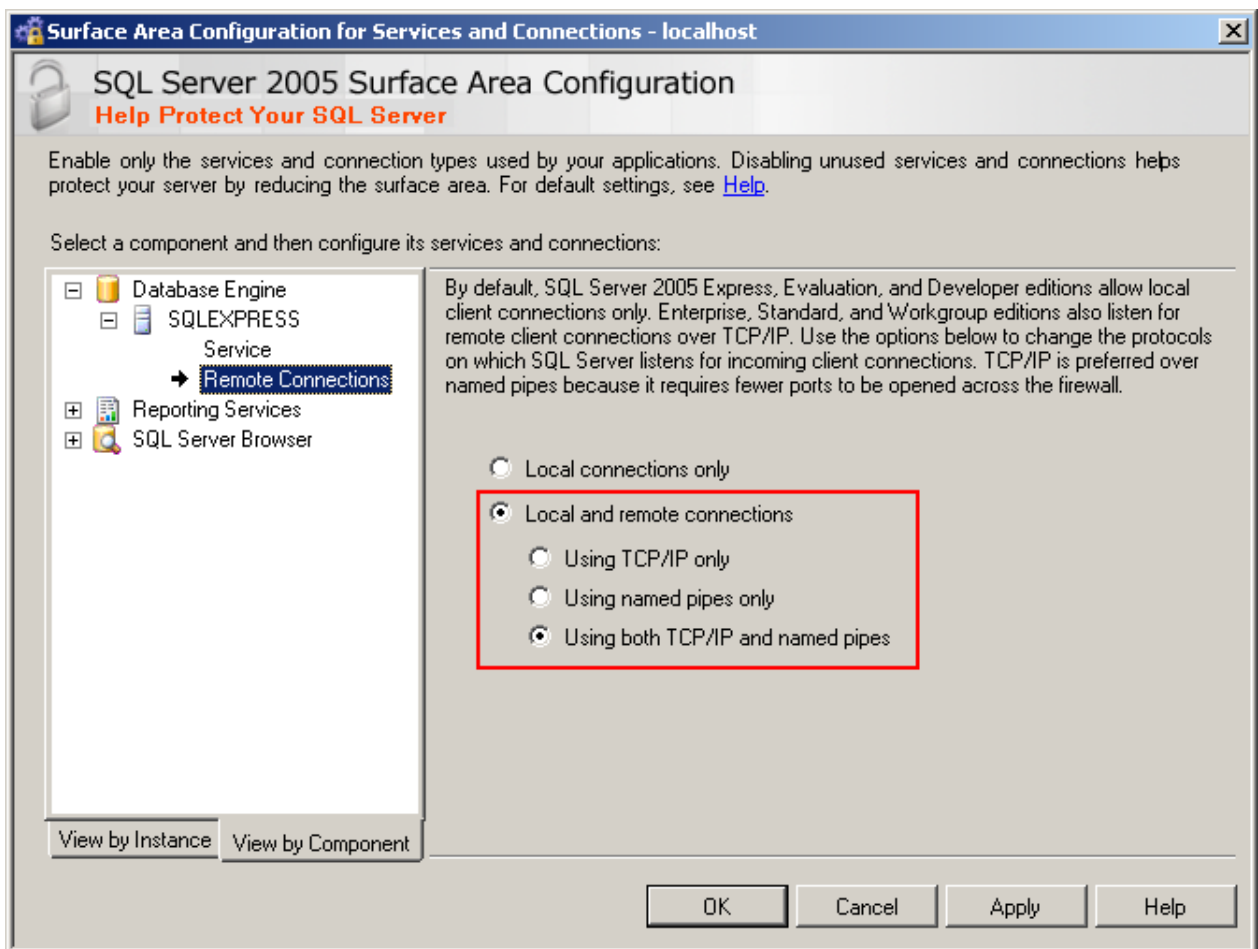
7 To create the tables for the database:

   a) Using MSSQL Enterprise Manager, right-click the MessageWay database and select New Query.

   b) From the install zip file, extract mwaytablecreate.sql, copy its contents into the query, and execute it.

   When it finishes, you'll see a message stating "1 row(s) affected".

   c) To see the MessageWay tables, click **Tables,** and press **F5**.

8 To specify database access:

   a) Using MSSQL Enterprise Manager, return to Security|Logins.

   b) Right-click the new user, and select **Properties**, then **User Mapping**.

   c) Select the MessageWay database, and verify that the access rules include *Owner* and *Public*. *Do not* check any server roles.

9 To create a Data Source Name (DSN):

IMPORTANT (64-bit MSSQL Server): When the application server uses the 64-bit version of MSSQL, run the following program to access the proper 32-bit ODBC Data Source Administrator to configure the system DSN:

```
C:\Windows\SysWoW64\odbcad32.exe
```

Since MessageWay is a 32-bit application, you must use this 32-bit administrator program to select the proper SQL Native Client ODBC driver.

   a) Create a system DSN called **MessageWay_DSN** on the MessageWay server, and select **Windows Authentication**.

   - For MSSQL Server 2012, use driver: SQL Native Client version 11.
   - For MSSQL Server 2016, use driver: ODBC Driver 13 for SQL Server.
   - For MSSQL Server 2019, use driver: ODBC Driver 17 for SQL Server.

   b) Point to the MessageWay database on the correct SQL server.

   c) Test the connection.

10 To enable Multiple Active Result Sets (MARS):

   a) In the Windows registry, go to the location shown in the following window.

   b) Add a new string value with data content of **Yes**:

   NAME: **MARS_Connection**

   TYPE: **String value**

   DATA: **Yes**

This is the location for 32-bit systems:
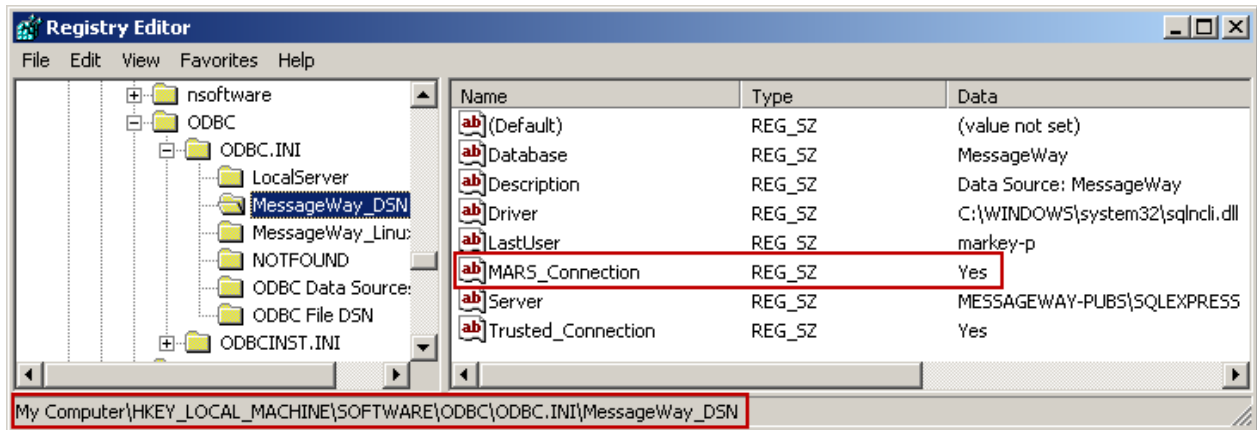
This is the location for 64-bit systems:
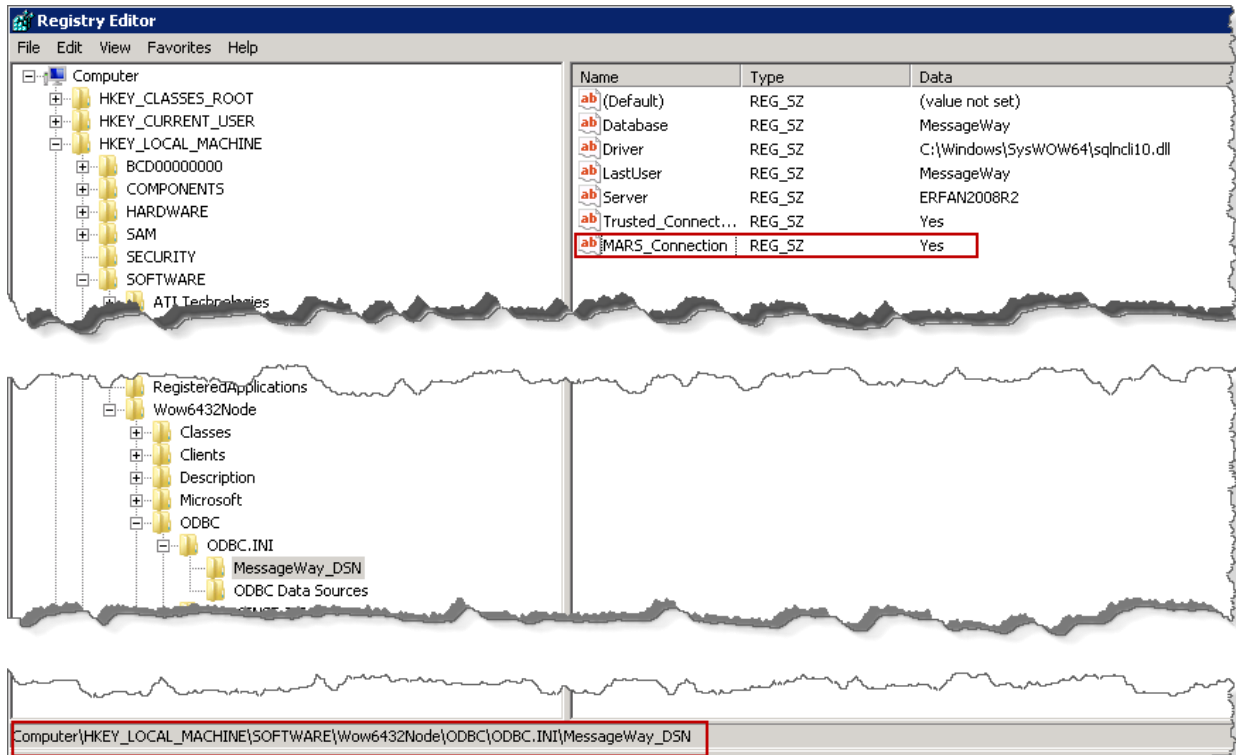
c) Retest the connection to make sure MARS is enabled.
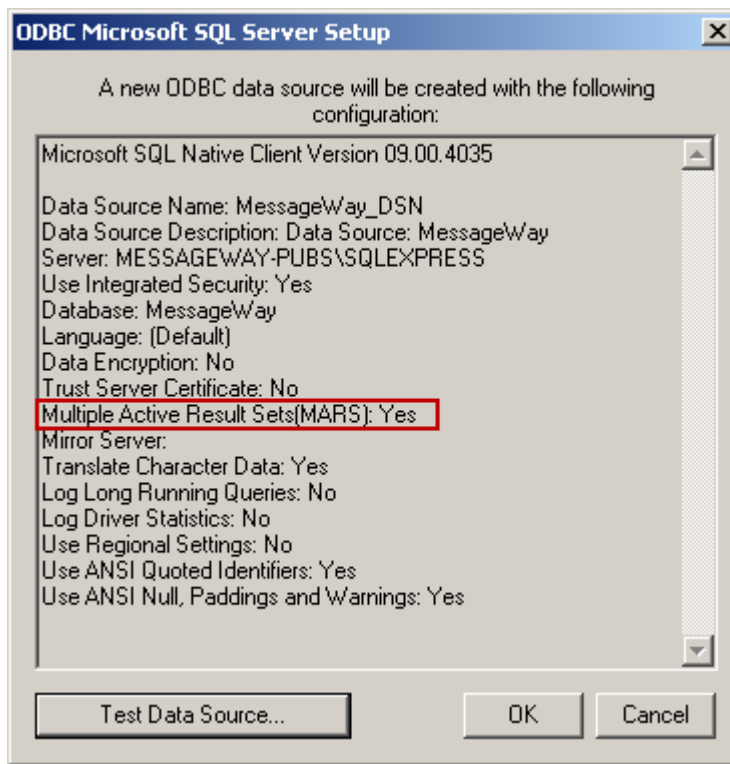
IMPORTANT: If you do not have this enabled, you will receive 8003 errors.

11 To complete the installation:

a) Log on to the MessageWay server using the domain ID from step 4.

b) Run the MessageWay installation program.

c) When prompted for the database user and password, click **Next** without entering any information in the fields.

Using MSSQL Authentication

To have Microsoft SQL Server (MSSQL) authenticate the user that accesses the MessageWay database, proceed as follows:

1 On the MSSQL server system, create the folder, *drive***MessageWay\db**.

2 Using MSSQL Enterprise Manager, make sure the MSSQL server allows *SQL Server and Windows Authentication*.

To set this property:

a) On the **Security** tab of the SQL Server Properties window, select **SQL Server and Windows Authentication.**

b) Save the change, and restart the server.

3 To add a new user:

a) Using MSSQL Enterprise Manager, go to Security|Logins.

    b) In the right pane, right click, and select **New Login**.

    c) Select or type an ID for the login (Name), **mway**.

    d) Select **SQL Server Authentication**.

    e) Type a password, **mway**.

    f) Turn *off* **Enforce Password Policy**.

    g) Set the default database to **master**.

4 To create a new database:

    a) Using MSSQL Enterprise Manager, create a new database on the MSSQL server.

    b) Name the database **MessageWay**.

    c) Specify the owner as the ID created in step 3.

    d) Specify a default size as appropriate for your environment. Be sure it is set to **Can Grow**.

    e) Point the file location for the data and the log to *drive***MessageWay\db** (See step 1).

5 If you are not running MessageWay and the database on the same machine, you need to enable TCP/IP and Named pipes:
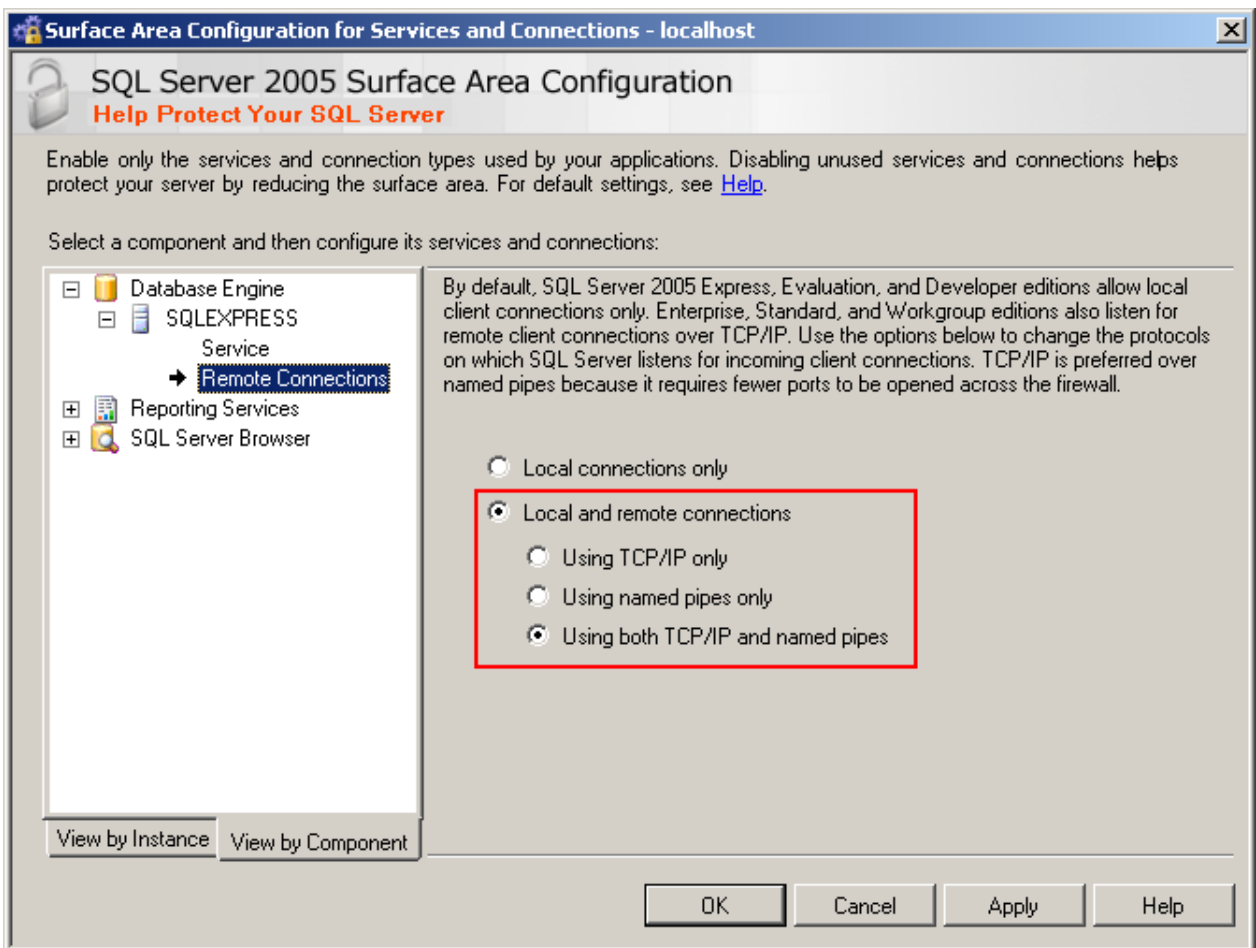
6 To create the tables for the database:

a) Using MSSQL Enterprise Manager, right-click the MessageWay database and select New Query.

b) From the install zip file, extract mwaytablecreate.sql, copy its contents into the query, and execute it.

   When it finishes, you'll see a message stating "1 row(s) affected".

c) To see the MessageWay tables, click **Tables,** and press **F5**.

7 To specify database access:

a) Using MSSQL Enterprise Manager, return to Security|Logins.

b) Right-click the new user, and select **Properties**, then **User Mapping**.

c) Select the MessageWay database, and verify that the access rules include *Owner* and *Public*. *Do not* check any server roles.

8 To create a Data Source Name (DSN):

IMPORTANT (64-bit MSSQL Server): When the application server uses the 64-bit version of MSSQL, run the following program to access the proper 32-bit ODBC Data Source Administrator to configure the system DSN:

```
C:\Windows\SysWoW64\odbcad32.exe
```

Since MessageWay is a 32-bit application, you must use this 32-bit administrator program to select the proper SQL Native Client ODBC driver.

a) Create a *system* DSN called **MessageWay_DSN** on the MessageWay server.

   - For MSSQL Server 2012, use driver: SQL Native Client version 11.
   - For MSSQL Server 2016, use driver: ODBC Driver 13 for SQL Server.
   - For MSSQL Server 2019, use driver: ODBC Driver 17 for SQL Server.

b) Select **SQL Server Authentication** using the username and password from step 3.

c) Point to the MessageWay database on the correct SQL server.

d) Test the connection.

9 To enable Multiple Active Result Sets (MARS):

a) In the Windows registry, go to the location shown in the following window.

b) Add a new key with a string value of **Yes**:

   NAME: **MARS_Connection**

   TYPE: **String value**

   DATA: **Yes**

This is the location for 32-bit systems:
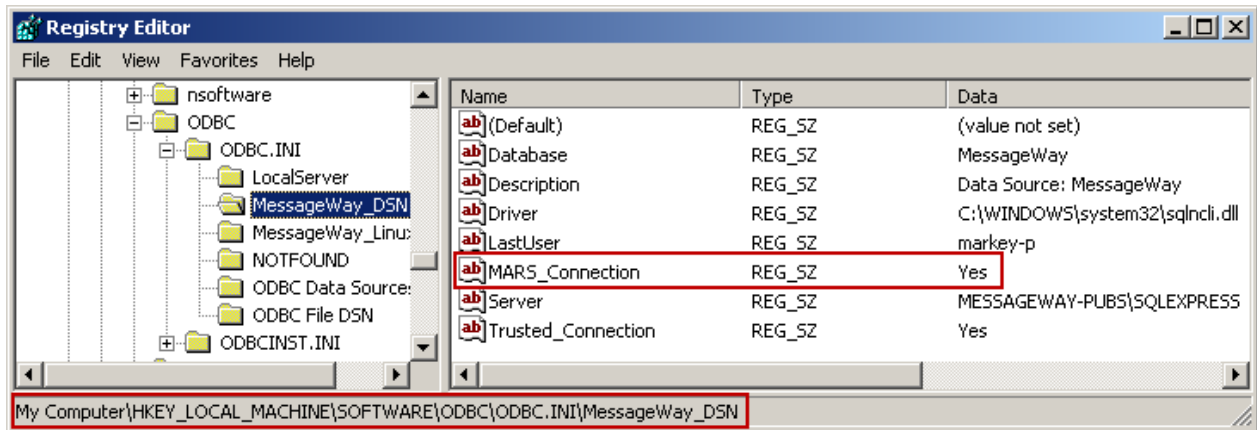
This is the location for 64-bit systems:
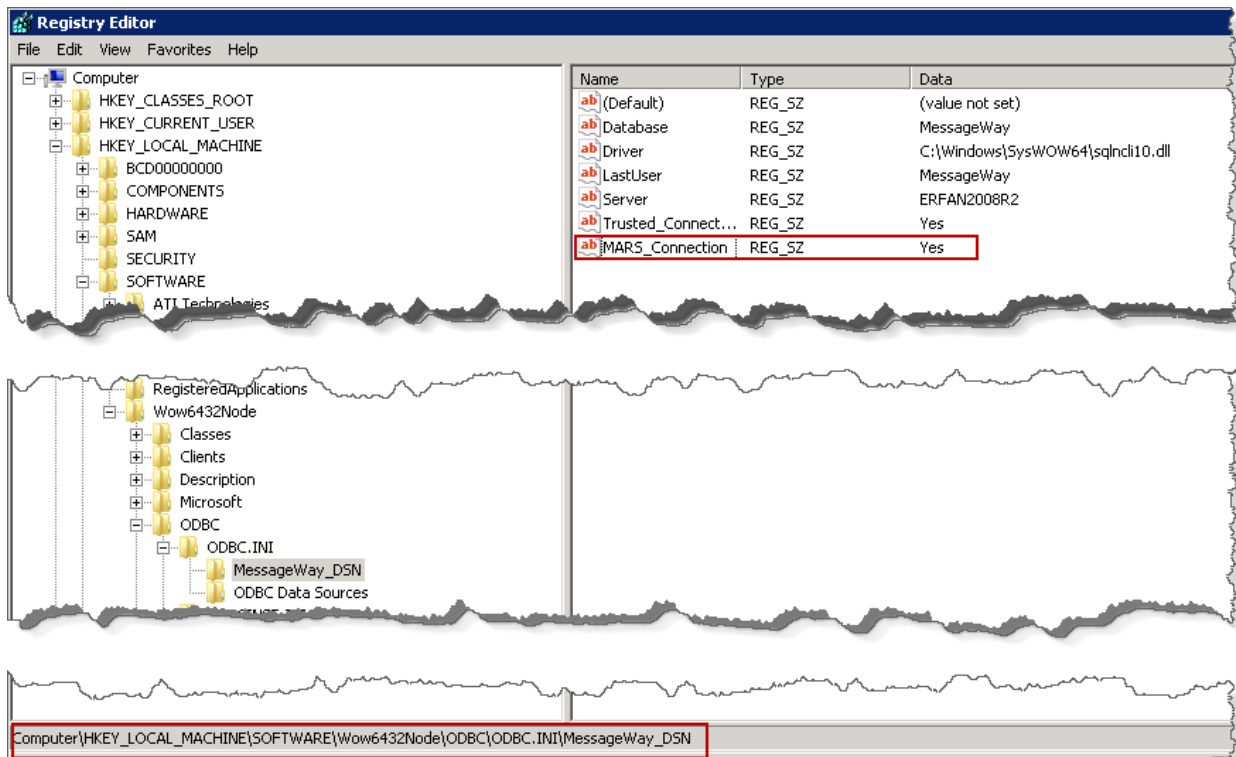
c) Retest the connection to make sure MARS is enabled.
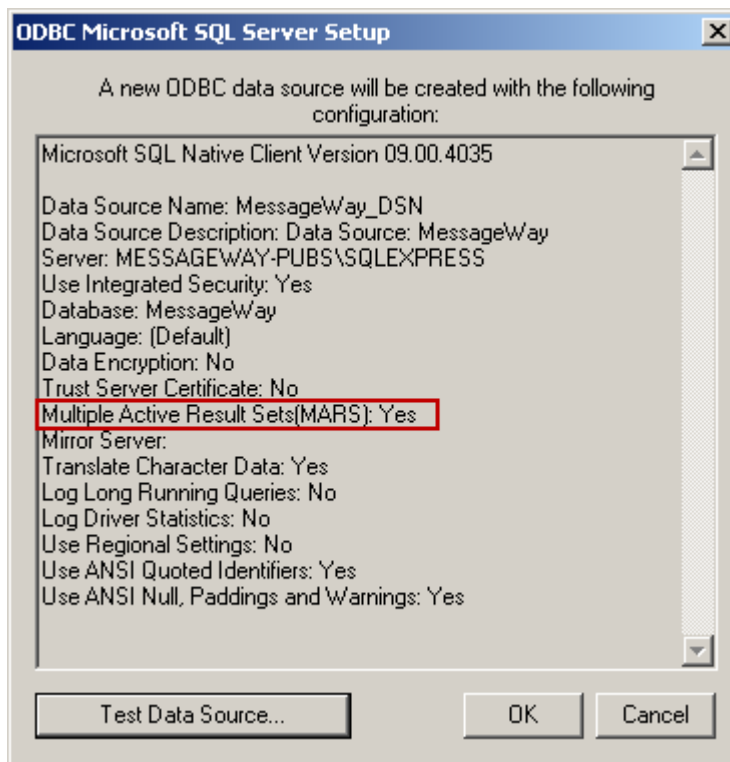
IMPORTANT: If you do not have this enabled, you will receive 8003 errors.

10 To complete the installation:

   a) Log on to the MessageWay server using the domain ID from step 4.

   b) Run the MessageWay installation program.

   c) When prompted for the database user and password, enter the information you created in step 3.

Installing MessageWay on Windows

IMPORTANT: Perform the following instructions as an *administrative user* (on page 25). If you are using an administrator, make sure it has all the rights described in the topic *To Assign Rights to the Local User* (on page 27), particularly *Log on as a service*.

This procedure installs MessageWay and the MessageWay database on the same system.

CAUTION: The MessageWay installation program automatically installs the database and ODBC connection for MSSQL 2008 running on the MessageWay application server using Windows authentication. For any other database, MSSQL database version, authentication method, or remote database on a different server, you *must* manually pre-install the database *before* you start the MessageWay installation program. For detailed instructions, refer to the topic, *Installing a MessageWay MSSQL Database Manually* (on page 29).

When you are ready to install MessageWay on your server, the first step is to run the installation program:

1 Locate and run the install program from the install package sent by Progress:

...\messageway_6.1.0\windows\messageway-6.1.0-win32-install.exe

2 Click **OK** to begin the installation.
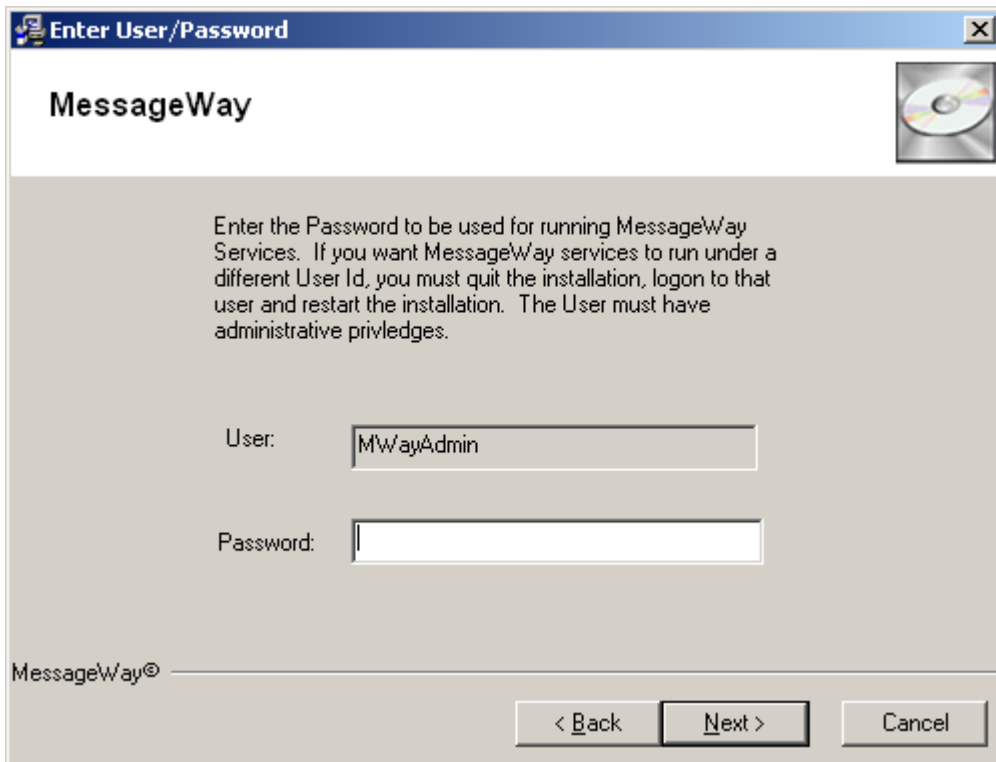
An installation window appears as shown below, followed by a notice regarding the location of the MessageWay documentation files.
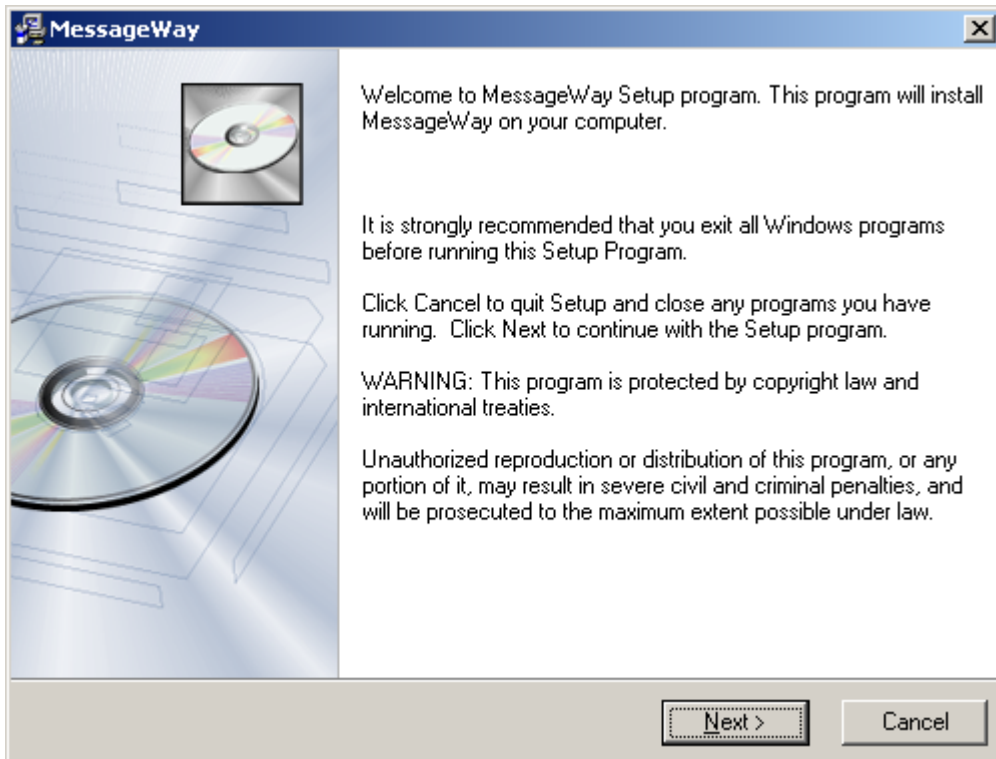
3 Click **Next** on this screen and the screen that follows it.

The Enter User/Password screen appears.

4 Enter a logon and password that will be used to start the MessageWay services. The account you choose must have Administrator privileges on the server.

IMPORTANT: The user with administrative privileges must also have "Log on as a service" allowed in User Rights Assignment. This information is typically found under **Local Security Policy** on Windows systems.

5 Click **Next** to continue.

When you click **Next**, MessageWay validates the user and password to ensure they are valid and that they have the proper authority to perform the installation. When a logon does not have proper authority, an error message will appear, and you will have the opportunity to reenter the information or correct the privileges of the user.

The Select Components screen appears.

6 Select the options you want to install. The default selection is **Base MessageWay**.

IMPORTANT: If you choose any additional components, you must purchase a license for those products before you can use them.
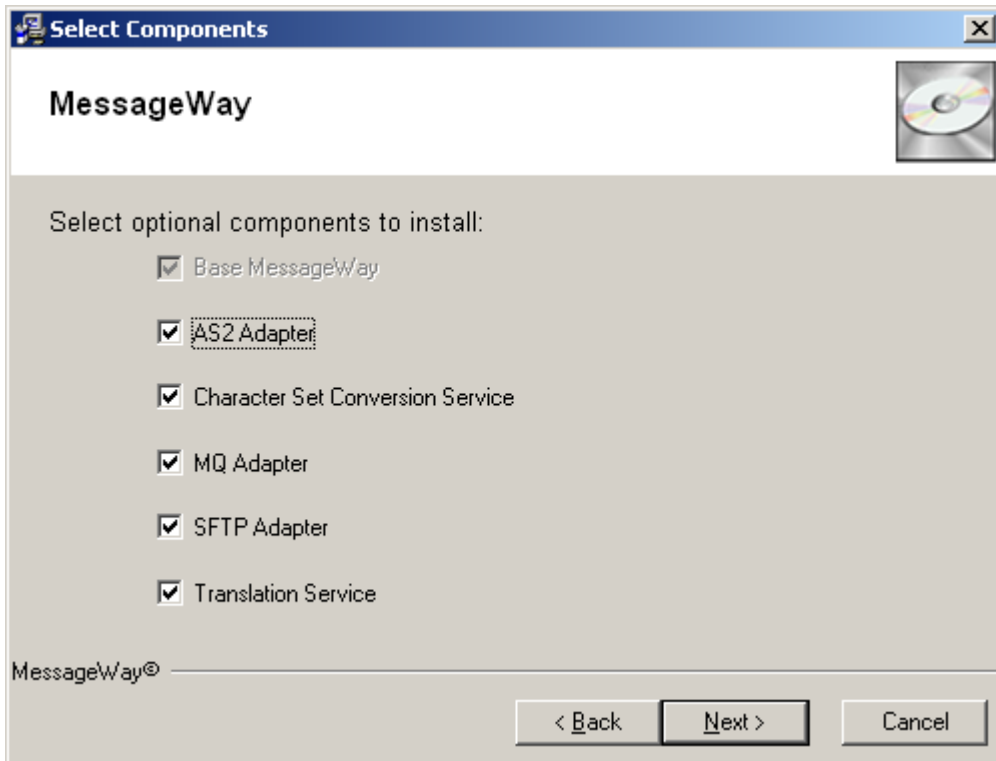
7 Click **Next** to continue.

The MessageWay Directories screen appears.

NOTE: This screen allows you to distribute the MessageWay files among multiple folders on your network. This is useful when you want to ensure that disk activity is not concentrated on one disk drive.

8 Change any directories as needed by clicking the **Browse** button, then click **Next** to continue.

NOTE: The database directory is only available for selection when you use a supported version of the MS SQL Server and the installation process creates the database. Otherwise, the option is dimmed.
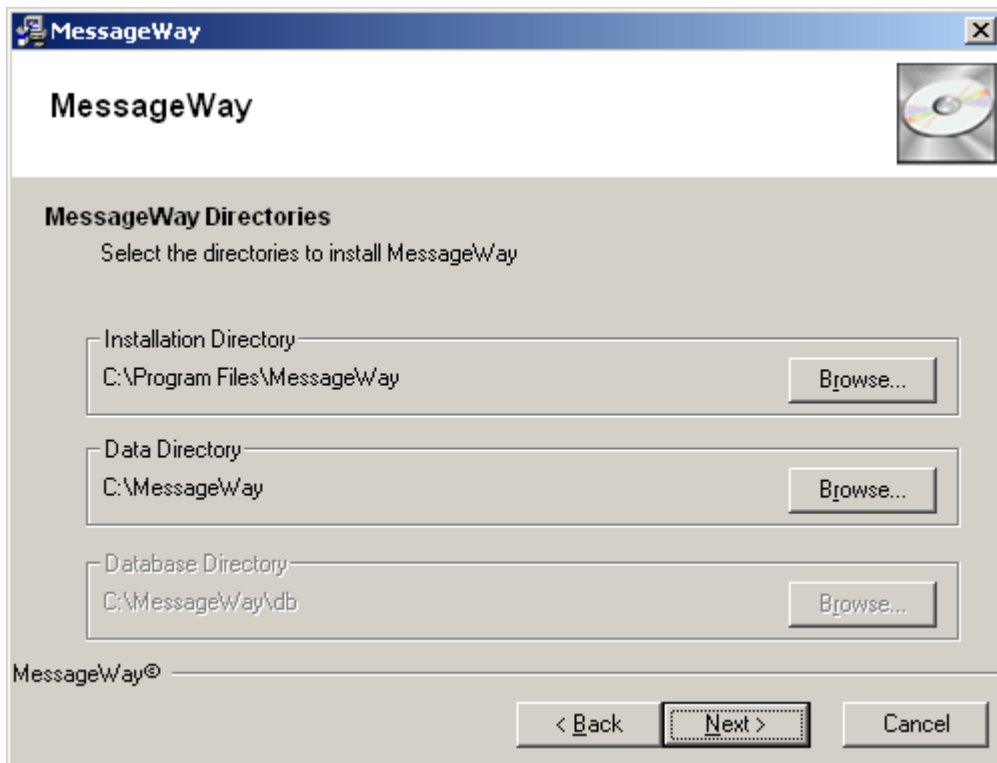
9   The Start Installation screen allows you to cancel the installation, if necessary. To continue, click **Next**.

10 The database User ID and password request window only appears when the DSN already exists. If this is the case, do the following depending on which authentication type you use:

- For *Windows Authentication*, leave the fields blank.

     - or -

- For *SQL Authentication*, type the user id and password configured in the *SQL Authentication section* (on page 29).

11 When the installation is complete, the final screen will appear. Click **Finish** to exit the MessageWay installation procedure.

Installing the Server on UNIX or Linux

The installation process for MessageWay on Linux or UNIX servers is controlled by a script file, which prompts the installer with a series of questions. Answers to those questions are used by the script to determine the location of the software, message store and other MessageWay files.

> **Best Practice**
>
> With version 5.0 or later, users have the option to store messages on disk or in the MessageWay database. Best practice is to store messages on disk, particularly for large files. When users need MessageWay encryption or compression, they may prefer to store content in the database. The install process sets parameters to store messages on disk by default, but users may change that option from the MessageWay Manager. The option may be set at the system level or the location level. For more information, search in online help for "Message content".

IMPORTANT: Before installing the MessageWay Server, you must create the MessageWay database. In some cases depending on your site, this will require help from your data base administrator (DBA).

CAUTION: If MessageWay is installed on a SuSE 10.2 system, the /opt/messageway/init/messageway stop and status commands will not properly stop or status the main MessageWay process, mwmsg. You will need to use the **ps -e | grep mwmsg** and **kill** commands to stop the process. This is due to a bug in SuSE which was fixed by SuSE Linux Enterprise Server 10.4.

Pre-installation Tasks for UNIX/Linux

The following pre-installation tasks may be optional, depending on your needs. They allow you to do the following:

- Install 64-bit MySQL database on RHEL6 64-bit system
- Install ODBC database for MessageWay that uses MySQL
- Install Oracle database on RHEL7 using DataDirect
- Increase the number of open files allowed by the operating system
- Add a system to the Hosts file
- Install unixODBC

Pre-requisites to Install MessageWay on RedHat EL6 64-bit for MySQL

To install MessageWay on a RHEL6 64-bit system, you may have to complete the following steps first, depending on what is already installed on your system:

1 Install a 64 bit MySQL

yum install mysql.x86_64

- or -

If available, you can use the Native Package Manager:

yum install mysql mysql-server mysql-libs mysql-server

2 Install the 32 bit libstdc++

yum upgrade libstdc++

yum install libstdc++.i686

3 (For MQ adapter only) Install a 32 bit compatibility module

yum install compat-libstdc++-33.i686

4   Install the 32 bit unixODBC. For instructions, refer to the topic *Install unixODBC on Linux 32 and 64-bit Platforms* (on page 45).

5   Install the 32 bit mysql connector and create symbolic links.

   a)   For our 64-bit station, we certified the RHEL5 mysql-connector-odbc-5.1.8-1.rhel5.i386.rpm for RHEL6 and recommend using only that version. Note that MySQL does not currently supply a RHEL6 rpm connector.

      Download the 32-bit RPM for mysql-connector from the MySQL website, for example, mysql-connector-odbc-5.1.8-1.rhel5.i386.rpm, which is our recommended version.

   b)   Install the connector using the rpm command.

      # **cd** <location of downloaded rpm>

      # **rpm -ivh --force --nodeps mysql-connector-odbc-5.1.8-1.rhel5.i386.rpm**

6   Proceed to the next pre-requisite topic, *Pre-requisites for Installing ODBC Databases on MessageWay* (on page 43).

Pre-requisites for Installing ODBC Databases for MessageWay

MessageWay can use MySQL on Linux or MySQL or Oracle databases on UNIX systems. Your database administrator is responsible for installing the appropriate database software on your server and verifying its functionality. Please refer to the *Databases and Database Drivers for the MessageWay Server* (on page 3) section for specific database and database driver versions required on your intended MessageWay platform.

MessageWay uses an ODBC connection to communicate with the database. In a MySQL environment, the ODBC drivers will typically be installed with MySQL. In an Oracle environment, the ODBC drivers will be installed as part of the MessageWay install. Refer to the documentation from those products for configuration instructions for the ODBC drivers.

To prepare for the MessageWay installation that will use a MySQL or an Oracle database, several steps must be performed and specific permissions must exist. Here is an overview of those steps:

1   Make sure the database software is installed and running.

> **NOTE**: If you are using 64-bit MySQL database, make sure you have completed the pre-requisites described in the topic, *Pre-requisites for installing MySQL 64-bit Database on RedHat EL6 64-bit* (on page 42).

2   Create a system user named **mway** in a group named **mway**.

3   Create a home directory, such as /home/mway, for which the user **mway** has permissions. You will run the install from this path.

4   You need to install with a root user. The security group, which is by default, **mway**, will need to provide the following functionality to the pseudo (sudo) root logon in order to run the script:

   ▪   The command, **whoami**, must return the value, **root**

   ▪   Must be able to set the user and group in the install command, which defaults to **mway**

   ▪   Must be able to change owner, **chown**, of installed files to the user group, **mway**

- ▪ Must be able to create /opt/messageway and var/opt/messageway, or alternate specified directories, and assign to the user and group, which defaults to **mway** and **mway**
- ▪ Must be able to substitute user, **su**, to user, **mway**, to run dbconvert, tzload, mwadmin and odbcinst under user, **mway**
- ▪ Must be able to install files in /etc and /etc/init.d, or in alternate specified directory
5 Unzip the MessageWay installation files.
6 Create a database named **messageway**.
7 Configure the ODBC drivers for the selected database.
8 Create a DSN named **MessageWay_DSN** that is used to access the MessageWay database.
9 Test the connectivity to the MessageWay database.

Pre-requisites to Install MessageWay on RedHat EL7 for Oracle using DataDirect

The following 32-bit RPM's are required to install MessageWay on a Red Hat Enterprise Linux Server 7.x system with Oracle, depending on what is already installed on your system:

> \# **yum install glibc.i686**
>
> \# **yum install libstdc++.i686**
>
> \# **yum install zlib.i686**

Increasing the Number of Open Files Allowed

When MessageWay processes large numbers of messages, there is a chance that the number of files open simultaneously will exceed the limit allowed by the operating system.

To override the Solaris fopen() limit of 255:

1 Set the ulimit to 2048:

```
ulimit -n 2048
```

2 Make sure your system contains a file named /usr/lib/extendedFILE.so.1. If not, download it from the Sun site.

3 Add the following line to the .bash_profile file for the user that owns MessageWay, typically, *mway*:

```
export LD_PRELOAD_32=/usr/lib/extendedFILE.so.1
```

Henceforth, any process started by this user, typically *mway*, can have a maximum of 2048 files open.

To override the file open() default of 1024 on UNIX and non-Linux based systems:

1 Add the following line to the .bash_profile file for the user *root* and the user that owns MessageWay, typically, *mway*:

```
ulimit -n 32767
```

To override the file open() default of 1024 on Linux based systems:

1 Add the following lines to /etc/security/limits.conf:

```
mway hard nofile 32767
mway soft nofile 32767
```

Adding a System to Hosts File

Unless you are certain that your computer appears in the domain name server, perform the following task. In practice, most computers will not need this step, because they rely on their own DNS server to provide this information.

To avoid getting an unknown host error when you use programs to connect through the MessageWay_DSN, you should configure your /etc/hosts file on the machine where the MessageWay Messaging Server runs.

1 Type **ifconfig** to get your IP address.

2 Type **hostname** to get your hostname.

3 Open /etc/hosts, and add the following entry using the values you received in steps 1 and 2:

   your_machine_IP your_machine_hostname

4 Restart your session to the machine.

Installing unixODBC for Linux with MySQL or Solaris SPARC

Follow the appropriate instructions to install unixODBC on your system.

Installing unixODBC on Linux 32 and 64-bit Platforms with MySQL

1 Stop MessageWay and all perimeter servers.

2 Start a terminal session as root user.

3 Backup your odbcinst.ini settings (typically located at /etc/odbcinst.ini).

4 Remove any previous versions of unixODBC:

   a) If installed through YUM RPM Database:

      1. Search for existing installations:

         # **yum list installed | grep unixODBC**

      2. If any are found, erase them:

         # **yum erase** *<unixODBC Packages>*

   b) If installed through RPM file:

      1. Search for existing installations:

         # **rpm -qa | grep unixODBC**

      2. If any are found, erase them:

         # **rpm –e** *<unixODBC Packages>*

   c) If installed through previous distribution source:

      1. Navigate to the unixODBC extracted directory.

      2. Uninstall the distribution:

make uninstall

NOTE: There may be some dependencies for unixODBC, for example, the MySQL-Connector ODBC driver. If you have this problem, follow similar procedures in step 4 to search and uninstall the dependant packages. After you complete the unixODBC installation, you can re-install the packages. If you are using a MySQL Database, you can wait to re-install the MySQL Connector ODBC driver, because you may need to install a newer version in subsequent steps.

---

5 Obtain a copy of the RPM created by Progress "unixODBC_DevBuild_Linux-2.3.2-2.i386.rpm" from the install medium.

6 Install the RPM:

rpm -ivh ./unixODBC_DevBuild_Linux-2.3.2-2.i386.rpm

If you run into dependency problems, use YUM to determine the necessary packages you are missing. When finished, rerun the RPM install.

yum provides *<Missing Dependency>*

yum install *<Missing Package>*

7 Confirm successful installation:

odbcinst --version

```
unixODBC 2.3.2-pre
```

Installing unixODBC on UNIX Solaris SPARC

1   Stop MessageWay and all perimeter servers

2 Start a terminal session as *root* user

3 Backup your odbcinst.ini settings (typically located at /etc/odbcinst.ini)

4 Remove any previous versions of unixODBC

    a) If installed through package file:

        1. Search for existing installations:

            # **pkginfo | grep unixODBC**

        2. If any are found, erase them:

            # **pkgrm** *<unixODBC Packages>*

    b) If installed through previous distribution source

        1. Navigate to the unixODBC extracted directory

        2. Uninstall the distribution

            # **make uninstall**

NOTE: There may be some dependencies for unixODBC, for example, the MySQL-Connector ODBC driver. If you have this problem, follow similar procedures in step 5 to search and uninstall the dependant packages. After you complete the unixODBC installation, you can re-install the packages.

If you are using a MySQL Database, you can wait to re-install the MySQL Connector ODBC driver, because you may need to install a newer version in subsequent steps.

5 Obtain a copy of the Progress created "unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar.gz" from the install medium.

6 Install the unixODBC-DevBuild package:

gunzip unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar.gz

tar xvf unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar

pkgadd -d .

7 Confirm successful installation:

odbcinst --version

```
unixODBC 2.3.2-pre
```

isql --version

```
unixODBC 2.3.2-pre
```

a) If you get an error from either command, then you're probably missing a dependency

b) To determine a missing dependency:

  # **ldd /usr/local/bin/isql**

  # **ldd /usr/local/bin/odbcinst**

c) If any libraries report "(file not found)" from the above commands, then you need to track down the dependencies.

  1. Search for existing libraries on your machine

    Search the system for existing library as a root user

    # **find / | grep** *<Library_Name>*

    If you find the library, you can add the directory it is located in to the $LD_LIBRARY_PATH environment variable. This should be done in the .bash_profile and should look like the following:

    # **.bash_profile**

    LD_LIBRARY_PATH=$LD_LIBRARY_PATH:*<Path_To_Library>*

    export LD_LIBRARY_PATH

    Restart your terminal session to the machine

  2. Download the package containing the library you're missing. A vast majority of Solairs utility packages can be found here: http://www.sunfreeware.com/programlistsparc10.html

    For example, a common missing library is libiconv.so.2

    Search for the libiconv package at the link provided above.

    Install the package.

    # **pkgadd -d libiconv-1.14-sol10-sparc-local**

d) Retry the ldd commands to confirm that the library dependencies are resolved

8 Configure your odbcinst.ini settings if necessary.

Using the Installation File

The name of the installation file will vary depending on the platform or distribution where MessageWay will be installed. Therefore, reference to the file name will be *Install File Name*.

The choices for UNIX and Linux are as follows:

UNIX (Solaris)   messageway-6.1.0-solaris.tgz

Linux (RedHat, SuSE)   messageway-6.1.0-linux.tgz

IMPORTANT: Before you extract the files from the tarball, log on as user **mway**.

Proceed as follows:

1   Move the MessageWay *Install File Name* to an installation directory on the server, such as, /home/mway/mwayinstall.

2   From the directory where you moved the *Install File Name*, perform the steps associated with the platform where MessageWay is to be installed.

For a UNIX system, issue the following commands:

1   **gunzip** *Install File Name*

2   **tar –xvf** *Install File Name*

This creates a subdirectory with the name of the install file.

NOTE: Don't include the **.tgz** extension in the **tar** command

For a Linux system, issue the following command:

1   **tar -xzvf** *Install File Name*

This creates a subdirectory with the name of the install file.

After running these commands, the new subdirectory will contain all files necessary to install MessageWay. Among the files in the directory will be the scripts required to build the MessageWay database tables for MySQL databases.

Using a MySQL Database

Follow these instructions to build a MessageWay database shell for a MySQL environment.

- *Gather information about your system* (on page 49) to create the database shell and for troubleshooting later
- Create the database shell
  - *Automatically by running a script* (on page 50)

    - or -

  - *Manually by following command-line instructions* (on page 53)

The manual instructions may help you resolve other issues, since these instructions include how to assign permissions.

Determine whether you want your database administrator to perform the steps to create the database. After you have created the database, you will run the MessageWay install to create the necessary tables and default configurations for the database.

Note that the security group, which is by default, mway, must provide the following functionality to the pseudo root logon:

- Must be able to find the mway home directory, as specified in the passwd file
- Must be able to stop MySQL
- Must be able to modify the MySQL configuration file, my.cnf
- Must be able to run odbcinst to install the MySQL driver
- Must be able to run the command, **whoami**, to verity the user, **root**

Gathering System Information

In order to create the database, you must know some facts about your system. Some of this information will be used in the scripts that create the database shell, and it will also help for troubleshooting. You will run two scripts that will search your system for pertinent information that includes the following:

- Host system
- Version of the operating system
- MessageWay system user information
- Installed MySQL RPMs
- MySQL client, server and driver information
- Installed unixODBC RPMs
- ODBC driver and DSN (ini) files

The first script (**preqdbmysql.sh**) must be run on the database server, and the second script (**preqmwaymysql.sh**) must be run on the application server.   Note that the database server and the application server can be the same server.

To run the **preqdbmysql.sh** script that collects necessary information on the database server, proceed as follows:

1   Log on to the database server as user, **root**.

2   From the MessageWay install sub-directory, typically /home/mway/mwayinstall/*Install File Name*, run the shell program:

   ./preqdbmysql.sh

3   View the log report, **PreReqDbMySQL.log**, created in the same sub-directory, and check the following:

   a)   In the   *MySQL Configuration File* section, verify my.cnf file exists, typically in /etc.

To run the **preqmwaymysql.sh** script that collects necessary information on the application server, proceed as follows:

1   Log on to the application server as user, **root**.

2 From the MessageWay install sub-directory, typically /home/mway/mwayinstall/*Install File Name*, run the shell program:

./preqmwaymysql.sh

3 View the log report, **PreReqMWayMySQL.log**, created in the same sub-directory, and check the following:

a) In the *MessageWay User Info...* section, verify the user_name and group_name, typically **mway** and **mway**.

b) In the *MySQL ODBC Driver Info* section, verify the version of the library, **libmyodbc5-5.1.8.so**.

c) In the *Checking Installed unixODBC RPMs...* section, verify unixODBC 2.3.2-pre or higher is installed.

NOTE: The log report may display the file name of the RPM, for example, unixODBC_DevBuild_Linux-2.3.2-2, rather than the version, for example, unixODBC 2.3.2-pre.

Creating the MySQL MessageWay Database Using the Scripts

Two scripts must be run to create and install the MySQL MessageWay database. The first script (**instdbmysql.sh**) must be run on the database server, and the second script (**instmwaymysql.sh**) must be run on the application server. Note that the database server and the application server can be the same server.

When you run the MySQL ODBC scripts to create the MySQL MessageWay database, you can accept the defaults shown between square brackets, [ ], by pressing **RETURN** or **ENTER** in response to the question, or you can type a value.

To run the **instdbmysql.sh** script on the database server, proceed as follows:

1 Log on to the database server as user, **root**.

2 From the /home/mway/mwayinstall/messageway-6.1.0-linux directory of the database server, run the instdbmysql.sh script:

./instdbmysql.sh

3 Respond to the prompts as they fit your configuration.

In the following example, where there is no typed response to the prompt, the script uses the default shown in brackets:

MessageWay Application Support Information

==================================

Enter MySQL Admin/Root DB User Name: [root]:

Enter MySQL Admin/Root DB User Password: [password]:

Testing Connection to MySQL Server with supplied credentials

MySQL Connection Attempt: SUCCESS !!

Step (1) Add entries in MY.CNF file required for MessageWay

This step will require a restart of the MySQL Server

Press 'y' to ACCEPT or any other key to SKIP [n]: **y**

MySQL Server needs to be shutdown to make the required edits to the MY.CNF file

Press 'y' and enter to continue [n]: **y**

MySQL Server needs to be started

Press 'y' and enter to continue [n]: **y**

Step (2) Create MessageWay Application Database and Add Schema

Press 'y' to CREATE or any other key to SKIP [n]: **y**

Enter MessageWay Application Database Name: [messageway]:

Enter MessageWay Application Install Directory:
[/home/mway/mwayinstall/messageway-6.1.0-linux]:

Checking Existence of MySQL Database [messageway]

IMPORTANT: If the MySQL Database already exists, the following alert will be displayed:

Alert !!! DATABASE [messageway] EXISTS. IT WILL BE DROPPED AND THEN CREATED.

and you will be asked whether or not you want to continue:

Are you SURE you want to DROP and CREATE the database [messageway]

Press 'y' to CONTINUE or any other key to TERMINATE [n]:

Connecting to MySQL Server

Creating MessageWay Application Database [messageway]

Adding MessageWay Application Schema to database [messageway]

MessageWay Application Database Schema Added

Step (3) Grant DB Users access to the MessageWay Application Database

Press 'y' to GRANT access or any other key to SKIP [n]: **y**

Enter MessageWay Application Database Name: [messageway]:

Enter localhost if the Database Server resides on the MessageWay Application Server

Enter Remote MessageWay Application Host IP Address1: []: <IP address of application server>

Enter Remote MessageWay Application DB Username1: [mway]:

Password should satisfy the password policy enforced by the MySQL Server

Enter Remote MessageWay Application DB Password1: []:

Enter Remote MessageWay Application Host IP Address2: []:

NOTE: Potentially you can be prompted for up to four (4) MessageWay Application Host IP Addresses and corresponding Username and Password. Hitting the Enter key without entering a value when

prompted for Host IP Address2, Host IP Address3 or Host IP Address4 will end the prompting for MessageWay Application Host IP Addresses and corresponding Username and Password.

Connecting to MySQL Server

Granting DB User [mway] access to DB [messageway] from Host [<IP address of application server>]

NOTE: A log file named **InstallDbMySQL.log** is created in the MessageWay Application Install Directory, which contains information pertaining to the install.

To run the **instmwaymysql.sh** script on the application server, proceed as follows:

IMPORTANT: Perform the following steps as user *mway*. Your locations and version numbers may vary, so adjust these instructions as necessary.

1   Refer to the *system information* (on page 49) you gathered earlier, and if necessary, copy the MySQL ODBC driver, such as **libmyodbc5-5.1.8.so**, to the /usr/lib directory:

cp -p libmyodbc5-5.1.8.so   /usr/lib

2   If preqmwaymysql.sh did not find the MySQL ODBC driver:

- Check your system for the mysql-connector-odbc, for example:

  - On RedHat, type, `rpm -qa | grep mysql`

  - To get the package, type, `yum install mysql-connector-odbc`

3   Check to see if you have a [MySQL] entry in your odbcinst.ini file, and [MessageWay_DSN] entry in your .odbc.ini file.

odbcinst -q -d -v

odbcinst -q -s –v

If you see the [MySQL] and [MessageWay_DSN] tags, this script will not update the files for you. You must do one of the following:

- Edit the .odbc.ini and odbcinst.ini files on your system and remove these tags and the options below them before you run the script. The file .odbc.ini is located by default at /home/mway and can be modified by user *mway*.   odbcinst.ini is located by default at /etc and can be modified by user *root*.

  - or -

- Follow the procedures in the ***Configuring the MySQL ODBC*** (on page 55) section after you run the script.

IMPORTANT: Log on to the application server as user *root*.

1   From the /home/mway/mwayinstall/messageway-6.1.0-linux directory directory of the application server, run the instmwaymysql.sh script:

./instmwaymysql.sh

2   Respond to the prompts as they fit your configuration.

In the following example, where there is no typed response to the prompt, the script uses the default shown in brackets:

MessageWay Application Support Information

=================================

Enter MessageWay (Linux/Unix) User ID: [mway]:

Enter localhost if the Database Server resides on the MessageWay Application Server

Enter MessageWay Database Host IP Address: []:

Enter MessageWay DB Name: [messageway]:

Enter MessageWay DB User Name: [mway]:

Enter MessageWay DB User Password: []:

Enter MySQL ODBC Driver Filename: [libmyodbc5_5.1.8.so]:

CAUTION: If you type a symbolic name here, for example, **libmyodbc5.so**, MessageWay will use the latest version of the driver. However, there is no guarantee that MessageWay will work with the latest version of the driver, so we highly recommend that you use the default value.

Testing Connections to MySQL Server

Testing ODBC Connections to MessageWay_DSN

MySQL ODBC Driver Added

MessageWay_DSN for user "mway" Added

ODBC Connection Test MessageWay_DSN....[SUCCESS]

NOTE: A log file named **InstallMWayMySQL.log** is created in the MessageWay Application Install Directory, which contains information pertaining to the install.

Creating the MySQL MessageWay Database Manually

The following instructions accomplish the same purpose as running the script: They create the database structure and its link, the Data Source Name (DSN). Note that most of the instructions are performed as user, **root**, and a few are performed as user, **mway**.

Creating the MessageWay Database in MySQL

CAUTION: MySQL 5.5 does not support the earlier syntax in the my.cnf file that included *set-variable = .* If you upgrade MySQL to version 5.5 in preparation for an upgrade to MessageWay 6.1, you may need to edit my.cnf and remove all *set-variable =* values that precede the actual parameter setting. For example, if you have the parameter **set-variable = max_connections=1000**, you must change it to read **max_connections=1000**.

> **IMPORTANT:** Perform the following as the user **root** from the installation directory, such as, /home/mway/mwayinstall/*name of install file*, which is created when you untar the install file as described in the topic, ***Using the Installation File*** *(on page 48)*.

1 The MySQL install for versions 5 or higher does not create the my.cnf configuration file, which you must do as follows:

   a) In /etc, create a file, **my.cnf**.

   b) In the my.cnf file, create the section, **[mysqld]**, and add the following lines:

   lower_case_table_names=1

   interactive_timeout=2592000

   wait_timeout=2592000

   query_cache_size=20M

   thread_cache_size=40

   max_connections=1000

2 From /etc/init.d, restart the daemon process, mysqld:

   ./mysqld stop

   ./mysqld start

3 Run the MySQL client.

   mysql

4 Create the MessageWay database.

   mysql> **create database messageway;**

5 Grant access to the MessageWay database to user, **mway**, which will vary depending on whether the user is on the same machine as the database (local) or not (remote).

   ▪ For a local user, enter the following:

   > **grant all on messageway.* to mway@localhost identified by '***password***';**

   ▪ For a remote user, enter one of the following:

   To grant access to a specific remote machine:

   > **grant all on messageway.* to mway@'***IP address***' identified by '***password***';**

   To grant access to a range of remote machines:

   > **grant all on messageway.* to mway@'***nnn.nnn.nnn***.%' identified by '***password***';**

   To grant access to all remote machines:

   > **grant all on messageway.* to mway@'%' identified by '***password***';**

6 Create the MessageWay database tables using the file, mysqltablecreate.sql, which is included in the installation tarball.

   > **use messageway;**

   > **source mysqltablecreate.sql;**

Configuring the MySQL ODBC

IMPORTANT: Perform the following from the installation directory, such as, /home/mway/mwayinstall/*name of install file*, which is created when you untar the install file as described in the topic, *Using the Installation File* (on page 48). We will refer to this location as the *Install Directory.*

1 Locate the following files in the *Install Directory.*
  ▪ odbcinst.ini
  ▪ odbc.ini

2 Modify these two files as appropriate for your system.

  IMPORTANT:
  ▪ The only required modification is to set the DSN name in the odbc.ini file. Since we are configuring for MySQL, modify the MessageWay_DSN_MySQL tag to MessageWay_DSN
  ▪ Other modifications may be required if you installed MySQL Connector in a non-standard location.
  ▪ Be very careful not to change any of the options in these files; some are required for MessageWay to run correctly.

3 Add the MySQL ODBC driver: This must be completed as the *Root* user.

  odbcinst -i -d -f odbcinst.ini

  NOTE: If a "command not found" error results, you will find the files in the following locations:

  (Linux) /usr/bin/odbcinst

  (UNIX) /usr/local/bin/odbcinst

4 Verify the MySQL driver installation:

  odbcinst -q -d -v

  [Oracle]

  [MySQL]

5 Add MessageWay_DSN as the Data Source Name (DSN). This must be completed as the *mway* user.

  odbcinst -i -s -h -f odbc.ini

6 Verify the MessageWay_DSN configuration.

  odbcinst -q -s -v

  [MessageWay_DSN]

  [MessageWay_DSN_Oracle]

7 Test the DSN connection to the database.

  isql MessageWay_DSN *db-user db-password* **-v**

  NOTE: If a "command not found" error results, you will find the files in the following locations:

  (Linux) /usr/bin/isql

  (UNIX) /usr/local/bin/isql

Troubleshooting the MessageWay ODBC Connection for MySQL

These tasks will help you verify the MySQL database connection.

IMPORTANT: You should execute all commands as user **mway** unless noted otherwise.

To Verify the MessageWay Connector to the Database

The following scenario tests the MessageWay connector to the database. These examples show a successful connection and an unsuccessful connection.

Command	**isql MessageWay_DSN** *db-user db-password* **-v**
Response (success)	Connected!
	sql-statement
	help [tablename]
	quit
Command	**Quit**
Response (failure)	Bad logon
	[mway@Linux mway]$ **isql MessageWay_DSN mway yes -v**
	[S1000][unixODBC][MySQL][ODBC 5.1 Driver]Access denied for user 'mway'@'localhost' (using password: YES)
	[ISQL]ERROR: Could not SQLConnect

If user name and password are correct, you should verify the ODBC configuration.

To Verify Required ODBC Software and Configurations

Verify the presence of the UNIX ODBC.

Command	**odbcinst --version**
Response	unixODBC 2.3.2-pre
	NOTE: This is an example. You may have a later version.

Verify the presence of the MessageWay Data Source Name, **MessageWay_DSN**.

Command   **odbcinst -q -s**

Response   [MessageWay_DSN]

Verify the MessageWay_DSN configuration.

Command   **more /home/mway/.odbc.ini**

Response   [MessageWay_DSN]

  Description   = MessageWay Database

  Trace   = Off

  TraceFile   = stderr

  Driver   = MySQL

  SERVER   = localhost

  USER   =

  PASSWORD   =

  PORT   = 3306

  DATABASE   = messageway

  SOCKET   = /var/lib/mysql/mysql.sock

  OPTION   = 4194304

NOTE: This is an example. These entries are subject to change. Also, values for the Server, Port, Database and Socket may vary.

To Verify the MySQL Driver Configuration

Find the location of the driver as user **mway**.

Command   **odbcinst -j**

Response unixODBC 2.3.2-pre

DRIVERS............: /etc/odbcinst.ini

SYSTEM DATA SOURCES: /etc/odbc.ini

USER DATA SOURCES..: /home/mway/.odbc.ini

NOTE: This is an example. These entries are subject to change.

View the ODBC driver configuration.

Command **more /etc/odbcinst.ini**

Response [PostgreSQL]

Description = ODBC for PostgreSQL

Driver   = /usr/lib/libodbcpsq5.so

Setup   = /usr/lib/libodbcpsqlS.so

FileUsage = 1

[MySQL]

Description = ODBC for MySQL

Driver   = /usr/lib/libmyodbcX.so

Setup   = /usr/lib/libodbcmyS.so

FileUsage = 1

Threading = 3

UsageCount = 1

NOTE: This is an example. These entries are subject to change.

Verify the existence and security of the library and setup files for the driver.

Command **ls -l /usr/lib/libmyodbc5.so**

Response lrwxrwxrwx. 1 root root 19 May 17 12:00 /usr/lib/libmyodbc5.so -> libmyodbc5-5.1.8.so

Command **ls -l /usr/lib/libodbcmyS.so**

Response | lrwxrwxrwx. 1 root root 19 Apr 27 13:45 /usr/lib/libodbcmyS.so -> libodbcmyS.so.2.0.0

Using an Oracle Database

Follow these instructions to build MessageWay database tables for an Oracle environment. Determine whether you want your DBA to perform the steps to create the database.

Create the MessageWay Schema in Oracle

An Oracle Database Administrator (DBA) usually performs these steps.

1 Create the MessageWay schema in an Oracle database.

2 Create the MessageWay database tables using the file, oracletablecreate.sql, which is included in the installation tarball.

Configure the Oracle ODBC

1 In the .bash_profile for the user, mway, add the following environment variables:

NOTE: Please consult your Database Administrator if you require assistance with the following steps.

a) NLS_LANG to ensure no implicit CLOB data conversion occurs between MessageWay and Oracle. This *MUST* match the Oracle database's NLS_CHARACTERSET configuration. If they do not match, CLOB data will not be encoded correctly in the database. The default NLS_CHARACTERSET for Oracle 10g and Oracle 11g are WE8ISO8859P1 and WE8MSWIN1252, respectively. It is also possible that a UTF-8 character set (AL32UTF8) was selected when the database was deployed (this is the default for Oracle 12c and 19c). Follow these steps to confirm your database configuration and set the environment variable appropriately.

1. To determine your database's current NLS_CHARACTERSET configuration, execute the following SQL statement in a database interface like ISQL or SQL*Plus

   select * from NLS_DATABASE_PARAMETERS where PARAMETER = 'NLS_CHARACTERSET';

   If the Oracle database's NLS_CHARACTERSET is not one of the following character sets, please contact Technical Support to confirm MessageWay is compatible with your database.

   • WE8ISO8859P1

   • WE8MSWIN1252

   • AL32UTF8

2. Place the following statement in your .bash_profile and replace *<NLS_CHARACTERSET>* with the character-set determined above.

   NLS_LANG=.*<NLS_CHARACTERSET>*;export NLS_LANG

   Note: Please note the period before the character-set name.

b) NLS_NCHAR to ensure no implicit NVARCHAR2 data conversion occurs between MessageWay and Oracle. This *MUST* match the Oracle database's NLS_NCHAR_CHARACTERSET

configuration. If they do not match, NVARCHAR2 data will not be encoded correctly in the database. The default NLS_NCHAR_CHARACTERSET for all Oracle databases is AL16UTF16. Follow these steps to confirm your database configuration and set the environment variable appropriately.

1. To determine your database's current NLS_NCHAR_CHARACTERSET configuration, execute the following SQL statement in a database interface like ISQL or SQL*Plus

   select * from NLS_DATABASE_PARAMETERS where PARAMETER = 'NLS_NCHAR_CHARACTERSET';

   If the Oracle database's NLS_NCHAR_CHARACTERSET is not AL16UTF16, please contact Technical Support to confirm MessageWay is compatible with your database.

2. Place the following statement in your .bash_profile

   NLS_NCHAR=AL16UTF16; export NLS_NCHAR

2   Set up the database configuration files.

Add the open_cursors parameter, either manually or with Oracle Enterprise Manager, to the Oracle parameter initialization file, **init***dbname***.ora**, located in **/ORACLE_HOME/dbs**, as follows:

open_cursors=300

Installing MessageWay on Linux

IMPORTANT: Perform the following as the user **root** from the installation directory, such as /home/mway/mwayinstall/*name of install file*, which is created when you untar the install file as described in the topic, *Using the Installation File* (on page 48). We will refer to this location as the *Install Directory*.

After the ODBC is configured and the database tables are built, you can install MessageWay.

1   Log on as user **root**.

IMPORTANT: The following step 2. only applies if you are using an Oracle database.

2   Go to the installation directory, edit the **.odbc.ini.Oracle** file and change the value of the **IANAAppCodePage** to match your database's current **NLS_CHARACTERSET** as follows:

NOTE: The following step a) must be executed on the database server, preferable by your Oracle Database Administrator.

a)   To determine the **NLS_CHARACTERSET,** execute the following SQL statement in a database interface like ISQL or SQL*Plus:

select * from NLS_DATABASE_PARAMETERS where PARAMETER = 'NLS_CHARACTERSET';

b)   Use the following table to determine the value of **IANAAppCodePage** required for your install:

Oracle Database NLS_CHARACTERSET	IANAAppCodePage Param Value in .odbc.ini.Oracle
WE8ISO8859P1	4

AL32UTF8	106
WE8MSWIN1252	2252

c) Make the appropriate change to **.odbc.ini.Oracle** and save your changes.

3 Go to the installation directory, and start the MessageWay installation by typing:

./install.sh

NOTE: This command will start the installation script and lead the user through a series of prompts. The answers provided will determine the location of the MessageWay files and programs.

Enable Core Files for UNIX/Linux

To facilitate troubleshooting, we recommend that users enable core files. In the event that an application process, such as an adapter or service, terminates abnormally, users may then send the core file to **MessageWay Technical Support** for analysis.

To enable the core files, proceed as follows:

1 Log on as the owner of MessageWay, which is the user ID under which you installed MessageWay.

2 From the home directory of the owner, edit the **.bash_profile** file to add the following line:

ulimit -c unlimited

3 Save and close the file.

4 Log out and then log back in as the owner of MessageWay.

From now on, core files will be created when a MessageWay process terminates abnormally.

IMPORTANT: If you have already started MessageWay, you must restart it to make the change take effect.

Post-installation Task for All Platforms

There are a few tasks to perform after installation is complete, as described in the following table.

Task	Description
Add license file	In order to start MessageWay, users must add the license file provided for them to the appropriate location.
(Conditional) Add the environment variable, MWAY_CONF	For installations where MessageWay is installed in a location other than the default or where the MessageWay configuration file is something other than the default, users should add an environment variable, MWAY_CONF.
(Optional) Encrypt database password	After installation, the MessageWay database password is in the clear. To encrypt it, use the mwadmin utility.

NOTE: Your system DBA may want to turn off audit logging of successful database logins. Otherwise, every remote user login will cause an entry in the system log file.

Adding the License File

Before you can start MessageWay, you must first contact MessageWay Technical Support to request a license file after running the **mwayhostname** program provided in the install package sent by Progress on your application server.

NOTE: The licenses are based on the hostname of the machine and are case-sensitive.

To install the license you need to:

1   Locate the license file, *MySystem*.**lic**, sent to you by Progress.

2   Copy the license file to the following location, depending on your server platform:

   Windows   ..**\Program Files\MessageWay\bin**

   Linux or UNIX   ../**opt/messageway/bin**

3   Rename the license file to **messageway.lic**.

NOTE: If you wish to add adapters or services after installation, a new license file is required. For more information, refer to the topic, *Installing Additional Adapters or Services* (on page 147).

Creating an Environment Variable for Custom Installations

When you install MessageWay in something other than the default directory or use a name other than the default name of the MessageWay configuration file, you should add the environment variable, MWAY_CONF to your system. All command line utilities, those in the /utils directory and the archive program, must have access to the MessageWay configuration file.

The location and name of the MessageWay configuration file vary depending on the operating system, as follows:

Operating System	Location of the MessageWay Server Configuration File
UNIX or Linux	/etc/messageway/messageway.conf
Windows	\Users*MessageWayUser*\AppData\Roaming\messageway\messageway.conf

To add the variable to a UNIX/Linux system, set it in the mway owner's profile file (typically bash_profile for user mway), as shown in the following example:

> export MWAY_CONF=/etc/messageway/messageway.conf

To add the variable to a Windows system, for example for Windows 7:

1   Log on as the owner of MessageWay.

2   From the **Start** menu, start typing **Edit environment variables for your account** in the 'Search programs and files' box, then select Edit environment variables for your account from the displayed list of Control Panel items.

The Environment Variables window appears.

3   Under User Variables, click **New**.

A **New User Variable** dialog box appears.

4   In *Variable name*, type **MWAY_USER**, and in *Variable value* type the full path name of the file, for example, **F:\Documents and Settings\mway\Application Data\messageway\messageway.conf**.
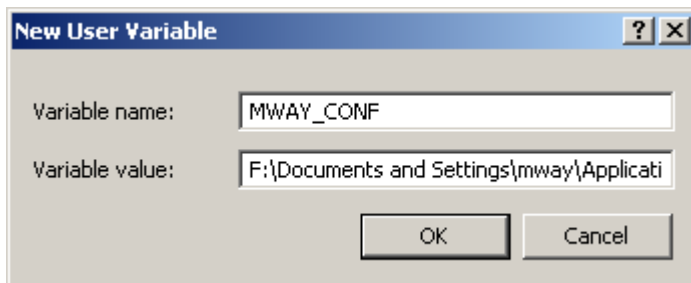
5   Click **OK** until you have closed all windows.

(Windows only) Encrypting the Database Password

For Windows users that do not use Windows authentication to access the database, after the installation process, the database password appears in the MessageWay configuration file in the clear. To encrypt the password, use the *mwadmin* utility command-line option *setdblogon*.

1   Navigate to the location of mwadmin utility, C:\Program Files\MessageWay\utils.

2   Type the following, replacing *DSN*, *User*, and *Password* with your values:

mwadmin setdblogon *DSN User Password*

Example: **mwadmin setdblogon MessageWay_DSN mway password**

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Upgrading a MessageWay System

Prior to any software upgrade, you should follow best practices for planning and executing the upgrade. Progress is available to review your upgrade plans and provide guidance if necessary.

CAUTION (Oracle): Due to MessageWay Unicode support, there are several very critical pre-upgrade procedures that must be followed in the *MessageWay Installation Guide*. When preparing to upgrade, please pay close attention to the procedures outlined in the install guide, and contact Technical Support if you need assistance.

NOTE: As for all upgrades, if you intend to use any new MessageWay options, you will need an updated license.

The upgrade path varies depending on the version you want to upgrade from and to.

- To upgrade to MessageWay version 6.1 from versions 5.0 or later, the process is automated and seamless.
- To upgrade to MessageWay 6.1 from version 4.2, you must first upgrade to version 5.0.
- To upgrade to MessageWay version 6.0 from version 5.0, you must first upgrade to version 5.5.
- To upgrade to MessageWay version 6.0 from version 4.2, you must first upgrade to version 5.0 and then to 5.5.

IMPORTANT (Upgrade from MessageWay 4.2): Because of the program and service name changes included in 5.0, you will need to obtain a new MessageWay license from the Support Center before you can start your newly upgraded system.

The upgrade path based on the version you are starting from is:

Version From	Version To	Upgrade Path
5.0 or later	6.1	5.0 or later > 6.1
5.0	6.0	5.0 > 5.5 > 6.0
4.2	6.1	4.2 > 5.0 > 6.1
4.2	6.0	4.2 > 5.0 >5.5 > 6.0

CAUTION: Make sure you are using the recommended database drivers for this release. You can find a list of the various drivers in the topic *Databases and Database Drivers for the MessageWay Server* (on page 3).

You may have to ***upgrade the unixODBC*** (on page 45) to version 2.3.2-pre using the RPM included in the Progress installation package.

WARNING: Pay careful attention to the pre-upgrade tasks. With the introduction of Unicode to MessageWay 6.1, these steps are essential for proper database functionality. If you attempt to upgrade your database before making these changes, it is possible to corrupt the database, and some parts may be irrecoverable. Due to this risk, we also recommend ***backing up the MessageWay database*** (on page 66).

Checking Current MessageWay Operations

As a precaution and to facilitate troubleshooting, check the current operation of MessageWay before installation, for example:

- Create a list of adapters and services that should start automatically
- Create a list of other servers that should start automatically (Reconciliation, Logging, Schedule, Service Interface)
- Verify that you can start/stop adapters and services

Backing up the MessageWay Database and ODBC Configuration Files

CAUTION: It is *essential* that you back up the MessageWay database before you upgrade MessageWay, particularly if the upgrade requires a database conversion.

- Back up the MessageWay database. Although it is always a best practice to back up a database before you upgrade, this is particularly important when changes are also made to the database.
- Back up the ODBC configuration files *.odbc.ini* and *odbcinst.ini*. By default, these are located at */home/mway/.odbc.ini* and */etc/odbcinst.ini*. In the event that you need to revert to your previous MessgaeWay version, that process will be easier if you have these backup files.

1   Shutdown MessageWay and all perimeter servers.

2   Use the DBA's preferred procedure to produce a backup.

3   Note that the following SQL commands identify all files that should be copied if you want to produce a full offline backup:

select name from sys.v_$datafile;

select member from sys.v_$logfile;

select name from sys.v_$controlfile;

Performing Pre-upgrade Tasks for UNIX/Linux

WARNING: Pay careful attention to the pre-upgrade tasks. With the introduction of Unicode to MessageWay 6.1, these steps are essential for proper database functionality. If you attempt to upgrade your database before making these changes, it is possible to corrupt the database, and some parts may be irrecoverable. Due to this risk, we also recommend ***backing up the MessageWay database*** (on page 66).

The following pre-upgrade tasks are required and vary depending on your platform and database platform.

- Upgrading unixODBC
- Upgrading the database and database driver for MySQL databases
- Updating the Oracle environment variables for Oracle databases
- Updating ODBC configurations

Upgrading unixODBC

Follow the appropriate instructions to upgrade unixODBC on your system.

Installing unixODBC on Linux 32 and 64-bit Platforms

1   Stop MessageWay and all perimeter servers.

2   Start a terminal session as root user.

3   Backup your odbcinst.ini settings (typically located at /etc/odbcinst.ini).

4   Remove any previous versions of unixODBC:

    a) If installed through YUM RPM Database:

        1. Search for existing installations:

            # **yum list installed | grep unixODBC**

        2. If any are found, erase them:

            # **yum erase** *<unixODBC Packages>*

    b) If installed through RPM file:

        1. Search for existing installations:

            # **rpm -qa | grep unixODBC**

        2. If any are found, erase them:

            # **rpm –e** *<unixODBC Packages>*

    c) If installed through previous distribution source:

        1. Navigate to the unixODBC extracted directory.

        2. Uninstall the distribution:

            # **make uninstall**

> **NOTE:** There may be some dependencies for unixODBC, for example, the MySQL-Connector ODBC driver. If you have this problem, follow similar procedures in step 4 to search and uninstall the dependant packages. After you complete the unixODBC installation, you can re-install the packages. If you are using a MySQL Database, you can wait to re-install the MySQL Connector ODBC driver, because you may need to install a newer version in subsequent steps.

5   Obtain a copy of the RPM created by Progress "unixODBC_DevBuild_Linux-2.3.2-2.i386.rpm" from the install medium.

6   Install the RPM:

rpm -ivh ./unixODBC_DevBuild_Linux-2.3.2-2.i386.rpm

If you run into dependency problems, use YUM to determine the necessary packages you are missing. When finished, rerun the RPM install.

yum provides *<Missing Dependency>*

yum install *<Missing Package>*

7   Confirm successful installation:

odbcinst --version
```
unixODBC 2.3.2-pre
```

Installing unixODBC on UNIX Solaris SPARC

1   Stop MessageWay and all perimeter servers

2   Start a terminal session as *root* user

3   Backup your odbcinst.ini settings (typically located at /etc/odbcinst.ini)

4   Remove any previous versions of unixODBC

    a)   If installed through package file:

        1.   Search for existing installations:

           # **pkginfo | grep unixODBC**

        2.   If any are found, erase them:

           # **pkgrm** *<unixODBC Packages>*

    b)   If installed through previous distribution source

        1.   Navigate to the unixODBC extracted directory

        2.   Uninstall the distribution

           # **make uninstall**

> **NOTE:** There may be some dependencies for unixODBC, for example, the MySQL-Connector ODBC driver. If you have this problem, follow similar procedures in step 5 to search and uninstall the dependant packages. After you complete the unixODBC installation, you can re-install the packages. If you are using a MySQL Database, you can wait to re-install the MySQL Connector ODBC driver, because you may need to install a newer version in subsequent steps.

5 Obtain a copy of the Progress created "unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar.gz" from the install medium.

6 Install the unixODBC-DevBuild package:

gunzip unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar.gz

tar xvf unixODBC_DevBuild_Solaris-2.3.2.SPARC.pkg.tar

pkgadd -d .

7 Confirm successful installation:

odbcinst --version

```
unixODBC 2.3.2-pre
```

isql --version

```
unixODBC 2.3.2-pre
```

a) If you get an error from either command, then you're probably missing a dependency

b) To determine a missing dependency:

ldd /usr/local/bin/isql

ldd /usr/local/bin/odbcinst

c) If any libraries report "(file not found)" from the above commands, then you need to track down the dependencies.

 1. Search for existing libraries on your machine

Search the system for existing library as a root user

find / | grep *<Library_Name>*

If you find the library, you can add the directory it is located in to the $LD_LIBRARY_PATH environment variable. This should be done in the .bash_profile and should look like the following:

.bash_profile

LD_LIBRARY_PATH=$LD_LIBRARY_PATH:*<Path_To_Library>*

export LD_LIBRARY_PATH

Restart your terminal session to the machine

 2. Download the package containing the library you're missing. A vast majority of Solairs utility packages can be found here: http://www.sunfreeware.com/programlistsparc10.html

For example, a common missing library is libiconv.so.2

Search for the libiconv package at the link provided above.

Install the package.

pkgadd -d libiconv-1.14-sol10-sparc-local

d) Retry the ldd commands to confirm that the library dependencies are resolved

8 Configure your odbcinst.ini settings if necessary.

Upgrading the Database and Driver for MySQL Databases

Make sure you perform the following tasks before you upgrade MessageWay 6.1.

Upgrading MySQL to version 5.5

If you are using a MySQL database for MessageWay, you must upgrade to MySQL 5.5 before you install MessageWay 6.1.

The normal path used to upgrade the database, namely to install the 5.5.x RPM (in Linux) or PKG (in Solaris), does NOT update MySQL's master schema with the TRIGGER privilege. MessageWay 6.1 adds database triggers to the MessageWay schema.

To add the TRIGGER privilege, proceed as follows:

1   Upgrade your MySQL database. Please refer the MySQL documentation for additional info and command syntax.

2   After you install the 5.5.x RPM or PKG, run the mysql_upgrade program. Typically, this program is in /usr/bin.

Upgrading the MySQL ODBC Driver on Linux

Using MySQL from MessageWay 6.1 on Linux requires a more recent MySQL ODBC driver (mysql-connector) than used by previous versions of MessageWay. Previous versions of MessageWay required mysql-connector version 3.51, while version 6.1 requires mysql-connector 5.1.x. We specifically suggest version 5.1.8. Depending on your version of Linux, you may not be able to directly upgrade from 3.51 to 5.1.x using the built-in package manager.

IMPORTANT: you must install a 32-bit version of mysql-connector, even if your Linux system is 64-bit.

If you are unable to perform an upgrade, first remove the existing mysql-connector and then install the new version. The sample commands here are for versions of Linux based on the RedHat distribution.

1   Stop MessageWay and all perimeter servers.

2   Start a terminal session as *root* user.

3   Remove any previous versions of the MySQL ODBC Connector:

   a)   If installed through YUM RPM Database:

      1.   Search for existing installations:

         # **yum list installed | grep mysql-connector-odbc**

      2.   If any are found, erase them:

         # **yum erase** *<MySQL ODBC Connector Package>*

   b)   If installed through RPM file:

      1.   Search for existing installations:

         # **rpm -qa | grep mysql-connector-odbc**

      2.   If any are found, erase them:

rpm –e *<MySQL ODBC Connector Package>*

4 Download the 32-bit RPM for mysql-connector, for example,
mysql-connector-odbc-5.1.8-1.rhel5.i386.rpm, which is our recommended version.

5 Install the mysql-connector. For example, type the following:

rpm --install --force --nodeps *<MySQL ODBC Connector Package>*

NOTE: You must use "--force" and "--nodeps" because the unixODBC package we provide creates symbolic links for libraries that are required for the MySQL ODBC Connector but are not registered in the RPM database.

Upgrading the MySQL ODBC Driver on UNIX

Using MySQL for MessageWay 6.1 on UNIX requires a more recent MySQL ODBC driver (mysql-connector) than used by previous versions of MessageWay. Previous versions of MessageWay required mysql-connector version 3.51, while version 6.1 requires mysql-connector 5.1.x. We specifically suggest version 5.1.8.

IMPORTANT: you must install a 32-bit version of mysql-connector (not a SPARC-64bit version).

1 Stop MessageWay and all perimeter servers.

2 Start a terminal session as root user.

3 Remove any previous versions of the MySQL ODBC Connector:

a) If installed through package file:

1. Search for existing installations:

pkginfo | grep mysql-connector-odbc

2. If any are found, erase them:

pkgrm *<MySQL ODBC Connector Package>*

4 Download the 32-bit package for mysql-connector, for example,
mysql-connector-odbc-5.1.8-solaris10-x86-32bit.pkg.gz, which is the version we recommend.

5 Install the mysql-connector:

gunzip mysql-connector-odbc-5.1.8-solaris10-x86-32bit.pkg.gz

pkgadd -d mysql-connector-odbc-5.1.8-solaris10-x86-32bit.pkg

Updating the Environment Variables for Oracle Databases

1 In the .bash_profile for the user, mway, add the following environment variables:

NOTE: Please consult your Database Administrator if you require assistance with the following steps.

a) NLS_LANG to ensure no implicit CLOB data conversion occurs between MessageWay and Oracle. This *MUST* match the Oracle database's NLS_CHARACTERSET configuration. If they do not match, CLOB data will not be encoded correctly in the database. The default NLS_CHARACTERSET for Oracle 10g and Oracle 11g are WE8ISO8859P1 and WE8MSWIN1252, respectively. It is also possible that a UTF-8 character set (AL32UTF8) was

selected when the database was deployed (this is the default for Oracle 12c and 19c). Follow these steps to confirm your database configuration and set the environment variable appropriately.

1. To determine your database's current NLS_CHARACTERSET configuration, execute the following SQL statement in a database interface like ISQL or SQL*Plus

   select * from NLS_DATABASE_PARAMETERS where PARAMETER = 'NLS_CHARACTERSET';

   If the Oracle database's NLS_CHARACTERSET is not one of the following character sets, please contact Technical Support to confirm MessageWay is compatible with your database.

   • WE8ISO8859P1

   • WE8MSWIN1252

   • AL32UTF8

2. Place the following statement in your .bash_profile and replace *<NLS_CHARACTERSET>* with the character-set determined above.

   NLS_LANG=.*<NLS_CHARACTERSET>***;export NLS_LANG**

   Note: Please note the period before the character-set name.

b) NLS_NCHAR to ensure no implicit NVARCHAR2 data conversion occurs between MessageWay and Oracle. This *MUST* match the Oracle database's NLS_NCHAR_CHARACTERSET configuration. If they do not match, NVARCHAR2 data will not be encoded correctly in the database. The default NLS_NCHAR_CHARACTERSET for all Oracle databases is AL16UTF16. Follow these steps to confirm your database configuration and set the environment variable appropriately.

1. To determine your database's current NLS_NCHAR_CHARACTERSET configuration, execute the following SQL statement in a database interface like ISQL or SQL*Plus

   select * from NLS_DATABASE_PARAMETERS where PARAMETER = 'NLS_NCHAR_CHARACTERSET';

   If the Oracle database's NLS_NCHAR_CHARACTERSET is not AL16UTF16, please contact Technical Support to confirm MessageWay is compatible with your database.

2. Place the following statement in your .bash_profile

   NLS_NCHAR=AL16UTF16; export NLS_NCHAR

Updating ODBC Configurations

IMPORTANT: Perform the following from the installation directory, such as, /home/mway/mwayinstall/*name of install file*, which is created when you untar the install file as described in the topic, *Using the Installation File* (on page 48). We will refer to this location as the *Install Directory*.

CAUTION: You *must* perform these steps before you convert the database, which is your next task.

1 Locate the following files in the *Install Directory*.

   ▪ odbcinst.ini

- odbc.ini

2 Modify these two files as appropriate for your system.

IMPORTANT:

- The only required modification is to set the DSN name in the odbc.ini file. If you are upgrading with a MySQL database, modify the MessageWay_DSN_MySQL tag to MessageWay_DSN. If you are upgrading with an Oracle database, modify the MessageWay_DSN_Oracle tag to MessageWay_DSN. *Do not modify both.*

- Other modifications may be required if you are using a MySQL database and you installed the MySQL connector in a non-standard location.

- Be very careful not to change any of the options in these files; some are required for MessageWay to run correctly.

3 Update the ODBC driver: This must be completed as the *Root* user.

odbcinst -i -d -f odbcinst.ini

NOTE: If a "command not found" error results, you will find the files in the following locations:

(Linux) /usr/bin/odbcinst

(UNIX) /usr/local/bin/odbcinst

4 Verify the driver installation:

odbcinst -q -d -v

[Oracle]

[MySQL]

5 Update the Data Source Name (DSN) MessageWay_DSN. This must be completed as the *mway* user.

odbcinst -i -s -h -f odbc.ini

6 Verify the MessageWay_DSN configuration.

odbcinst -q -s -v

With Oracle databases you should see the following:

[MessageWay_DSN]

[MessageWay_DSN_MySQL]

With MySQL databases you should see the following:

[MessageWay_DSN]

[MessageWay_DSN_Oracle]

7 Test the DSN connection to the database.

isql MessageWay_DSN *db-user db-password* **-v**

NOTE: If a "command not found" error results, you will find the files in the following locations:

(Linux) /usr/bin/isql

(UNIX) /usr/local/bin/isql

You have reached the end of the pre-upgrade tasks for UNIX/Linux. You are now ready to convert the MessageWay database to support Unicode. Follow the instructions in the next topic, *Converting the MessageWay Database* (on page 74).

Converting the MessageWay Database

The process of upgrading your system to MessageWay release 6.1.0 includes a database conversion program that modifies the structure of your MessageWay database.

Best Practice   With version 5.0 or later, users have the option to store messages on disk or in the MessageWay database. Best practice is to store messages on disk, particularly for large files. When users need MessageWay encryption or compression, they may prefer to store content in the database. The install process sets parameters to store messages on disk by default, but users may change that option from the MessageWay Manager. The option may be set at the system level or the location level. For more information, search in online help for "Message content".

As is the case with any database conversion, please follow these recommendations:

1 Upgrade your test system to evaluate the amount of time required for the upgrade.

2 Thoroughly test your data flows with your test system.

3 Prior to upgrading your production system, run the mwayarchive program to reduce the size of your database.

4 Back up all components of your MessageWay system, including your SQL database and all MessageWay files in these folders:

Messageway Server Operating System	Folders to backup
All	Backup your SQL database
Windows	..\Program Files\MessageWay
	..\MessageWay
	..\ProgramData\MessageWay
	..\Users*MessageWayUser*\AppData\Roaming\messageway
UNIX/Linux	/opt/messageway
	/var/opt/messageway
	/etc
	/etc/init.d
	/etc/messageway
	/home/root/.messageway.install

5 To upgrade your database, run the MessageWay server install program, because the database upgrade process is part of the normal MessageWay installation. Refer to the appropriate topic for your system as follows:

▪ For UNIX/Linux, follow the steps in the topic ***Installing MessageWay on UNIX or Linux*** (on page 60).

▪   For Windows, follow the steps in the topic *Installing MessageWay on Windows* (on page 37)

6   After the upgrade, review the dbconvert.log and the MWayInstall.log to ensure the database and all files were upgraded properly.

NOTE: During an upgrade to MessageWay 6.1, to reduce the time to convert archive messages, audit log, and event log tables that would need to support the Unicode changes, we do not convert the tables. Instead, we leave them in their 6.0 state for historical purposes and rename them to archivemessages_6_0, auditlog_6_0 and eventlog_6_0, respectively.

To convert any of these tables to 6.1 Unicode versions, contact **MessageWay Technical Support**. You can convert any of the tables while the customer's production server is live since these tables are not necessary MessageWay operations. This will mitigate production server downtime. Alternatively, the DB administrator can remove these tables once they have decided they are no longer useful.

Also, on a related note, we remove all entries from the TraceLine and TraceEvent tables.

IMPORTANT: During the conversion, special modifications are made to Custom Processing service locations and Custom IO sites. For those types of locations, any data in the **Command** field or the **Script** box that contains a percent sign, %, that is NOT part of a MessageWay-defined token will be replaced with a release character of another percent sign immediately preceding the first, giving two percent signs, %%. Then when MessageWay resolves the tokens, it will strip one of the signs, leaving you with one as part of the data.

Any non-MessageWay tokens you use in the **Command** field or **Script** box must be enclosed in double percent signs, %%, so MessageWay can distinguish them from standard MessageWay tokens.

CAUTION: MySQL 5.5 does not support the earlier syntax in the my.cnf file that included *set-variable = .* If you upgrade MySQL to version 5.5 in preparation for an upgrade to MessageWay 6.1, you may need to edit my.cnf and remove all *set-variable =* values that precede the actual parameter setting. For example, if you have the parameter **set-variable = max_connections=1000**, you must change it to read **max_connections=1000**.

Upgrading MWTranslator Service for MSSQL Authentication
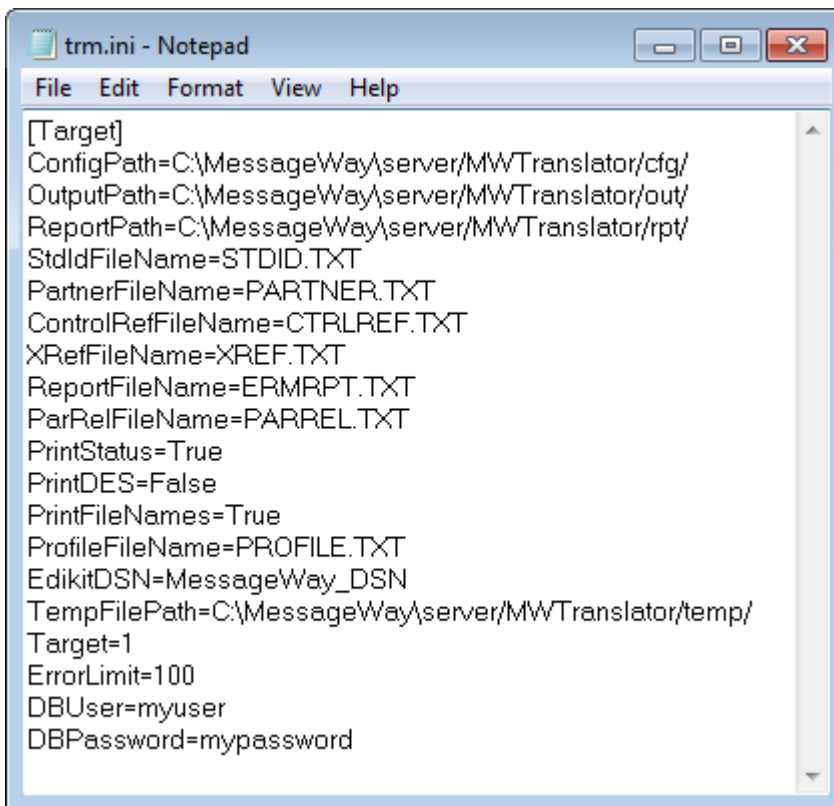
If you are using MSSQL Authentication for a MessageWay database running on Windows, and you want to upgrade the MWTranslator Service from version 6.0 or lower, you will need to add database logon information to the Translator Runtime Module file, trm.ini.

1 From MessageWay Manager, on the Translator page of the MWTranslator Service Properties window, find the location of the trm.ini file.
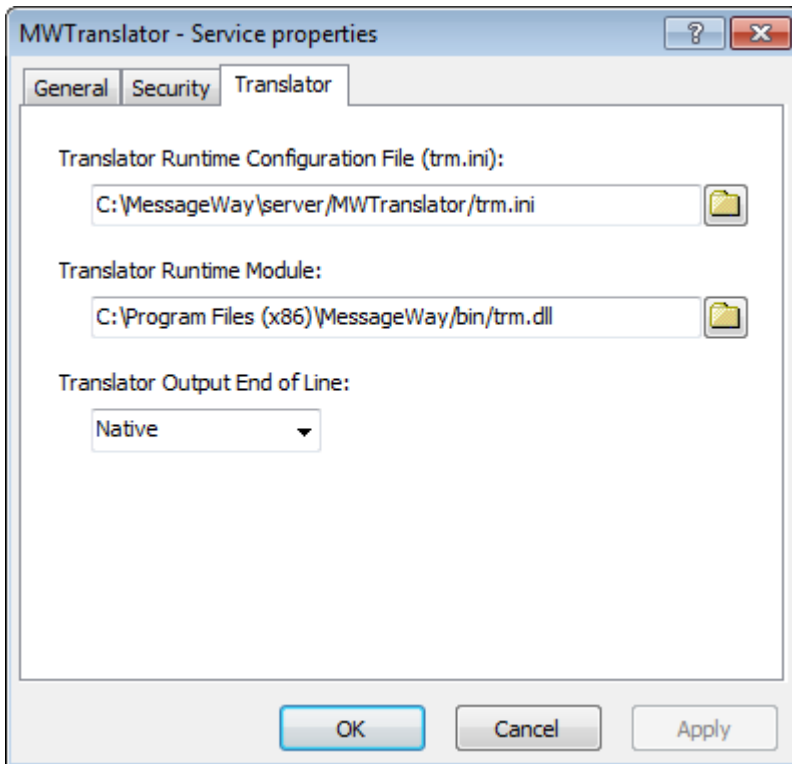
2 Open the file in a simple text editor such as Notepad, and add the following lines to the end of the file:

DBUser=<user>

DBPassword=<password>

3   Save and close the file, and restart the MessageWay Translator Service MWTranslator. The values for DBUser and DBPassword will be used to connect to the database.

Upgrading to MW Translator from Edikit

If you were running Edikit with MessageWay, you must first upgrade to MW Translator 5.0, then 5.5 and then to version 6.1.0. The MW Translator Workbench and Operator Program are delivered separately as noted earlier. To install those programs, please see the *MW Translator Installation Guide*.

For instructions to upgrade your existing Edikit Workbench environments to MW Translator environments, please see the "Upgrading an MW Translator Installation" section of the *MW Translator Installation Guide*.

IMPORTANT: If you plan to use Edikit 4.0 or 4.2 in addition to or instead of MW Translator 6.1, please contact the Support Center before running the upgrade. They will provide instructions for saving your previous Edikit environment and then configuring it to work with MessageWay 6.1.0.

Updating MessageWay Configuration Files

All MessageWay servers, internal and perimeter, that use configuration files retain their original configuration files during upgrades. The upgrade process never changes configuration files. However, parameters within the configuration files may have changed or been added. You will find a complete description of the latest configuration files and parameters in the following sections of the *MessageWay User's Guide and Reference* and online help:

- Configuring MessageWay Internal Servers
- Configuring MessageWay Perimeter Servers

Refer to the *MessageWay Release Notes* for a list of changes to configuration files since the previous release. Users must update their own configuration files as required.

Starting MessageWay

You are now ready to start the MessageWay system on the server. For all environments, MessageWay can only be started from the system where the server is installed, not from the manager.

IMPORTANT: You must add the license file to the appropriate location before you can start the MessageWay server.

Starting the MessageWay Server

You must start the MessageWay Messaging Server from the operating system. The procedure varies slightly depending on the platform, Windows or UNIX/Linux.

How to Start MessageWay on UNIX or Linux

To start MessageWay, proceed as follows:

1 Log on as the user that owns MessageWay, typically, **mway**.

2 At a command prompt, type the following commands and press **Enter** to:

    a) Change the directory to where the script runs, typically **/opt/messageway/init**:

       cd /*installation_directory*/init

    b) Run the script to start MessageWay

       ./messageway start

The Messageway Server starts and then starts any other required servers as well as any servers that are configured to start automatically.

3 To check the status of the Messaging Server, type the following command and then press **Enter**:

./messageway status

The system returns a message similar to the following:

```
MessageWay (pid 4436) is running...
MWSched (pid 4448) is running...
MWSI (pid 4480) is running...
MWUser (pid 4464) is running...
```

- or -

To determine what commands are available, type the following command:

./messageway

NOTE: For Red Hat 7.x, MessageWay supports the systemctl utility, including automatically starting MessageWay when the application server is rebooted, and automatically starting MessageWay perimeter servers when the perimeter server is rebooted. The systemctl files are named *messageway.service*, *mwftpd.service*, *mwproxy.service*, *mwresd.service* and *mwsftpd.service*, and are located in **/usr/lib/systemd/system/**, with symbolic links being added in **/etc/systemd/system/multi-user.target.wants/**. See above systemctl files for more details.

How to Start MessageWay on Windows

On Windows, MessageWay runs as a Windows service.

Start MessageWay as follows:

NOTE: Exact instructions vary depending on your operating system.

1   From the **Start** menu or your desktop, right click **My Computer** or **Computer**, and then select **Manage**.

A management window appears.

2   From the left pane, within *Services and Applications* or *Configurations*, click **Services**.

3   From the right pane, right click **MessageWay Messaging Server**.

4   From the pop-up menu, click **Start**.

The MessageWay Messaging Server starts and then starts any dependent services. To view all started services, press **F5**.

Logging On to the MessageWay Manager
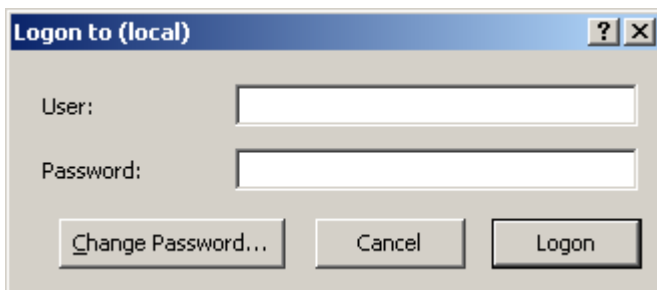
All access to the MessageWay configuration screens is accomplished via the MessageWay Manager. Make sure you have a valid MessageWay logon ID and password. You must also know your MessageWay security policies to create passwords.

1   To start the manager:

a)   From the **Start** menu, access the programs list.

b)   Click **MessageWay Client 6.1**, and then **MessageWay Manager 6.1**.

The **Logon to** *environment* dialog box appears.

- or -

If you are not already at a logon window, from the **File** menu, click **Logon**.

2 Click **Change Password**, type the appropriate information, and click **Logon**.

NOTE: The user ID that is delivered with MessageWay is **Administrator**, and the initial password is **12345**. Your new password must be at least *six* characters.

MessageWay forces a password change before allowing the initial logon. The administrator account has special privileges, so take care to guard the new password you choose. The new password must conform to your MessageWay system logon requirements. The initial default is *six* characters.
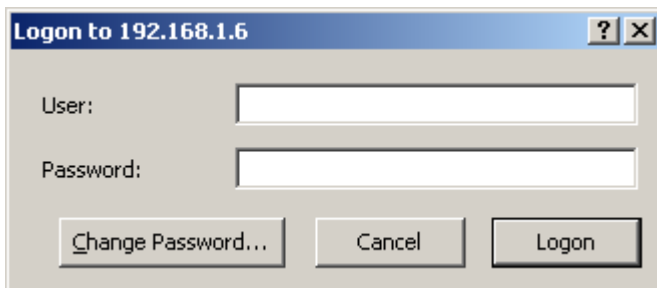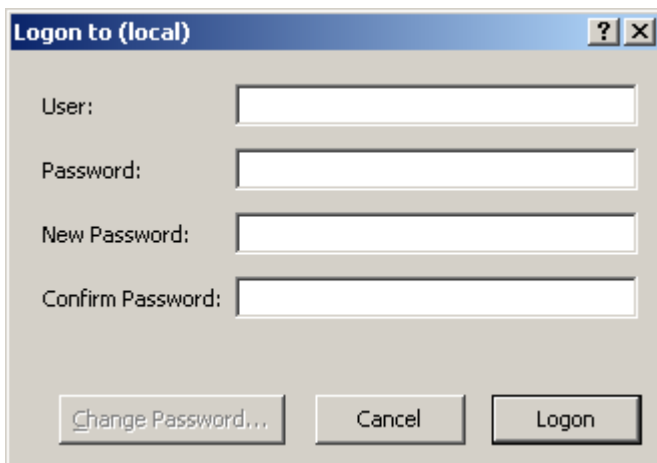
If you use Windows authentication to access your database, the user ID and password are not included in the MessageWay configuration file. Otherwise, the user ID and password, in the clear, are written to the file. Use the mwadmin utility to encrypt the password.

The mwadmin utility is in the *MessageWayInstall Directory*/**utils**.

1 From a command line, to review the syntax of the command, type:

mwadmin --help

The syntax for the command appears.

2 To set the db logon and encrypt the password, type **setdblogon**, the data source name (DSN), the user ID to log on to the database, and the password, for example:

mwadmin setdblogon MessageWay_DSN mway mway

At this point, your installation of MessageWay is complete and you may begin configuring MessageWay. More information about adding the new administrator-level ID and configuring MessageWay can be found in the *MessageWay User's Guide and Reference*.

Best Practice

It is strongly recommended that you immediately configure another Administrator level ID and password and use that ID when adding users. The ID named **Administrator** has super-user level security and should not be used in your daily configuration activities.

Adding an Environment to the MessageWay Manager

Now that you have logged on to MessageWay, you will see that there is a default environment that points to your server. This task, creates a new environment and also points to your server. It is possible to delete all environments. Although it is easy to add an environment, it might be less disconcerting if you know that you have the default environment available. So, we recommend that you create a new one for your testing. Also, by default, each environment is associated with a single MessageWay system.

To configure the environment where you want to connect:

1   Click **File|Select Environment,** then click **Add**.

The **Add Environment** dialog box appears.

2   Type a name for the environment to reflect where you are connecting, then click **OK**.
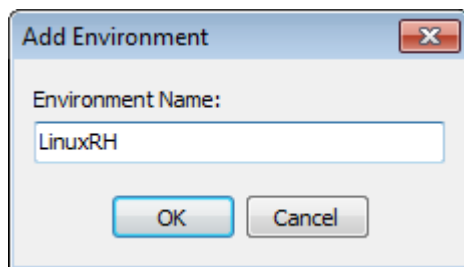
The Connection Options window appears.

3   Click the **Refresh Server List** button to see a list of MessageWay servers available on your network. All MessageWay servers on the network are available for connections by any manager.

4   From the **Server** list, select the system to which you want to connect.

- or -

Enter the IP address of the system, which may be necessary if the server is not accessible using the name.

You should not have to change the port entry unless the default port of 6237 is configured and in use server for some other application. If it is, enter the port number that the workstation should use exclusively to communicate with the server.
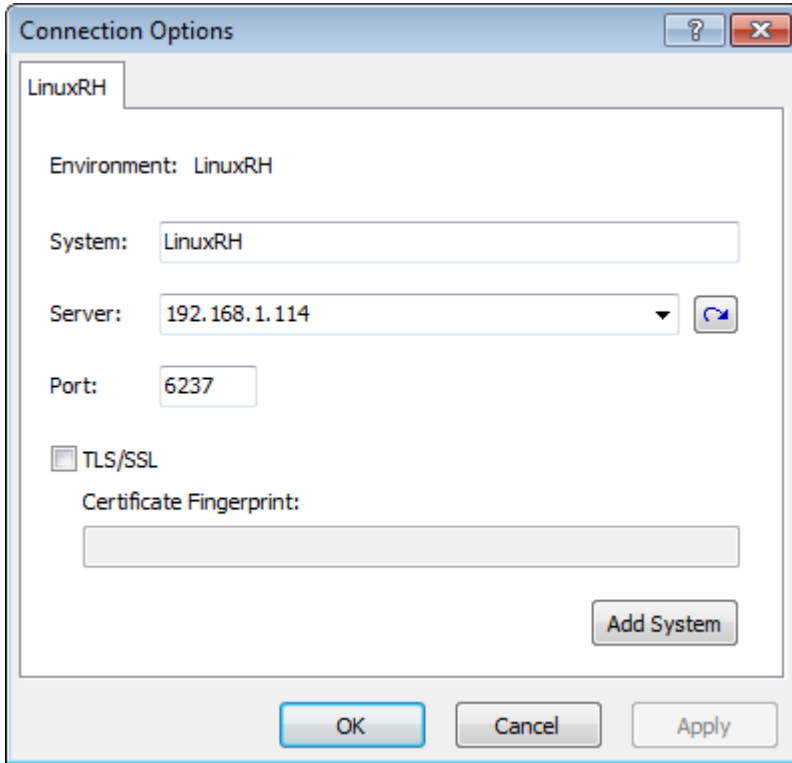
NOTE: As of MessageWay 5.5, it is possible to configure multi-system environments. This allows you to monitor multiple systems simultaneously from a single MessageWay Manager. It also allows you to issue search across multiple systems and release and cancel messages across multiple systems. You can add up to 4 systems to an environment using the **Add System** button, which adds a new tab for each system. When you have more than one system, a delete button appears that allows you to remove systems.

5   Click **OK**.

6   The manager now points to the newly configured environment.

The title bar shows you to which environment MessageWay attempts to connect.
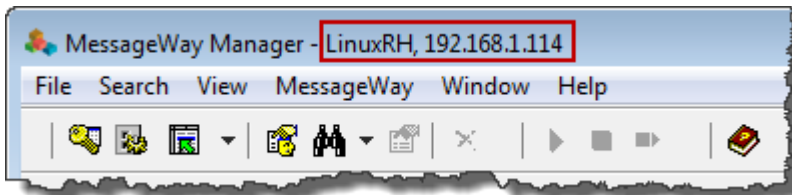
7   When MessageWay connects to the remote environment and database, it presents a logon window. Log on using a logon ID and password provided to you by the administrator of the environment.

Once you have successfully logged on you are ready to start using MessageWay.

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Testing the Installation

MessageWay can be used in several different ways. It can be used to store and forward messages, hold messages for retrieval by a remote client, and it can be used to accept messages and translate them using the MW Translator product. Output can be delivered to a designated recipient via FTP, Email, or to a file location on a server.

Testing without Translation

The first setup and test provided is for simple data transfers from one disk location to another. This test will pick up a file from a folder on the server and deliver it to a location, which will then deliver the message out to another folder using the Disk Transfer Adapter.

- No changes are required to configure the adapter.
- You need to create two directories from the operating system and add two locations from the MessageWay Manager.

Create Directories

From the operating system, create two directories as follows:

Windows	**C:\DT\DTIn**
	C:\DT\DTOut
Linux/UNIX	**/var/opt/dt/dtout**
	/var/opt/dt/dtin

IMPORTANT: For UNIX and Linux systems, the MessageWay user, typically *mway,* must have *read* and *write* access to these directories.

Configure the Output Location

Configure an output location where messages will be delivered as follows:

1 From the left pane of the MessageWay Manager, click **Locations**.
2 In the right pane, right-click in an open space, and from the menu, click **Add Location**.
  The **Enter New Location Name** dialog box appears.
3 Type the Location name, **DTOut**, and click **OK**.

The Location Properties screen appears.

4 In the **Adapter/Service Name** field, use the drop down list to select **MWDisk**.

```
MWAS2
MWCompress
MWConvert
MWCustomIO
MWCustomProc
MWDisk
MWDistList
MWEmail
```
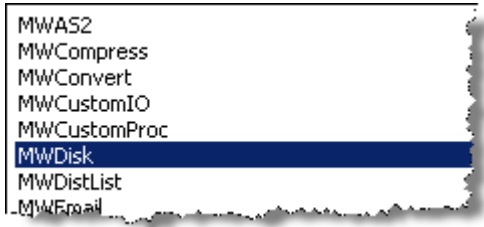
5 On the **Disk Output** tab, click the **Output from MessageWay** box.

6 In the **Directory** field, type the full path of the DTOut folder that you created previously.

NOTE: The folder buttons next to the directory fields appear only when you install the MessageWay Server on **(local)**. This allows you to search your system for the correct directory. Any other system designation, such as localhost, host name, host IP address, and 127.0.0.1, are all considered remote systems, and you will not see the folder buttons for browsing.

7 In the **Mask** box, accept the default.

The mask is used to create the output file a name in the DTOut folder. Click the **Help** [?] button, and then click the **Mask** box for an explanation of how the file mask works.
The following example shows the **Disk Output** tab for Windows.

The next example shows the **Disk Output** tab for UNIX/Linux.
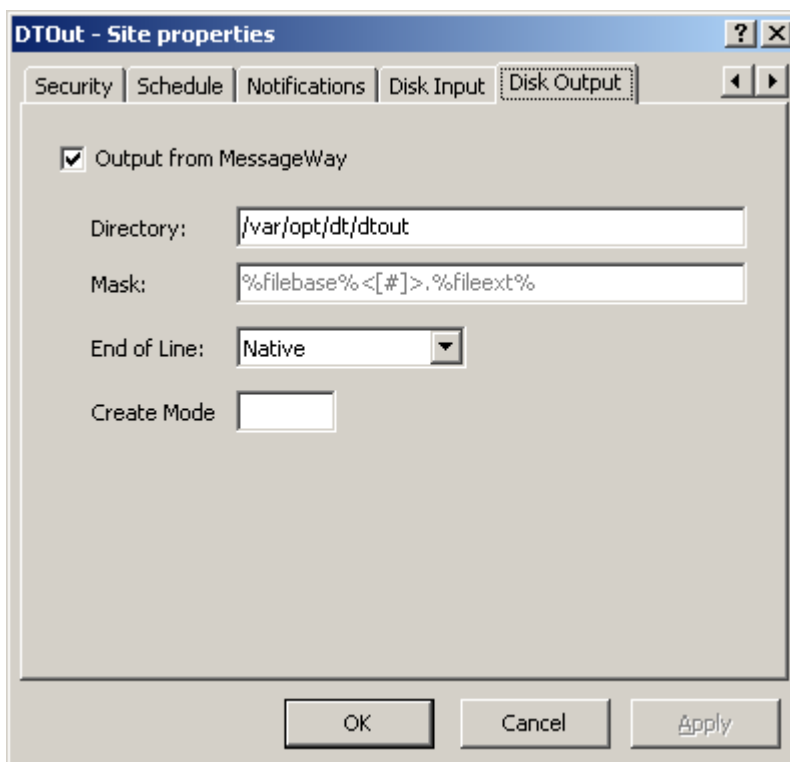
8 If you want a tool tip to appear for the location name, in the **General** tab, type a description for the location, such as **Test output location for Disk Transfer adapter**.

NOTE: To view tabs that are not currently displayed, click the right and left arrow buttons, ◄ ►.

9 Click **OK**.

Configure the Input Location

Create a location for the input messages and identify the directory where the adapter will poll for messages.

1 From the left pane of the MessageWay Manager, click **Locations**.

2 In the right pane, right-click in an open space, and from the menu, click **Add Location**.

The **Enter New Location Name** dialog box appears.

3 Type the location name, **DTIn**, and click **OK**.

The location properties window appears.

4   In the **Adapter/Service** field, use the drop down list to select **MWDisk**.
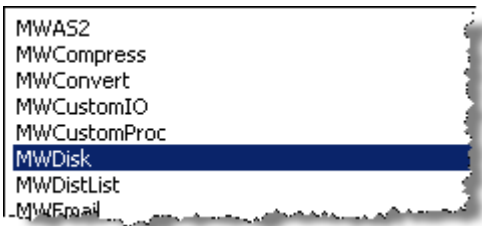
5   On the **Disk Input** tab, click the **Input to MessageWay** box.

6   In the **Directory** field, type the full path of the DTIn folder that you created previously.

7   In the **Deliver To** box, use the **Select Destination Location** button and click the DTOut location that you created in the previous step.

The following example is for Windows.
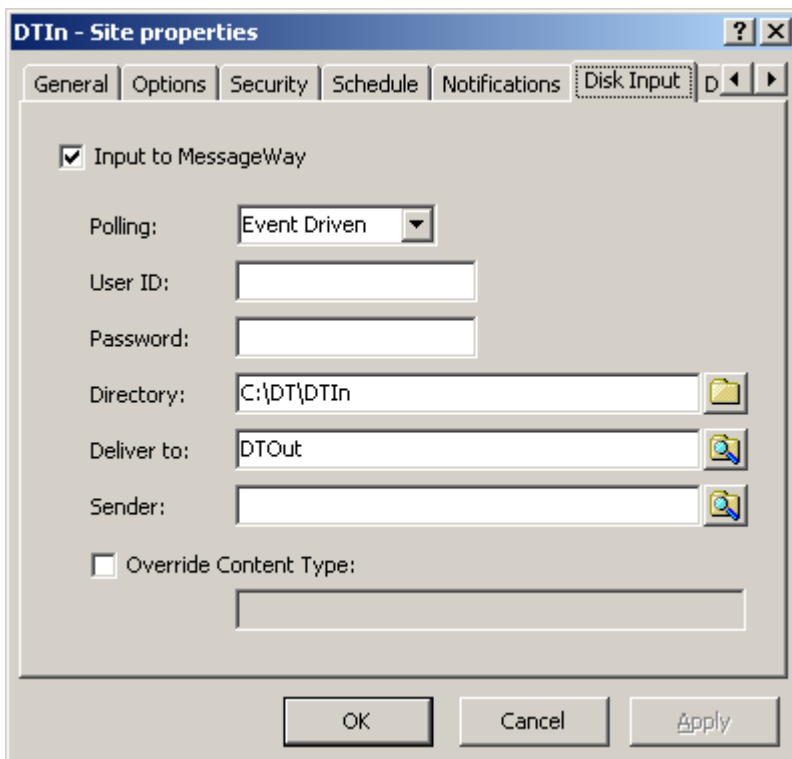
The next example is for UNIX/Linux.

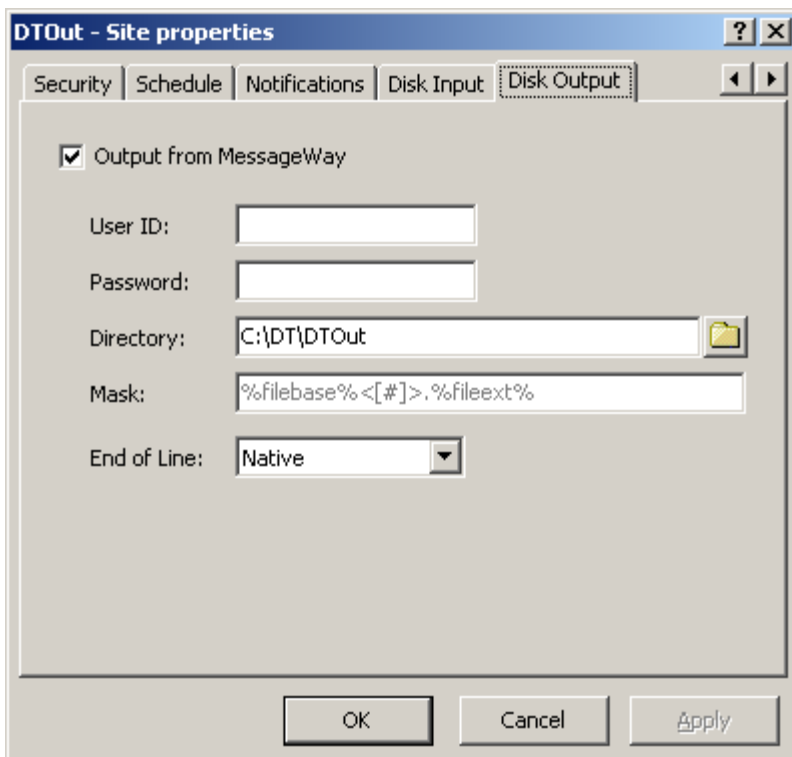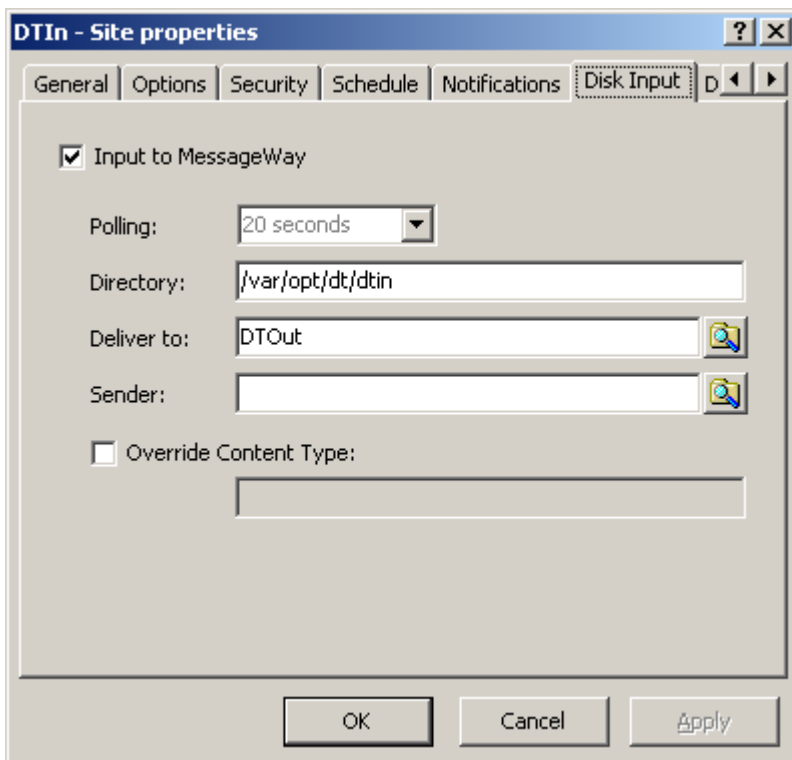8   If you want a tool tip to appear for the location name, in the **General** tab, type a description for the location , such as **Test input location for Disk Transfer adapter**.

9   Click **OK**.

Test Message Delivery

You are now ready to load a file to be transferred from the server into MessageWay and out again.

1   In the left pane of the MessageWay Manager, double-click **Adapters/Services**.

2   In the right pane, right-click **MWDisk**.

3   From the menu, click **Start**.

    The status will change from **Stopped** to **Running**.

4   From the operating system, place a file in the **dtin** directory.

5   Return to the MessageWay Manager and note that the I/O statistics have changed. You will see **Receiving** and **Sending** change to **1**, then **0**, and the completed count will change to **1**.

6   Double-click the **Complete** field to view the message.

7   From the operating system, navigate to the **dtout** directory, and verify that the file has been delivered to that location.

Testing with Translation

If you installed the optional MW Translator service, you can run a test translation to verify the installation. The sample test translates an X12 850 purchase order to a proprietary, fixed-format document and also generates an X12 997 acknowledgment.

This translation is the only translation that can be run through the newly installed MessageWay. To run other translations, you would move their configuration files to the MessageWay directories using the MW Translator Operator Program.

The MW Translator service does not need any changes to its configuration.

You need to create four directories from the operating system and add five locations from the MessageWay Manager.

Create Directories

From the operating system, create four directories as follows:

WIndows	**C:\DT\X850TEST**
	C:\DT\TESTREC-MAILBOX
	C:\DT\X12-SEND-LOC
	C:\DT\Translation Reports
Linux/UNIX	**/var/opt/dt/x850test**
	/var/opt/dt/testrec-mailbox
	/var/opt/dt/x12-send-loc
	/var/opt/dt/translation reports

Configure the MW Translator Service Location

Use the following information to configure the MW Translator service location:

Field	Value
Location Name	**MWTranslator**
(General tab) Adapter/Service	**MWTranslator**
(Translator tab) Check box	**Send Translation Report To**
(Translator tab) (location name)	**Translation Reports**

Configure the Output Locations

Use the instructions provided in the topic, *Configure the Output Location* (on page 87),to add output locations. From the MessageWay Manager, you will configure the following three output locations:

Location Name	Purpose
Translation Reports	Location for MW Translator processing reports.
TESTREC-MAILBOX	Location for translated documents.
X12-SEND-LOC	Location for functional acknowledgment returned to the sender.

Use the following information to configure the Translation Reports location:

Field	Value
Location Name	**Translation Reports**
(General tab) Adapter/Service	**MWDisk**
(Disk Output tab) Check box	**Output from MessageWay**
(Disk Output tab) Directory:	
Windows	**C:\DT\Translation Reports**
Linux/UNIX	**/var/opt/dt/translation reports**

Use the following information to configure the TESTREC-MAILBOX location:

Field	Value
Location Name	**TESTREC-MAILBOX**
(General tab) Adapter/Service	**MWDisk**
(Disk Output tab) Check box	**Output from MessageWay**
(Disk Output tab) Directory:	
Windows	**C:\DT\TESTREC-MAILBOX**
Linux/UNIX	**/var/opt/dt/testrec-mailbox**

Use the following information to configure the X12-SEND-LOC location:

Field	Value
Location Name	**X12-SEND-LOC**
(General tab) Adapter/Service	**MWDisk**

Field	Value
(Disk Output tab) Check box	**Output from MessageWay**

(Disk Output tab) Directory:
    Windows
    Linux/UNIX
	
	C:\DT\X12-SEND-LOC
	/var/opt/dt/x12-send-loc

Configure the Input Location

Use the instructions provided in the "Testing without Translation" topic, *Configure the Input Location* (on page 89), to add an input location from the MessageWay Manager.

Use the following information to configure the X850TEST location:

Field	Value
Location Name	**X850TEST**
(General tab) Adapter/Service	**MWDisk**
(Disk Input tab) Check box	**Input to MessageWay**

(Disk Input tab) Directory:
    Windows
    Linux/UNIX
	
	C:\DT\X850TEST
	/var/opt/dt/x850test

(Disk Input tab) Deliver to:	**MWTranslator**

Test the Translation

Now that the folders and locations are complete it is time to send a file through the translator.

1 Start the MWDisk adapter and MWTranslator service.

2 Navigate to the MWTranslator folder:

     Windows   **C: \MessageWay\Server\MWTranslator**

     Linux/UNIX   **/var/opt/server/MWTranslator**

3 Copy the file **X850test.txt** to the **X850TEST** directory.

     Windows   **C:\DT\X850TEST**

     Linux/UNIX   **/var/opt/dt/x850test**

4 Return to the MessageWay Manager and watch the statistics.

- The Processing statistics should move across until the **Complete** box increments by **1**.
- The I/O statistics should move across until the **Complete** box increments by **3**.

Review the Output

Once the test is completed, the output can be viewed a couple of different ways:

- From the locations
- From the operating system directories

To see contents from the locations, use the MessageWay Manager:

1   Click on the **Complete** box for the adapters.

The Message List window appears with the **3** files that were produced. Notice that MessageWay gives you the source and destination information for each message.

2   To view the content of a message, double-click the message.

The Message window appears.

3   To view information about a message, right-click the message, and select **Properties** from the menu.

The Message Properties window appears.

4   To view all messages associated with the translation, right-click the message that was sent to MWTranslator, and select **Get Related Messages** from the menu.

All outputs and reports associated with the input message will be shown in the message list.

You can also go to the individual directories to view the output.

You will find the content files in the following locations:

WIndows	
Translation output	**C:\DT\TESTREC-MAILBOX**
Acknowledgment	**C:\DT\X12-SEND-LOC**
Translation report	**C:\DT\Translation Reports**
Linux/UNIX	
Translation output	**/var/opt/dt/testrec-mailbox**
Acknowledgment	**/var/opt/dt/x12-send-loc**
Translation report	**/var/opt/dt/translation reports**

The conclusion of this test verifies that the MessageWay software is installed and operating correctly. For more information about using the software and configuring adapters and services and locations, refer to the *MessageWay User's Guide and Reference*.

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Installing or Upgrading MessageWay Perimeter Servers

Select the appropriate topic to install or upgrade perimeter servers or interfaces. To configure these options, refer to the *Messag*eWay User's Guide and Reference.

NOTE: The perimeter server upgrade procedures are the same as the installation procedures. Please use the applicable installation topic for your perimeter server upgrade.

The upgrade process for perimeter servers is typically automatic from version 5.0 or above, except for the following:

- MessageWay AS2 Interface

Installing the AS2 Interface

This is a check-list of the tasks you will perform to install the AS2 Interface and then configure it for initial testing. The following instructions install the interface. To configure the AS2 Interface, please refer to the section "Configuring MessageWay Perimeter Servers" in the *MessageWay User's Guide and Reference*.

The installation process installs the components of the AS2 Interface. The installation process also requires a Java Runtime Environment and a Web container, such as Apache Tomcat. For specific MessageWay and third-party requirements, refer to the topic, ***Prerequisites for the MessageWay AS2 Interface*** (on page 98).

These tasks assume that you have already installed MessageWay, which includes the following components of interest here:

- MessageWay Messaging Server, which processes messaging requests
- MessageWay User Server, which controls access to MessageWay
- MessageWay Service Interface, which provides access to MessageWay from MessageWay servers and the Internet
- MessageWay Manager, which provides the user interface to configure MessageWay

These are the basic tasks to install the MessageWay AS2 Interface:

- Install the MessageWay AS2 inbound and outbound servlets on any system within a Web container in the LAN or WAN
- Install the MessageWay AS2 adapter on the system where the MessageWay Server runs

IMPORTANT: You must have a license for the AS2 Interface before you can start the AS2 adapter.

After you have installed the AS2 Interface, you must perform the following tasks to configure and test the system:

- Modify the configuration file for the Service Interface on the MessageWay system
- Modify the configuration files for the AS2 Interface
- Configure MessageWay users and locations
- Create and populate Java Key Store (.jks) file to manage X.509 certificates
- Start the Service Interface
- Start the Web container, such as Apache Tomcat, which starts the AS2 servlets
- Test the connection from a browser to the AS2 Interface
- Test inbound AS2 transmissions
- Start the AS2 adapter
- Test outbound AS2 transmissions

Licensing Requirements for the AS2 Interface

The MessageWay AS2 server and the AS2 adapter require a license from Progress. For more information, contact MessageWay Technical Support.

Prerequisites for the MessageWay AS2 Interface

The MessageWay AS2 Interface has been developed with and requires at a minimum specific versions of MessageWay software as well as third-party software. These are the prerequisites:

Software Component	Minimum Requirement
Java Runtime Environment (JRE) (*http://www.java.com*)	Java version 8.x
Web container that supports Java Servlet specification 2.4, such as *Apache Tomcat* (*http://tomcat.apache.org/*)	Apache Tomcat version 7.x, 8.x or 9.x

IMPORTANT: Tomcat must be installed as a service. Not all versions of Tomcat do this automatically. Refer to the installation instructions provided with Tomcat, since the instructions may vary between versions.

Install the AS2 Servlets

The installation process for the AS2 servlets varies depending on the operating system where you install the components, UNIX/Linux or Windows.

To Install the AS2 Servlets on UNIX or Linux

Make sure you have already installed the Web container, Apache Tomcat. For more information, refer to the topic, *Prerequisites for the MessageWay AS2 Interface* (on page 98).

1   Log on as user, **root**.

2   Go to the mwayinstall directory, and unzip the MessageWay AS2 Interface zip file, **mwas2servlet-6.1.0-java.zip**. Type the following command:

unzip mwas2servlet-6.1.0-java.zip

This creates a subdirectory of the name of the install file.

3   Go to the directory you just created, and copy the directory, mwas2, and all of its contents to the /webapps subdirectory of the Apache Tomcat install directory. Type the following command:

   ▪   **cp -rp ./mwas2** *Apache Tomcat install path***/webapps/**

4   Optionally, delete the file NTEventLogAppender.dll and NTEventLogAppender.amd64.dll from the mwas2 directory, which is for the Windows installation.

Your directory structure should look something like the following:
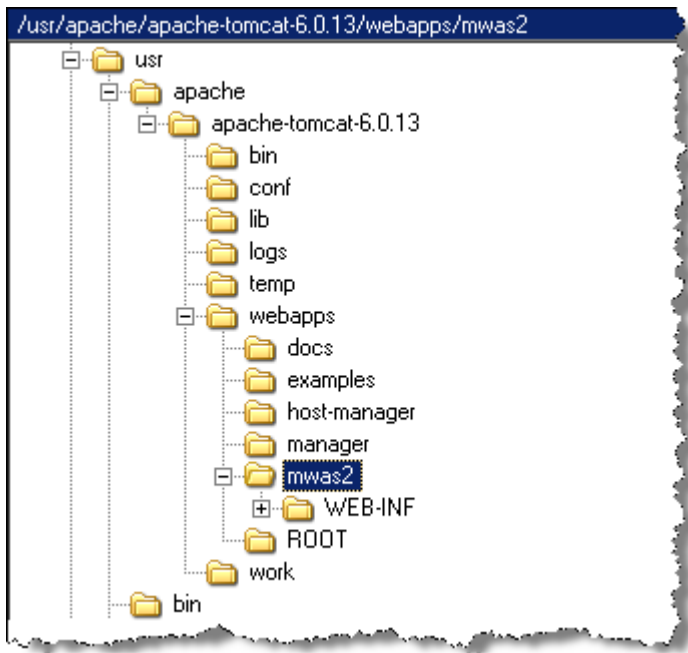
To Install the AS2 Servlets on Windows

To install the AS2 inbound and outbound servlets, you unzip the installation package and copy a directory structure to the web container. The web container, Apache Tomcat, *must* be installed as a pre-requisite and *must* be installed as a service. Not all versions of Tomcat automatically install as a service. Refer to the installation instructions provided with Tomcat, since the instructions may vary between versions.

1   In some install directory, unzip the MessageWay AS2 Interface zip file, **mwas2servlet-6.1.0-java.zip**, using the folder path names.

This creates a subdirectory of the name of the install file.

2   Go to the directory you just created, and copy the directory, mwas2, and all of its contents to the \webapps subdirectory of the Apache Tomcat install directory.

This creates a subdirectory within the webapps directory. Your structure should look something like the following:
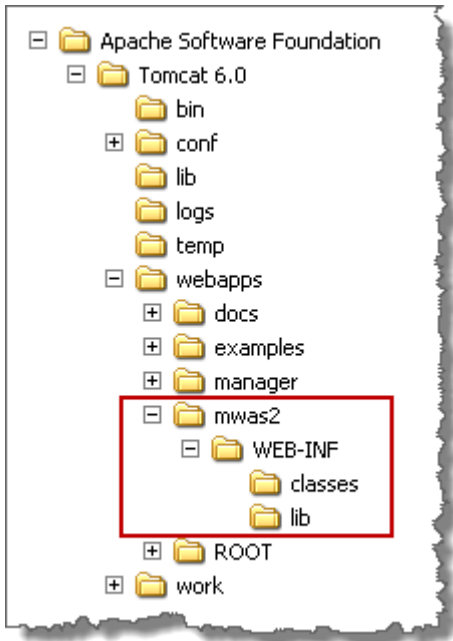
3   For 32-bit systems:

a)   Move the file NTEventLogAppender.dll (32-bit) from the mwas2 directory to the \Windows\System32 directory.

b)   Optionally, delete the file NTEventLogAppender.dll from the mwas2 directory, which is for the 64-bit Windows installation.

- or -

For 64-bit systems:

a)   Move the file NTEventLogAppender.amd64.dll (64-bit) to the \Windows\System32 directory.

b)   Move the file NTEventLogAppender.dll (32-bit) from the mwas2 directory to the \Windows\SysWOW64 directory.

Install the AS2 Adapter

The installation process for the AS2 adapter varies depending on the operating system where you install the components, UNIX/Linux or Windows. For more information, refer to the topic, *Installing Additional Adapters or Services* (on page 147).

Start the AS2 Interface

You start the AS2 Interface differently, depending on the operating system where the server resides, UNIX/Linux or Windows.

To Start the AS2 Interface on UNIX or Linux

Before you start the AS2 servlets, you must configure the file that identifies the location of the servlet configuration file. Then you start the Web container, Apache Tomcat, which starts the AS2 servlets.

IMPORTANT: These instructions allow you to start the servlets. To complete the configurations, refer to the topic, "Configuring the AS2 Interface" within the *MessageWay User's Guide and Reference* or in the manager online help.

1 Edit the file, web.xml, within the /webapps/mwas2/WEB-INF directory, to specify the current location of the servlet configuration file for both the inbound and outbound parameters, and save your changes. Typically, you would only replace the values **{Tomcat root}** with your install location, but be sure to check the entire path.

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>

<!DOCTYPE web-app
    PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
    "http://java.sun.com/dtd/web-app_2_3.dtd">

<web-app>

  <servlet>
     <servlet-name>MWayAS2In</servlet-name>
     <servlet-class>MWayAS2In</servlet-class>
     <load-on-startup/>
     <init-param>
        <param-name>mwas2-conf</param-name>
        <param-value>/usr/apache/apache-tomcat-6.0.13
         /webapps/mwas2/WEB-INF/mwas2.conf</param-value>
     </init-param>
     <init-param>
        <param-name>eventlevel</param-name>
        <param-value>INFO</param-value>
     </init-param>
  </servlet>

  <servlet>
     <servlet-name>MWayAS2Out</servlet-name>
     <servlet-class>MWayAS2Out</servlet-class>
     <load-on-startup/>
     <init-param>
        <param-name>mwas2-conf</param-name>
        <param-value>/usr/apache/apache-tomcat-6.0.13
         /webapps/mwas2/WEB-INF/mwas2.conf</param-value>
     </init-param>
     <init-param>
        <param-name>eventlevel</param-name>
        <param-value>INFO</param-value>
     </init-param>
  </servlet>
```

2 To start the Apache Tomcat Web container, which in turn starts the servlets, from the /bin directory of Apache Tomcat, type:
./startup.sh.

3 Test to make sure the servlets are running and you can access them:

   a) To test access to the inbound servlet, from your Web browser, type:
      http://localhost:8080/mwas2/in

   b) To test access to the outbound servlet, from your Web browser, type:

http://localhost:8080/mwas2/out

NOTE: If you do not receive messages, "You have reached the MessageWay AS2 ... Interface", test to see if you can access the Web container. Type, **http://localhost:8080**. If the Web browser is on a different machine, replace **localhost** with the IP Address of the machine hosting the servlets.

To Start the AS2 Interface on Windows

Before you start the AS2 servlets, you must configure the file that identifies the location of the servlet configuration file. Then you start the Web container, Apache Tomcat, which starts the AS2 servlets.

IMPORTANT: These instructions allow you to start the servlets. To complete the configurations, refer to the topic, "Configuring the AS2 Interface" within the *MessageWay User's Guide and Reference* or in the manager online help.

1   In the file, web.xml, within the \webapps\mwas2\WEB-INF directory, specify the current location of the servlet configuration file for both the inbound and outbound parameters, and save your changes.

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>

<!DOCTYPE web-app
    PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
    "http://java.sun.com/dtd/web-app_2_3.dtd">

<web-app>

  <servlet>
    <servlet-name>MWayAS2In</servlet-name>
    <servlet-class>MWayAS2In</servlet-class>
    <load-on-startup>1</load-on-startup>
    <init-param>
        <param-name>mwas2-conf</param-name>
        <param-value>C:\Program Files\Apache Software Foundation\Tomcat
        6.0\webapps\mwas2\WEB-INF\mwas2.conf</param-value>
    </init-param>
    <init-param>
        <param-name>eventlevel</param-name>
        <param-value>INFO</param-value>
    </init-param>
  </servlet>

  <servlet>
    <servlet-name>MWayAS2Out</servlet-name>
    <servlet-class>MWayAS2Out</servlet-class>
    <load-on-startup>1</load-on-startup>
    <init-param>
        <param-name>mwas2-conf</param-name>
        <param-value>C:\Program Files\Apache Software Foundation\Tomcat
        6.0\webapps\mwas2\WEB-INF\mwas2.conf</param-value>
    </init-param>
    <init-param>
        <param-name>eventlevel</param-name>
        <param-value>INFO</param-value>
    </init-param>
  </servlet>

  <servlet-mapping>
    <servlet-name>MWayAS2In</servlet-name>
    <url-pattern>/in</url-pattern>
  </servlet-mapping>

  <servlet-mapping>
    <servlet-name>MWayAS2Out</servlet-name>
    <url-pattern>/out</url-pattern>
  </servlet-mapping>

  <session-config>
    <session-timeout>5</session-timeout>
  </session-config>

</web-app>
```

2 Start the Apache Tomcat Web container, which also starts the servlets. The task varies depending on how you installed the software:

- From the Microsoft Management Console (MMC) Services window, start it as a Windows service.

  - or -

- Right-click the icon in the system tray, and click **Start service**.

3 Test to make sure the servlets are running and you can access them:

a) To test access to the inbound servlet, from your Web browser, type:

   http://localhost:8080/mwas2/in

b) To test access to the outbound servlet, from your Web browser, type:

   http://localhost:8080/mwas2/out

NOTE: If you do not receive messages, "You have reached the MessageWay AS2 ... Interface", test to see if you can access the Web container. Type, **http://localhost:8080**. If the Web browser is on a different machine, replace **localhost** with the IP Address of the machine hosting the servlets.

Upgrading the AS2 Interface

There is no automatic upgrade process for the MessageWay AS2 Interface.

To upgrade to MessageWay version 6.1, do the following:

1 Unzip the install file, mwas2servlet-6.1.0-java.zip.

2 Copy the following folders from mwas2servlet-6.1.0-java.zip\mwas2servlet-6.1.0-java\mwas2\WEB-INF:

- classes
- lib

CAUTION: *Do not* also copy the configuration files, web.xml and mwas2.conf, unless you intend to overlay your current configuration files.

3 Paste the folders mentioned in the previous step into the *Apache Install Directory*/webapps/mwas2/WEB-INF, and overlay the old folders.

4 (Windows only) For 32-bit systems:

a) Move the file NTEventLogAppender.dll (32-bit) from the mwas2 directory to the \Windows\System32 directory.

b) Optionally, delete the file NTEventLogAppender.dll from the mwas2 directory, which is for the 64-bit Windows installation.

   - or -

(Windows only) For 64-bit systems:

a) Move the file NTEventLogAppender.amd64.dll (64-bit) to the \Windows\System32 directory.

b) Move the file NTEventLogAppender.dll (32-bit) from the mwas2 directory to the \Windows\SysWOW64 directory.

- or -

(UNIX/Linux only):

▪ Optionally, delete the file NTEventLogAppender.dll and NTEventLogAppender.amd64.dll from the mwas2 directory, which is for the Windows installation.

Installing or Upgrading the FTP Perimeter Server

This is a check list of the tasks you will perform to install or upgrade the MessageWay FTP Perimeter Server. To upgrade the FTP perimeter server, you only need to perform the install, since the configuration files will not be changed for an upgrade.

For more information about configuring the FTP perimeter server, please refer to the section "Configuring MessageWay Perimeter Servers" in the *MessageWay User's Guide and Reference*.

The installation process installs the components of the MessageWay FTP Perimeter Server. These tasks assume that you have already installed MessageWay, which includes the following components of interest here:

- MessageWay Messaging Server, which processes messaging requests
- MessageWay User Server, which controls access to MessageWay from the manager
- MessageWay Service Interface, which provides access to MessageWay from the Internet
- MessageWay Manager, which provides the user interface to configure MessageWay

These are the tasks performed during initial installation for testing:

- Install the FTP perimeter server on any system
- Set up the configuration file for the Service Interface on the MessageWay system
- Start the Service Interface
- Test the connection to the Service Interface
- Set up the configuration file for the FTP perimeter server
- For secure transmissions, install the certificate obtained from a licensing authority

NOTE: Progress provides certificates with FTP perimeter server option to use for initial testing. These certificates allow anonymous logon. You should replace these certificates as soon as possible. Also note that these certificates are shared with the default installation of the MessageWay Service Interface Server.

- Configure MessageWay users and locations
- Test the system from end to end

Install the FTP Perimeter Server

The installation process for the FTP perimeter server varies depending on the operating system where you install the component, Windows or UNIX/Linux.

To Install the FTP Perimeter Server on Windows

When you are ready to install the FTP perimeter server, the first step is to run the installation program from your install medium:

1   Locate and run the install program from the install package sent by Progress:

…\messageway_6.1.0\windows\mwftp-6.1.0-win32-install.exe

2 Click **OK** to begin the installation.

An installation window appears as shown below, followed by a notice regarding the location of the MessageWay documentation files.
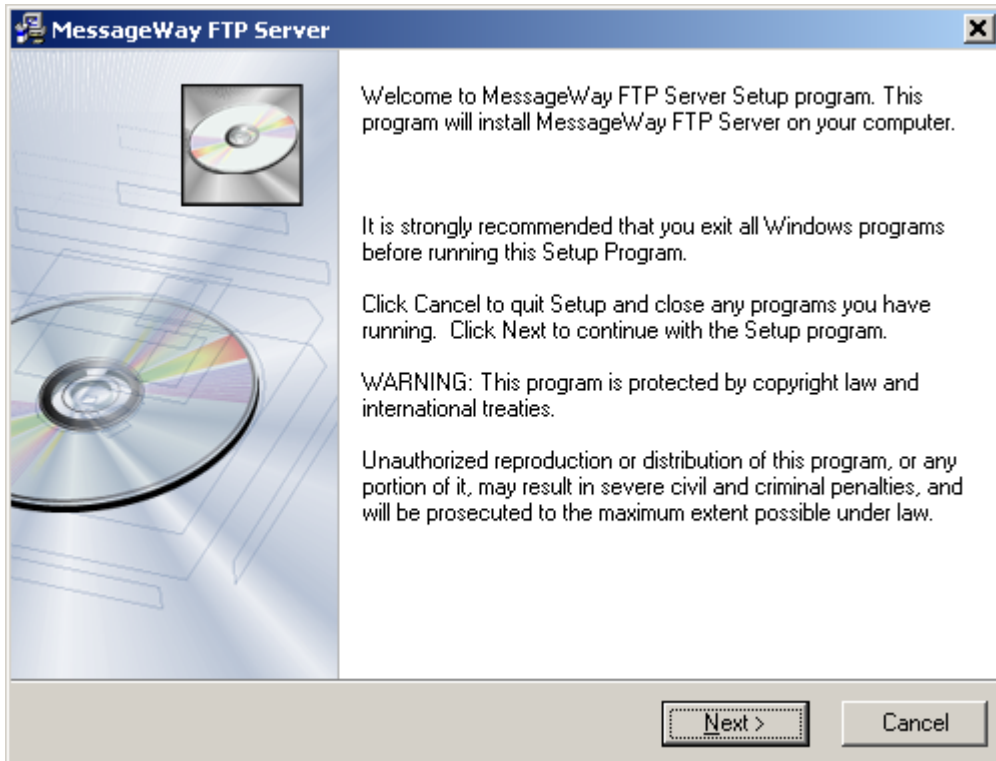
3 Click **Next**.

The MessageWay FTP Server notice screen appears.

4 Click **Next** to continue.

The MessageWay FTP Server Directory screen appears.
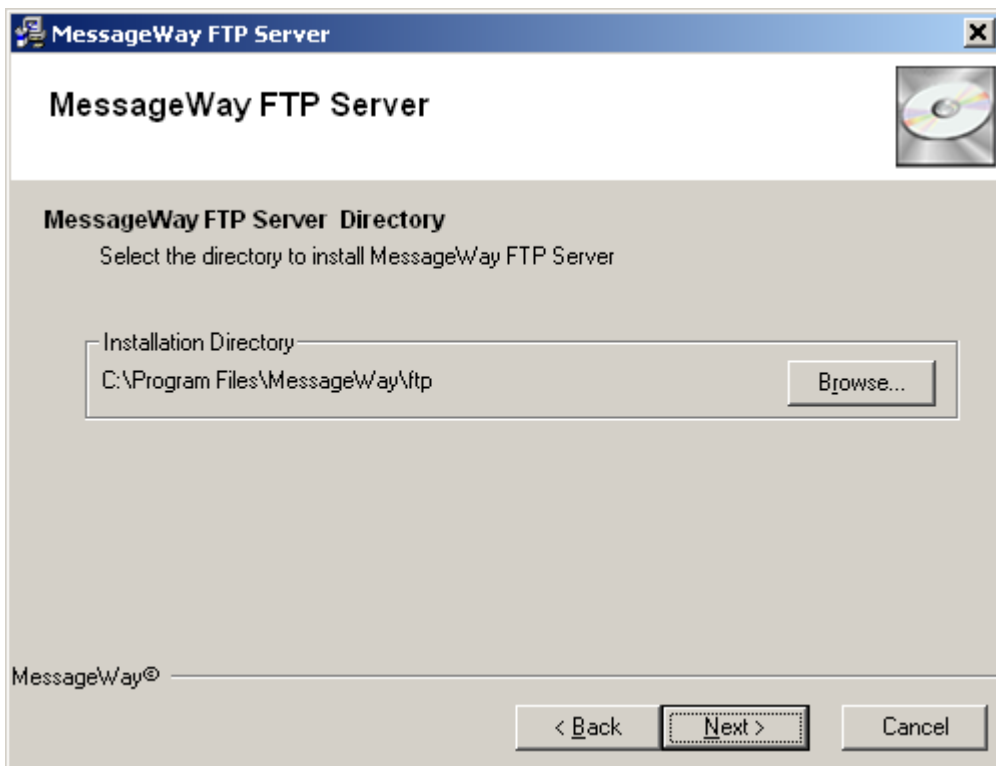
5   Change the directory where you want to install the server by clicking the **Browse** button, then click **Next** to continue.

The Start Installation screen appears.

6   This screen allows you to cancel the installation, if necessary. To continue, click **Next**.
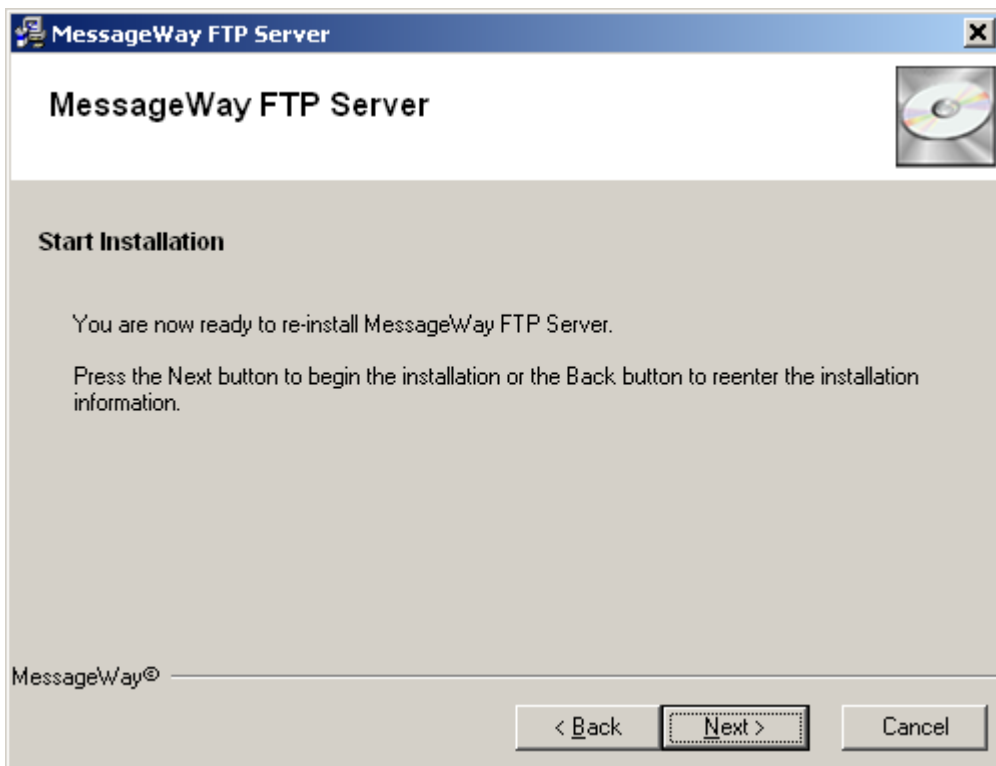
7   When the installation is complete, the final screen will appear. Click **Finish** to exit the installation procedure.

The locations of all files for the FTP Server are as follows:

| File Name	Description	Location
mwftpd.exe	FTP Server Executable file	\Program Files\MessageWay\ftp
mwftpd.conf	FTP Server Configuration file	\ProgramData\MessageWay
testcert.pem	FTP Server SSL certificate	\ProgramData\MessageWay\certs\cert
testkey.pem	FTP Server SSL private key	\ProgramData\MessageWay\certs\private

To Install the FTP Perimeter Server on UNIX or Linux

1   Log on as user, **root**.

NOTE: The installer requires root access in order to create the initial install directories and install the startup script, typically in /etc/init.d.

2   Go to the **mwayinstall** directory, and untar the MessageWay FTP perimeter server tarball, *FTPServerinstall file.*

For a UNIX system, issue the following commands:

a)   **gunzip** *FTPServerinstall file name*

b) **tar –xvf** *FTPServerinstall file name*

This creates a subdirectory of the name of the install file.

NOTE: Don't include the **.tgz** extension in the **tar** command.

For a Linux system, issue the following command:

- **tar -xzvf** *FTPServerinstall file name*

This creates a subdirectory of the name of the install file.

3   Go to the directory you just created, and run the install script by typing:

./install.sh.

The locations of all files for the FTP perimeter server are as follows:

File Name	Description	Location
mwftpd	FTP server executable file	/opt/messageway/ftp
mwftpd	FTP server startup shell script	/etc/init.d
mwftpd.conf	FTP server configuration file	/etc/messageway
testcert.pem	FTP server SSL certificate	/etc/messageway/certs/cert
testkey.pem	FTP server SSL private key	/etc/messageway/certs/private

Start the FTP Perimeter Server

You start the FTP perimeter server differently, depending on the operating system where the server resides: UNIX/Linux or Windows.

To Start the FTP Perimeter Server on Windows

To start the FTP perimeter server on Windows, proceed as follows:

1   From the **Start** menu, select **Programs|Administrative Tools|Computer Management**.

The Computer Manager window appears.

2   In the left pane, expand the folder **Services and Applications**, and click **Services**.

The Services window appears.

3   In the right pane, scroll to the service, **MessageWay FTP Server**.

4   Right-click **MessageWay FTP Server**, and select **Start** from the menu.

The Status column should display **Started**.

To Start the FTP Perimeter Server on UNIX or Linux

On UNIX or Linux, you start the FTP perimeter server with a startup script. The startup script, **mwftpd**, has the following options:

FTP script options	Description
condrestart	Restarts only if the FTP server is running. The script determines if the FTP server is running by looking for the PID file on disk. This process rereads the configuration file.
restart	Stops the server and then starts the server. This process rereads the configuration file.
start	Starts the server. This process rereads the configuration file.
status	Provides the status of the server.
stop	Sends the FTP server process a TERM signal; waits for 1 second; checks if the process is still running, and if it is, then sends the process a KILL signal.
stopnowait	Sends the FTP server a TERM signal and exits the script. This will cause the FTP server to stay around until the IdleLogonTime (configured in the Listeners section of the configuration file) before shutting down.
wait	Sends the FTP server a KILL signal and waits to make sure that the server is stopped.

IMPORTANT: The script and the daemon process that the script starts and stops can be started only by the user, **root**. Check the system logs for errors if the server daemon process fails to start.

To start the FTP perimeter server on UNIX or Linux, proceed as follows:

1   Make sure you are logged on as the user, **root**.

NOTE: When running, MessageWay temporarily requires root access for the remote execution server, the SFTP proxy server and the FTP and SFTP perimeter servers. The FTP and SFTP perimeter servers require root access because they must listen on low ports (<1024), and both Linux and Solaris require root access to listen on low ports.

2   Go to the subdirectory where the script resides by typing:

cd /etc/init.d

3   To start the server daemon process, type:

./mwftpd start

- or -

To check the server status, type:

./mwftpd status

- or -

To stop the server, type:

> **./mwftpd stop**
>
> - or -
>
> To restart the server, type:
>
> .**/mwftpd restart**

NOTE: For Red Hat 7.x, MessageWay supports the systemctl utility, including automatically starting MessageWay when the application server is rebooted, and automatically starting MessageWay perimeter servers when the perimeter server is rebooted. The systemctl files are named *messageway.service*, *mwftpd.service*, *mwproxy.service*, *mwresd.service* and *mwsftpd.service*, and are located in **/usr/lib/systemd/system/**, with symbolic links being added in **/etc/systemd/system/multi-user.target.wants/**. See above systemctl files for more details.

Installing or Upgrading the Remote Execution Server

This is a check list of the tasks you will perform to install the Remote Execution Server (RES). To upgrade the RES, you only need to perform the install, since the configuration files will not be changed for an upgrade.

For more information about configuring the Remote Execution Server, please refer to the section "Configuring MessageWay Perimeter Servers" in the   *MessageWay User's Guide and Reference*.

The installation process installs or upgrades the components of the Remote Execution Server (RES) system, at which time you also set up the configuration file. These tasks assume that you have already installed MessageWay, which includes the MessageWay Server and the MessageWay Manager. The Remote Execution Client is by default installed with the MessageWay Server.

These are the tasks performed during initial installation for testing:

- Install the Remote Execution Server, typically on a system that is not where the client runs.

NOTE: You may want to install the server on the same machine as the client for testing purposes.

- Set up the configuration file for the client, and optionally, the monitor.
- Set up the configuration file for the server, typically on the remote machine.
- Configure shared keys for the client and server.
- Configure logon security for the user ID that will access the server.
- If needed, for the monitor, configure a location to receive the notifications.
- Start the Remote Execution Server.
- Test the connection to the server.
- Configure a Custom Processing or Custom IO location to invoke the client.
- Test the system from end to end.

Licensing Requirements for the Remote Execution Server

The MessageWay Remote Execution Server (RES) is a licensed component of MessageWay from Progress. For more information, contact MessageWay Technical Support.

Pre-requisites to Install the Server Component of RES on a 64-bit RedHat System

If you install the server component of RES, mwresd, on a 64-bit RHEL6 system, you must first install these additional library components:

1 (Conditional) This step is *not* necessary if you install mwresd on the same machine as the MessageWay application. The MessageWay installation already required this step. To install the 32-bit libstdc++, type:

   # **yum upgrade libstdc++**

   # **yum install libstdc++.i686**

2 Install 32-bit pam.

   # **yum install pam.i686**

Installing the RES Components

The installation process for the Remote Execution Server Components varies depending on the operating system where you install the component, Windows or UNIX/Linux.

This option includes the following components:

- Remote Execution Server (RES)
- Remote Execution Client (installed with base MessageWay)
- Remote Server Monitor (part of MessageWay Schedule Server)

These components typically have the following physical relationships:

- The client resides with the MessageWay Server
- The monitor functionality is in the MessageWay Schedule Server, which resides with the MessageWay Server
- The RES resides on a remote machine

To install the RES server on IBM AIX, you must also have the following additional library components:

Package	Level	Libraries
bos.rte.libc	5.3.7.1	libc
bos.rte.security	5.3.7.1	libcrypt, libpam

| bos.rte.libpthreads	5.3.7.0	libpthreads
xlC.rte	9.0.0.1	libC (C++ library)

To Install RES on Windows

Repeat these instructions for each server you must install on a separate Windows system.

When you are ready to install the RES server, the first step is to run the installation program:

1   Locate and run the install program from the install package sent by Progress:

…\messageway_6.1.0\windows\mwres-6.1.0-win32-install.exe.

2   Click **OK** to begin the installation.

An installation window appears as shown below, followed by a notice regarding the location of the MessageWay documentation files.
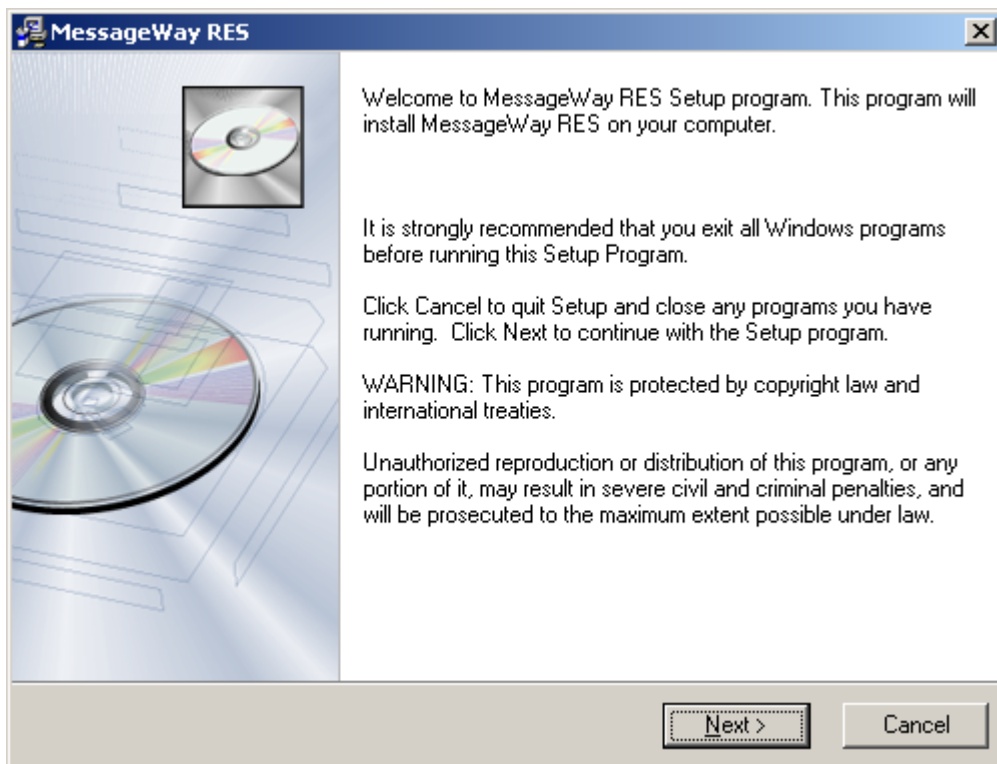
3   Click **Next**.

A notice screen appears.
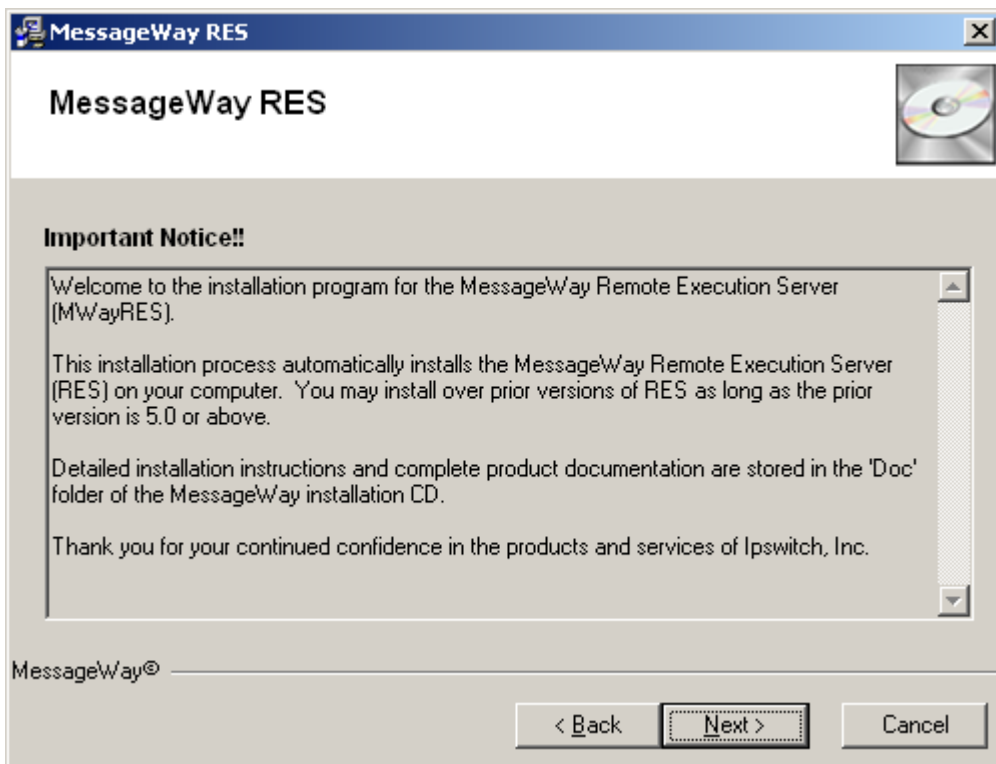
4 Click **Next** to continue.

The MessageWay RES Directory screen appears.

5 Change the directory where you want to install the client or server by clicking the **Browse** button, then click **Next** to continue.

The Start Installation screen appears.
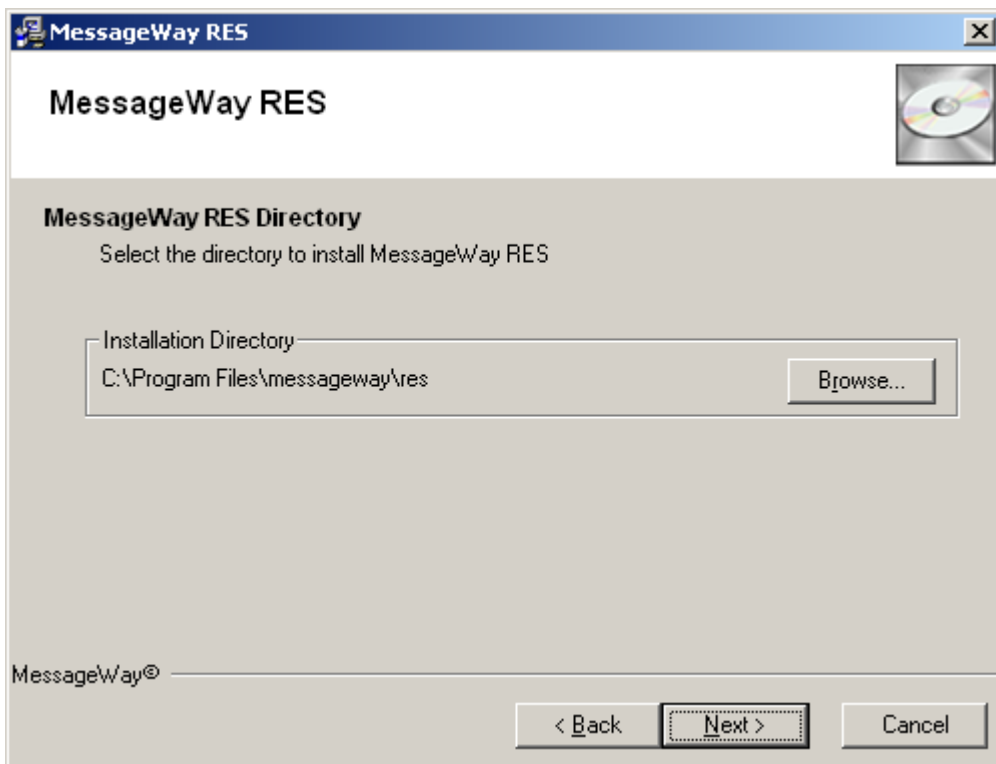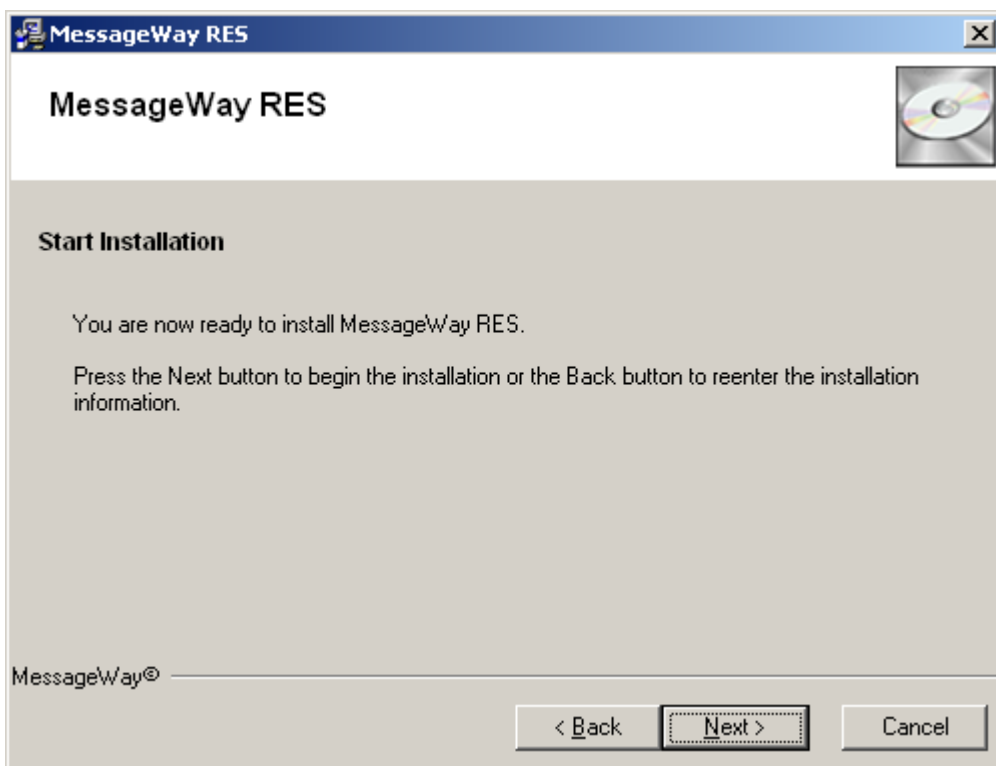

6   This screen allows you to cancel the installation, if necessary. To continue, click **Next**.

7   When the installation is complete, the final screen will appear. Click **Finish** to exit the installation procedure.

The Remote Execution Client was installed with the MessageWay Server. The locations of all files for the client are as follows:

File Name	Description	Location
mwres	RES Client Executable file (installed with base MessageWay)	\Program Files\MessageWay\utils
mwkeygen	RES Key Generation Program	\Program Files\MessageWay\utils
mwres.conf	RES Client Configuration file	\Users*MessageWayUser*\AppData\Roaming\messageway

The locations of all files for the RES server are as follows:

File Name	Description	Location
mwresd	RES Server Executable file	\Program Files\MessageWay\res
mwresd.conf	RES Server Configuration file	\ProgramData\MessageWay

To Install RES on UNIX or Linux

Repeat these instructions for each server you must install on a separate UNIX or Linux system.

1   Log on as user, **root**.

> **NOTE:** The installer requires root access in order to create the initial install directories and install the startup script, typically in /etc/init.d.

2   Go to the **mwayinstall** directory, and untar the MessageWay RES tarball, *RES install file name*.

For a UNIX system, issue the following commands:

a)   **gunzip** *RESinstall file name*

b)   **tar –xvf** *RESinstall file name*

This creates a subdirectory of the name of the install file.

> **NOTE:** Don't include the **.tgz** extension in the **tar** command

For a Linux system, issue the following command:

▪   **tar -xzvf** *RES install file name*

This creates a subdirectory of the name of the install file.

3   Go to the directory you just created, and run the install script by typing:
./install.sh.

The locations of all files for the RES client are as follows:

File Name	Description	Location
mwres	RES Client Executable file	/opt/messageway/utils
mwkeygen	RES Key Generation Program	/opt/messageway/utils
mwres.conf	RES Client Configuration file	/etc/messageway

The locations of all files for the RES server are as follows:

File Name	Description	Location
mwresd	RES Server Executable file	/opt/messageway/res
mwresd.conf	RES Server Configuration file	/etc/messageway

Configuring Security for the Remote Execution Server

The Remote Execution Server system authorizes script execution and protects data exchanged between the client and server machines from public access. To do so, it uses three methods: connection security, script security context and logon security.

The RES uses a session-specific key to encrypt the data passing through the connection between the client and server. The remote server generates the session key, which it encrypts using the shared key and passes to the client at the beginning of the session.

If a passphrase is provided, the server will use it to modify the shared key before it is used. Users must manually distribute the key to the server system the first time. The key could be updated on a regular basis for increased security.

The server accepts connections only from a list of approved client IP addresses from the configuration file. All other connections are refused. A separate key may be configured for each IP address.

You set the security context of the script by passing a user ID and password over the encrypted connection.

Logon security controls access to the Remote Execution Server.

Generating the Shared Key File

You generate the shared key on the system where the client resides and distribute a copy to the server.

The default location for the program that generates the key files, mwkeygen, and the key files themselves depends on the operating system, as shown in the following table:

Operating System	Default Location of Key Files
UNIX or Linux	**/opt/messageway/utils/mwkeygen**
Windows	**C:\Program Files\MessageWay\utils\mwkeygen.exe**

The syntax for the shared-key generation program is simply the executable followed by the file name of the key file you want to create. Once you create the key file on the client system, you should put a copy on the system where the server resides. When both the client and server are on the same system, they will share the one key file.

The syntax for the file name is as follows:

{*fully-qualified file name|file name*}[*.suffix*]

- When a suffix is not supplied, the default suffix .mkf is used.
- File names that are not fully qualified are created in the current directory.

Here are some Windows examples that are executed from a command prompt where the program resides:

|	
mwkeygen keyA	Creates a key file, **keyA.mkf**, in the current directory.
mwkeygen keyA.key	Creates a key file, **keyA.key**, in the current directory.
mwkeygen c:\keyfiles\keyA	Creates a key file, **keyA.mkf**, in the **c:\keyfiles** directory. The directory must exist.

Here are some UNIX and Linux examples that are executed from a command prompt where the program resides:

./mwkeygen keyA	Creates a key file, **keyA.mkf**, in the current directory.
./mwkeygen keyA.key	Creates a key file, **keyA.key**, in the current directory.
./mwkeygen /opt/keyfiles/keyA	Creates a key file, **keyA.mkf**, in the **/opt/keyfiles** directory. The directory must exist.

Security Context of Remote Script

IMPORTANT: You maintain the security of the script by not showing your password in clear text. The client will pass encrypted text to the server. Users should take care to make sure the password is not displayed as clear text in the location configuration.

You do this by configuring the password within the location configuration and then using the %password% replaceable parameter in the script. This way, the password never appears in clear text in the configuration files, as you can see in the following example. When you use the %password% token, you typically also use the %user% token, although either could be typed in clear text.
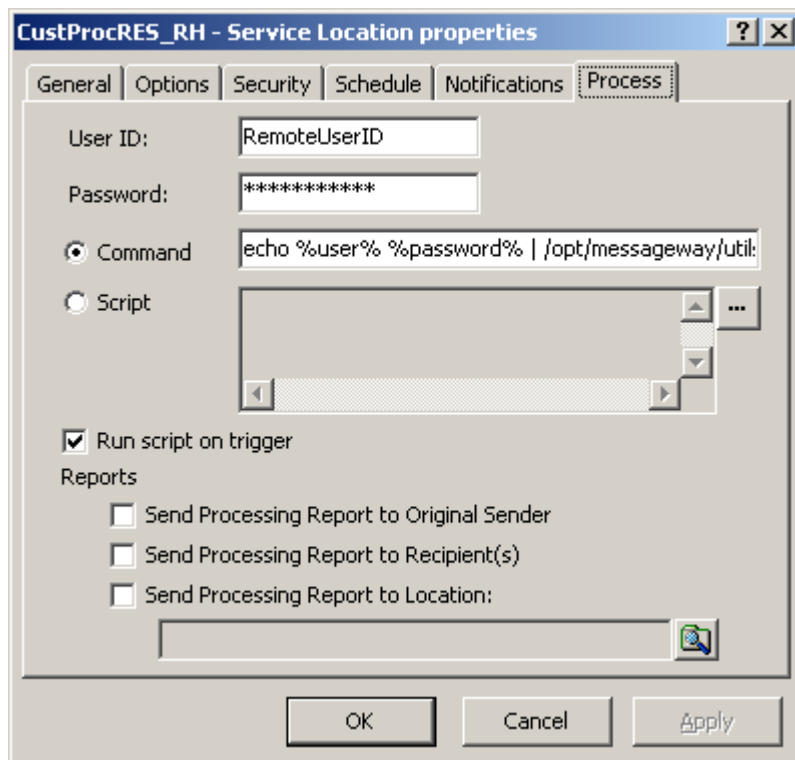
Logon Security

The Remote Execution Server requires certain security settings to enable the client to log on to the system on which the server resides.

You will perform different tasks, depending on where the server resides, UNIX/Linux or Windows.

Setting Logon Security for Windows

When the client sends a user ID to the Remote Execution Server, that user ID must have special privileges on the Windows system. If you need a special user ID to log on to Windows for this, create that user before you perform this task.

To grant the privileges, do the following:

1   From the **Start** menu, select **Programs|Administrative Tools|Local Security Policy**.

- or -

From the Control Panel window, select **Administrative Tools|Local Security Policy**.

The Local Security Settings window appears.

2   In the left pane, within the Local Policies folder, select **User Rights Assignment**.

3   In the right pane, double-click **Log on as a batch job**.

The Log on as a batch job Properties window appears.

4   Select the **Add User or Group** button.

The Select Users or Groups window appears.

5   Do the following:

a)   In Enter the object names to select, type the following:

   machine name\user ID to be passed by the client

b)   Select **Check Names** and then **OK** twice to return to the Local Security Settings window.

   If the object name is valid, the properties window appears with the user ID added to the **Member Of** tab.

Setting Logon Security for UNIX or Linux

For a UNIX or Linux system, the RES Server uses Pluggable Authentication Modules (PAM) to authenticate the remote user specified by the RES Client. PAM uses system-supplied shared objects for user authentication. The installation provides files that contain instructions to setup PAM on the system where the RES Server will be running.

For Linux, copy the mwresd.pam.gcc file as follows:

From Location	To Location
/opt/messageway/res/mwresd.pam.gcc	**/etc/pam.d/mwresd**

For UNIX, append the mwresd.pam.sol file as follows:

From Location	To Location
/opt/messageway/res/mwresd.pam.sol	**/etc/pam.conf**

For more information about PAM, visit the site ***http://www.kernel.org/pub/linux/libs/pam/*** (***http://www.kernel.org/pub/linux/libs/pam/***).

Installing or Upgrading the SFTP Perimeter Server

The MessageWay SFTP Server allows trading partners to send messages to MessageWay using the SFTP protocol. This is a check list of the tasks you will perform to install the SFTP Server and then configure it for initial testing.

To upgrade the SFTP perimeter server, you only need to perform the install, since the configuration files will not be changed for an upgrade.

To configure the SFTP Server, please refer to the section "Configuring MessageWay Perimeter Servers" in the *MessageWay User's Guide and Reference*.

This installation process installs the components of the SFTP Perimeter Server. These tasks assume that you have already installed MessageWay, which includes the following components of interest here:

- MessageWay Messaging Server, which processes messaging requests
- MessageWay User Server, which controls access to MessageWay
- MessageWay Service Interface, which provides access to MessageWay from MessageWay servers and the Internet
- MessageWay Manager, which provides the user interface to configure MessageWay

These are the basic tasks to install the SFTP Perimeter Server:

- For UNIX or Linux, install the MWay SFTP Perimeter Server

  - or -

- For Windows
  - Install the open source product Cygwin to provide a Linux-like environment for SFTP
  - Install the MessageWay SFTP Perimeter Server to run under Cygwin

NOTE: The SSH host keys are generated during the MessageWay SFTP Server installation. The mwsftpd.conf is pre-configured with these production-ready keys.

After you have installed the SFTP Perimeter Server, you must perform the following tasks to configure and test the system:

- Set up the configuration file for the Service Interface on the MessageWay system
- Start the Service Interface
- Test the connection to the Service Interface
- Set up the configuration file for the SFTP Perimeter Server
- Install the certificate obtained from a licensing authority to perform SSL communications, if desired, between the MWay SFTP Server and Service Interface

NOTE: Progress provides certificates with the MessageWay installation as part of the Service Interface to use for initial testing. These certificates allow anonymous logon. You should replace these certificates as soon as possible. If the SFTP Server is not installed on the local MessageWay box, the value in the CertFingerprint parameter, which comes pre-configured in the MSI section of mwsftpd.conf, must be used in order to establish an SSL connection using the provided test certificates. If the SFTP Server is installed locally, an SSL connection can be established using either the CertFingerprint or CertVerifyFile parameter. Only one of the two parameters must be active.

- Configure MessageWay users and locations
- Test the system from end to end

Licensing Requirements for the SFTP Perimeter Server

The MessageWay SFTP Perimeter Server, the MessageWay SFTP Adapter and the MessageWay SFTP Proxy Server are all included in the MessageWay base license, although you install and configure them separately. For more information, contact MessageWay Technical Support.

The SSH host keys are generated during MessageWay SFTP Perimeter Server installation to enable secure communications between SFTP clients and the SFTP Perimeter Server. These keys are production-ready and do not require replacement. The configuration file is pre-configured to use the keys generated during installation.

Progress has provided certificates with the MessageWay installation as part of the Service Interface for users to be able to test SSL communications between the MessageWay SFTP Perimeter Server and the Service Interface. At least for the final stages of testing, users should obtain their own certificates from a trusted licensing authority.

To install the SFTP Server on Windows, you must first install *Cygwin* (*http://www.cygwin.com/*), which is open software that provides a Linux-like environment on a Windows system.

Pre-requisites to Install the SFTP Perimeter Server on a 64-bit RedHat System

If you install the SFTP perimeter server on a 64-bit RHEL6 system, you must first install these additional library components:

1 (Conditional) This step is *not* necessary if you install the SFTP perimeter server on the same machine as the MessageWay application. The MessageWay installation already required this step. To install the 32-bit libstdc++, type:

yum upgrade libstdc++

yum install libstdc++.i686

2 Install the 32 bit zlib

yum upgrade zlib

yum install zlib.i686

Install the SFTP Perimeter Server

The installation process for the SFTP server varies depending on the operating system where you install the components, UNIX/Linux or Windows.

To Install the SFTP Perimeter Server on UNIX or Linux

1 Log on as user, **root**.

> **NOTE:** The installer requires root access in order to create the initial install directories and install the startup script, typically in /etc/init.d.

2 Go to the mwayinstall directory, and untar the MessageWay SFTP Server tarball, SFTPServerinstall file.

For a UNIX system, issue the following commands:

a) **gunzip** *SFTPServerinstall file name*

b) **tar –xvf** *SFTPServerinstall file name*

This creates a subdirectory of the name of the install file.

> **NOTE:** Don't include the **.tgz** extension in the tar command.

For a Linux system, issue the following command:

▪ **tar -xzvf** *SFTPServerinstall file name*

This creates a subdirectory of the name of the install file.

3 Go to the directory you just created, and run the install script by typing:

./install.sh.

> **IMPORTANT:** For SUSE 10, 64-bit systems, if you use password authentication rather than public key authentication, you may need to enable password authentication in the SSH configuration file, typically /etc/sshd_config. If this is not enabled, and you attempt to use password authentication, you will get a 1113 error stating that the system has exhausted authentication methods.

To review the locations of files for the SFTP perimeter server, refer to the topic, *MessageWay Files and Locations for UNIX/Linux* .

To Install the SFTP Perimeter Server on Windows

The SFTP server runs on Windows under the Cygwin, which is open software that provides a Linux-like environment for Windows. First, you must install Cygwin 32-bit version as an administrative user and then the SFTP server.

NOTE: The following instructions describe how to install the 32-bit version of Cygwin from the Internet.

To install Cygwin, make sure you are logged on as an administrative user, then proceed as follows:

1   From the *Cygwin site* (*http://www.cygwin.com/*), run the 32-bit setup program to install the latest version of Cygwin and its associated packages.
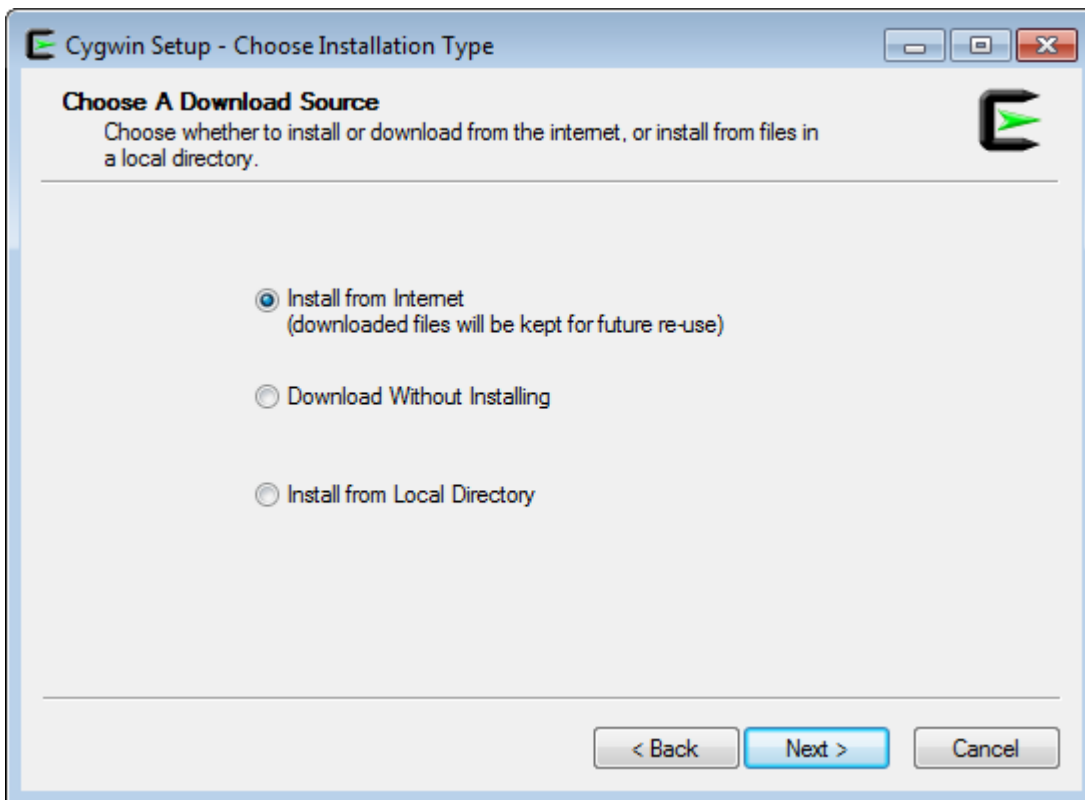
> **NOTE:** If you receive a security warning dialog about an unknown publisher, click **Run**.
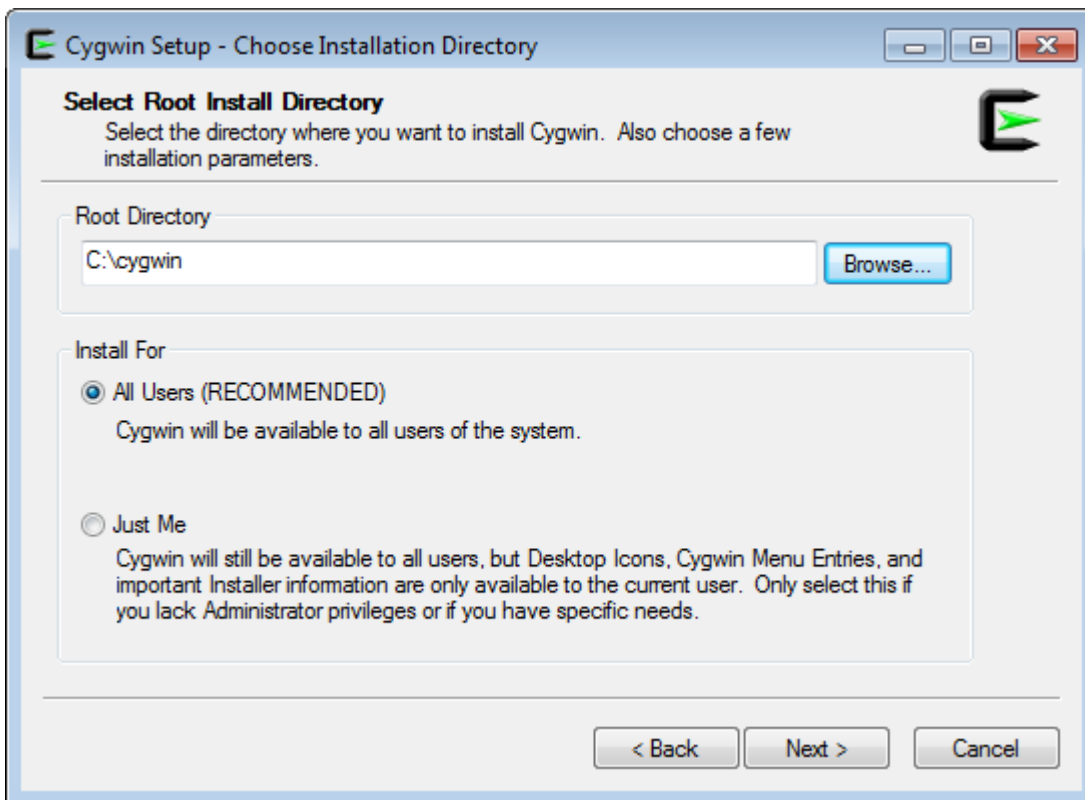
The **Cygwin Setup** window appears.
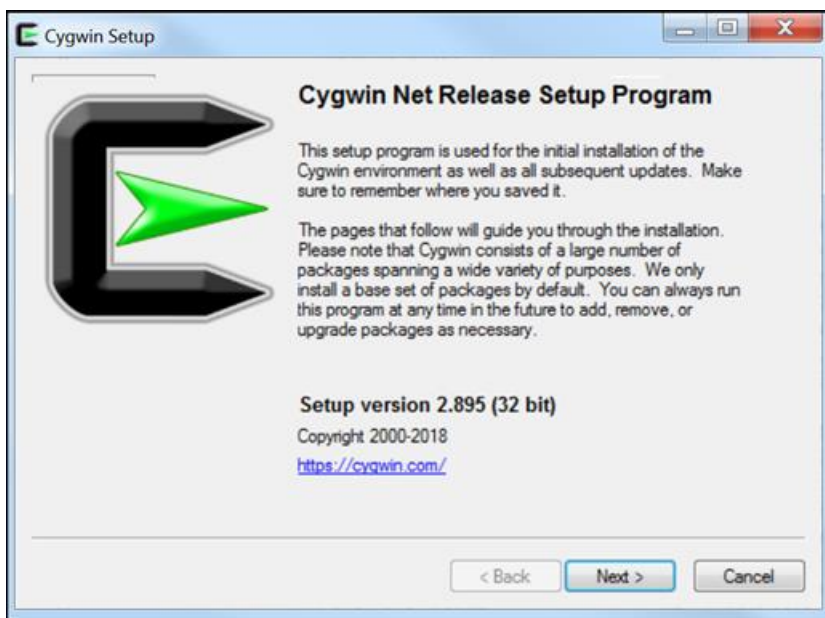
2   Click **Next**.
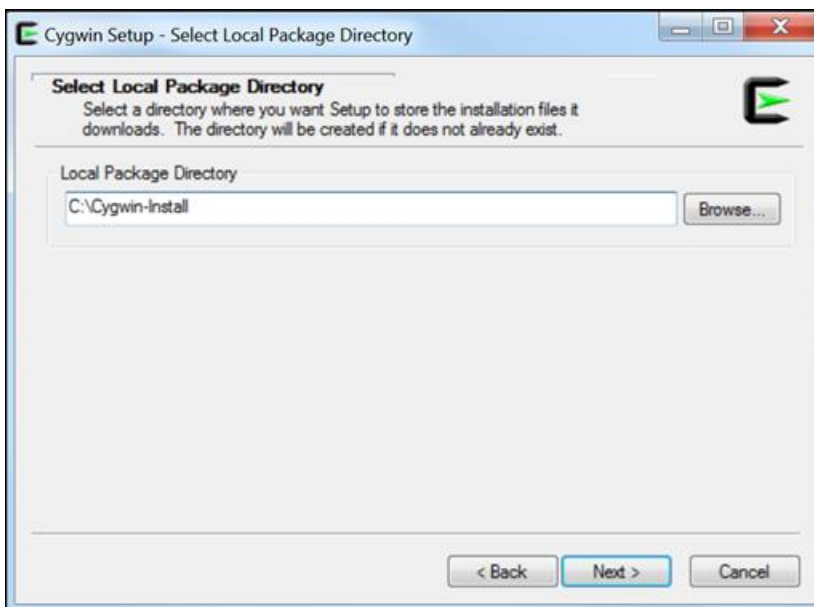
The **Choose Installation Type** window appears.

3   Select **Install from Internet**, and click **Next**.

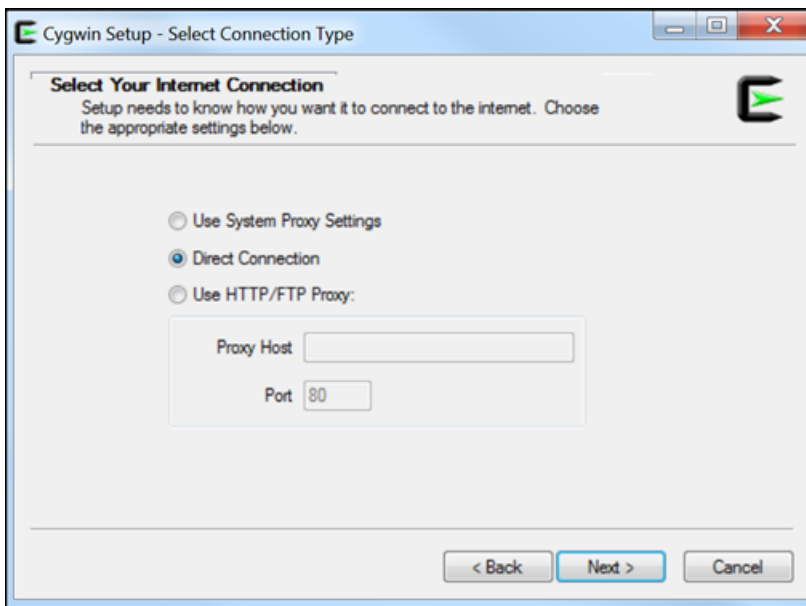The Choose Installation Directory window appears.

4   Accept the defaults, and click **Next**.

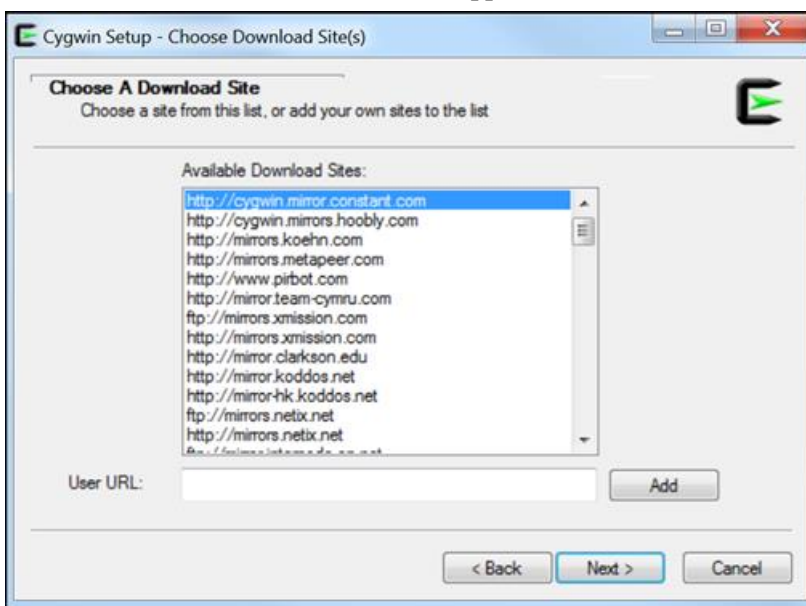The **Select Local Package Directory** window appears.

5   Specify where you want the program to store the files it downloads, and click **Next**.

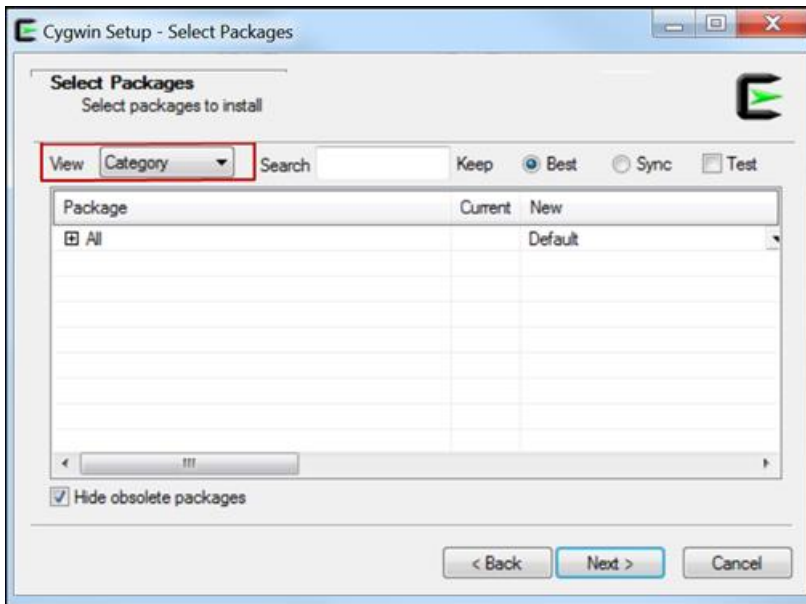The **Select Connection Type** window appears.

6 Select the type of connection you want to make, and click **Next**.

The **Choose Download Site(s)** window appears.

7 Choose the download site, and click **Next**.

The **Select Packages** window appears to show you which base packages it will install.

8 Click the drop down arrow next to **Category** and select *Not Installed* view.

Another **Select Packages** window appears to allow you to choose which packages to install.

IMPORTANT: If you are updating rather than uninstalling and reinstalling cygwin, the packages you currently have installed will be selected automatically and will not be visible in this view, since this view shows only those packages that are not already selected to be installed.

9 Use the **Search** function to locate the following packages, and for each of the following packages found:

a) Find the package in the **Package** column.

b) Click **Skip** in the **New** column and select the latest version. This puts a mark in the box in the **Bin?** column.

- **csih**: Provides support for installing cygwin services.
- **cygrunsrv**: NT/W2K service initiator
- **inetutils**: Common networking clients and servers (clients)
- **libcrypt0**: Encryption/Decryption utility and library
- **libcrypt2**: Extended encryption library
- **libssp0**: GCC Stack-Smashing Protection runtime library
- **syslog-ng**: Next generation system logging daemon
- **vim**: Vi IMproved - enhanced vi editor

- **zlib**: gzip de/compression library (documentation)
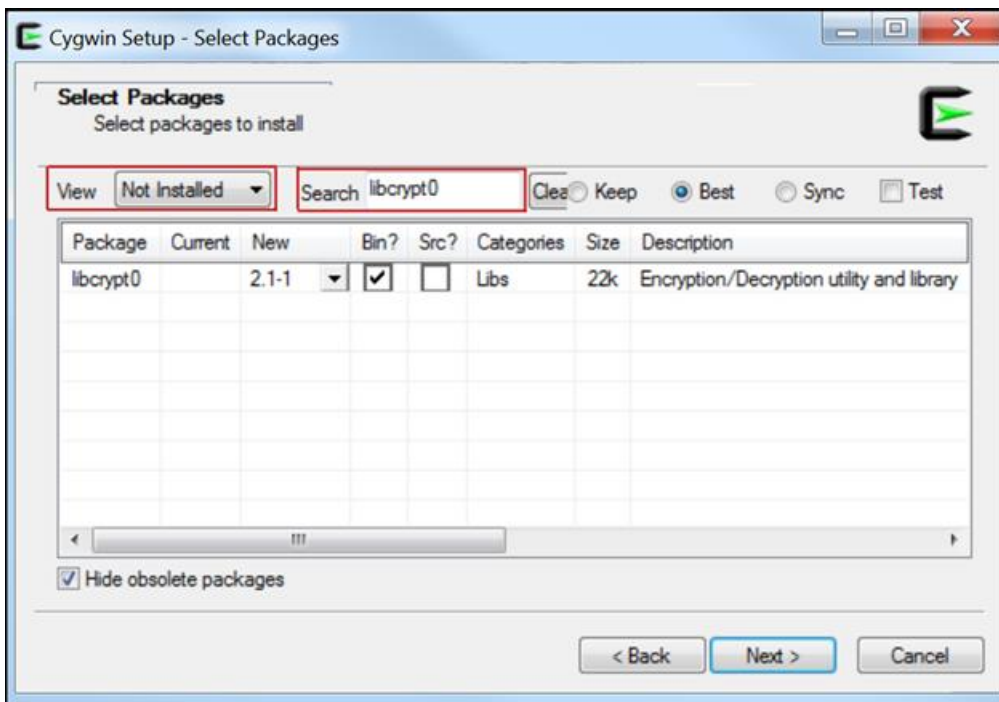
10 Click the drop down arrow next to **Not Installed** and select *Pending* view, and make sure that you see the packages listed previously. If you missed one, repeat step 9 for that package.

IMPORTANT: DO NOT deselect any packages that are already selected. DO NOT click the **Clear** button, because that removes all selections.
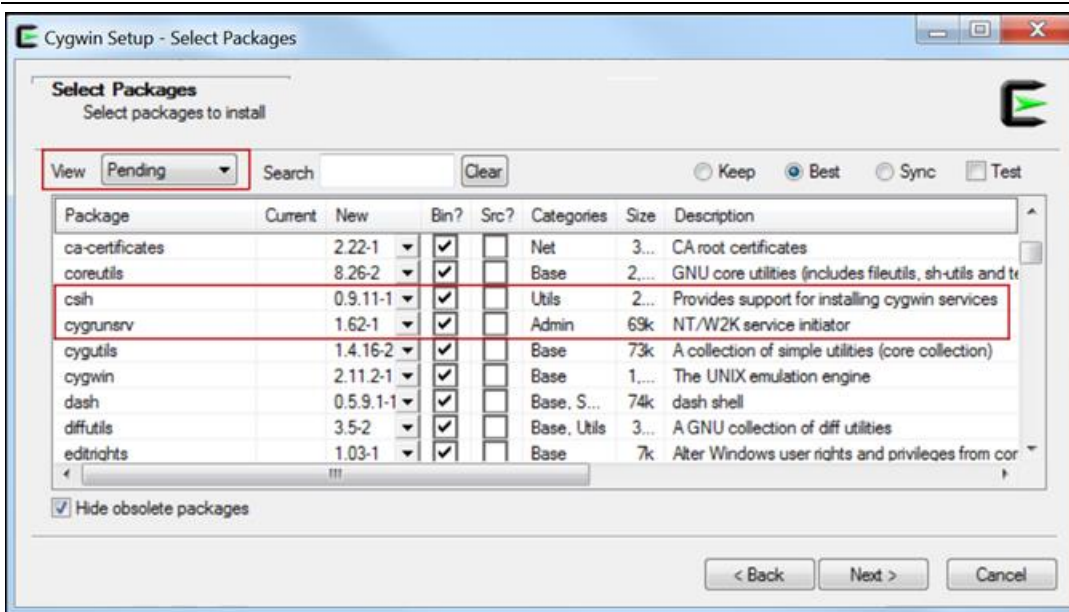
11 Click **Next**. The **Review and confirm changes** window will appear with a list of additional packages required to resolve dependencies. Click **Next**.

A progress window appears.

12 When the installation completes successfully, the **Installation Status and Create Icons** window appears.
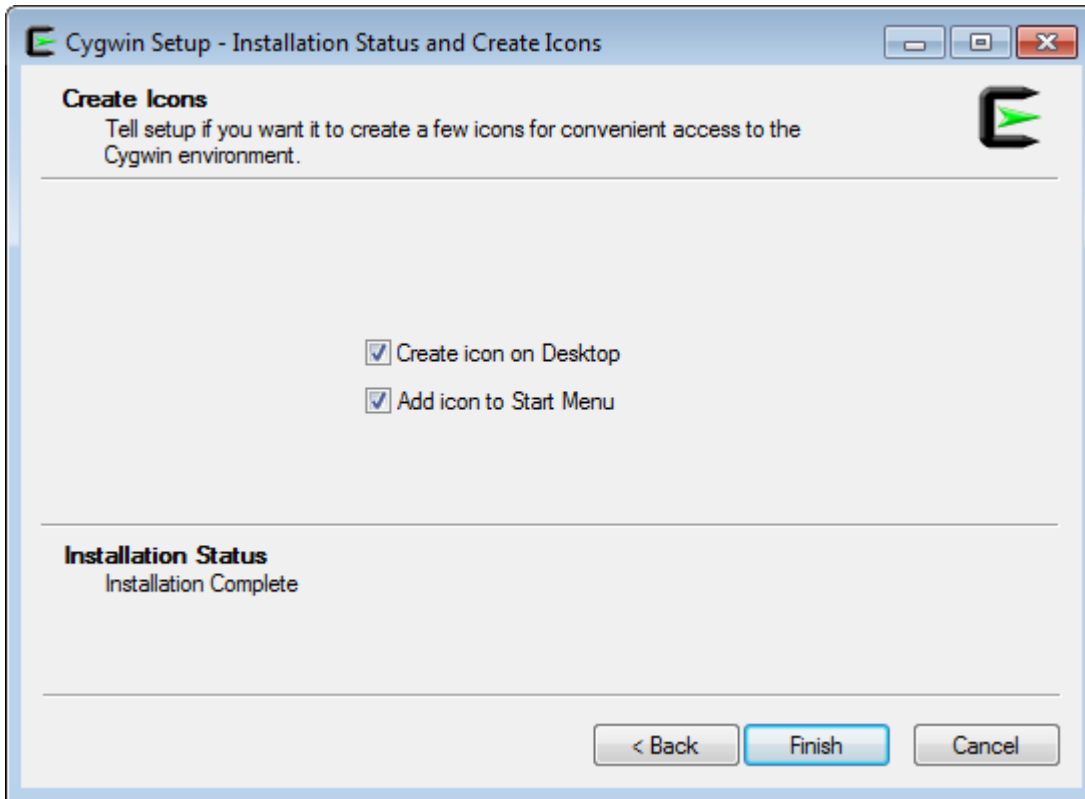
13 Choose whether you want to create icons, and click **Finish**.

CAUTION: For new installs, before you proceed, you may need to temporarily disable your anti-virus program when you install the SFTP server. This process uses ssh-keygen to create the SSH host keys for the server.

The examples show a full install, but you can use these steps for re-installs and upgrades as noted. To install the SFTP server to run under Cygwin, make sure you are logged on as the administrative user that will own the installed files, and proceed as follows:
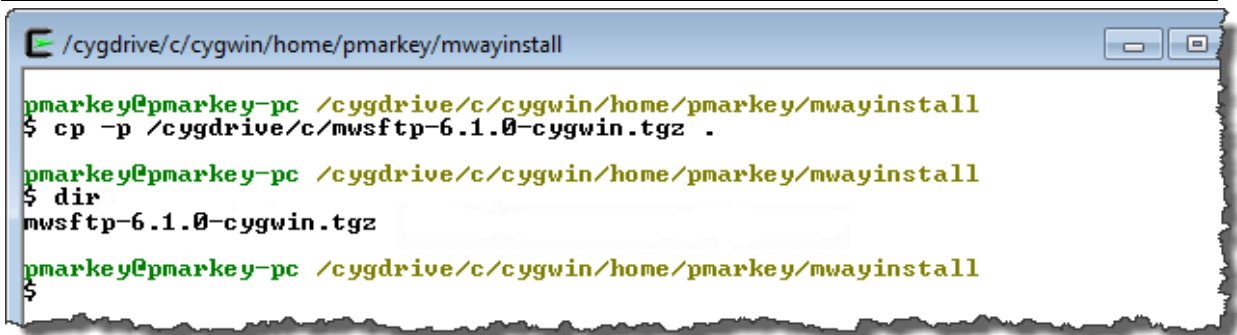
1 To start Cygwin, you must run it as an administrator. Right-click the Cygwin shortcut (Cygwin terminal) or the .bat file and select *Run as Administrator*.

- From the **Desktop** or **Start** menu, find **Cygwin Terminal**, which is typically in a Cygwin folder, and right-click and select *Run as Administrator*.

  - or -

- From the **Start** menu, click **Run**, browse to the location where you installed Cygwin, right-click the cygwin.bat file, and select *Run as Administrator*.

A Linux-type command-line environment window appears.

2 Create a MessageWay installation directory in your user directory.

a) Type **mkdir mwayinstall**, and press **Enter**.

b) Type **cd mwayinstall**, and press **Enter**.

3 Put the installation filewhich is a tarball, in the c:\root folder using Windows Explorer.

4 At the Cygwin prompt, copy the tarball to the mwayinstall folder.

- Type **cp -p /cygdrive/c/***SFTPServerinstall file name* **.**

NOTE: The name of the tarball must be followed by a space and a period.

```
/cygdrive/c/cygwin/home/pmarkey/mwayinstall                                    _ □

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$ cp -p /cygdrive/c/mwsftp-6.1.0-cygwin.tgz .

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$ dir
mwsftp-6.1.0-cygwin.tgz

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$
```

5 Untar, unzip, the MessageWay SFTP Server tarball.

- Type **tar -xzvf** *SFTPServerinstall file name.*

This creates a subdirectory of the name of the install file.

NOTE: If you are installing a maintenance release, you may see fewer files than those shown here.

```
/cygdrive/c/cygwin/home/pmarkey/mwayinstall                                    _ □

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$ dir
mwsftp-6.1.0-cygwin.tgz

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$ tar -xzvf mwsftp-6.1.0-cygwin.tgz
mwsftp-6.1.0-cygwin/
mwsftp-6.1.0-cygwin/banner
mwsftp-6.1.0-cygwin/cygcrypto-0.9.8.dll
mwsftp-6.1.0-cygwin/cygssl-0.9.8.dll
mwsftp-6.1.0-cygwin/install.sh
mwsftp-6.1.0-cygwin/installfunc.sh
mwsftp-6.1.0-cygwin/moduli
mwsftp-6.1.0-cygwin/mwsftp-server.exe
mwsftp-6.1.0-cygwin/mwsftpd.conf
mwsftp-6.1.0-cygwin/mwsftpd.exe
mwsftp-6.1.0-cygwin/mwsftpd.sh
mwsftp-6.1.0-cygwin/mwsftpd_config
mwsftp-6.1.0-cygwin/readme.txt
mwsftp-6.1.0-cygwin/ssh-keygen.exe
mwsftp-6.1.0-cygwin/testcert.pem
mwsftp-6.1.0-cygwin/testkey.pem

pmarkey@pmarkey-pc /cygdrive/c/cygwin/home/pmarkey/mwayinstall
$
```
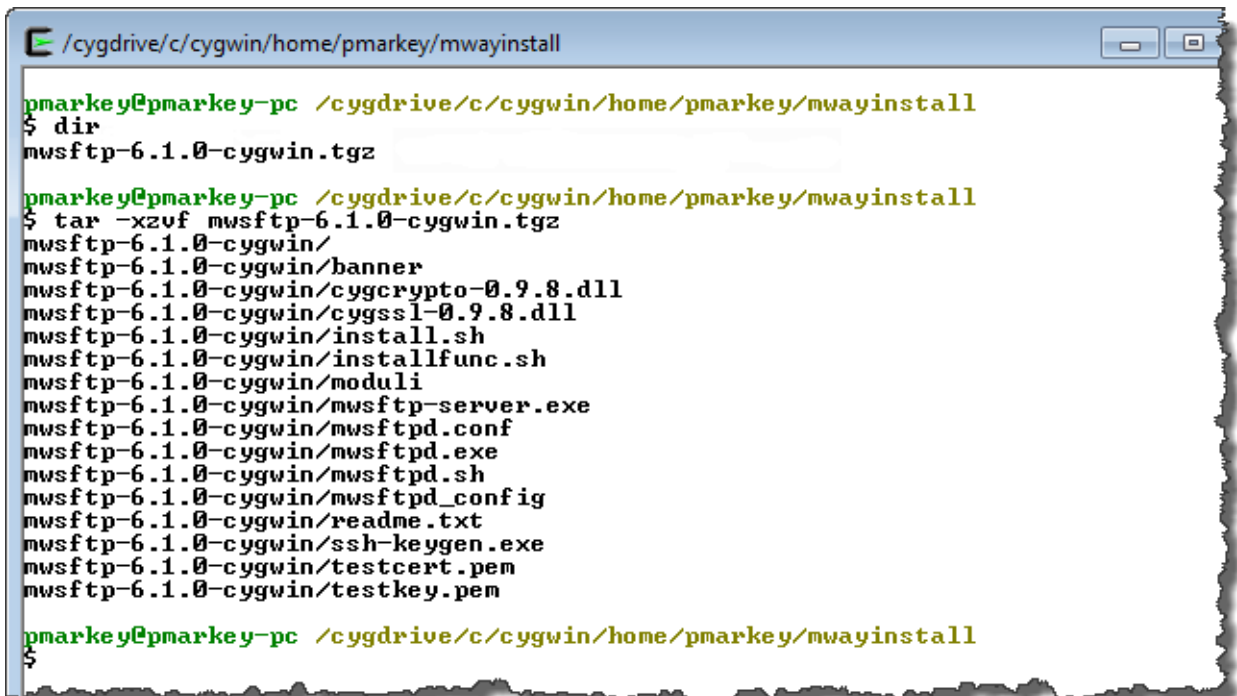
Your directory structure will look similar to the following:
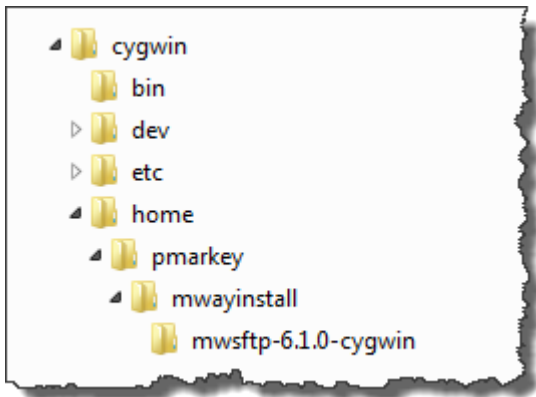
6 To ensure that the install works correctly, run the following commands from the Cygwin prompt:

a) $ **mkgroup -c >/etc/group**

b) $ **mkpasswd -c >/etc/passwd**

7 List the owner/group of the files in the mwayinstall directory to know what user name and group you should enter, and then go to the directory you just created, and run the install script.

a) At the mwayinstall directory, type **ls -l**.

b) Type **cd** *SFTPServerinstall directory*.

c) Type **./install.sh**, and press **Enter**.

Your screen should look something like the following:

8 To specify the user and group, use the values shown when you did the list command on the mwayinstall directory:

a) At the prompt, **Enter SFTP Server System User (mway) :**, type *system_user_name*, and press **Enter**.

b) At the prompt, **Enter SFTP Server System Group (mway) :**, type *system_user_group* or **None**, and press **Enter**.

9 For new installs, at the **Would you like to change these directories?** prompt, type **N**, and press **Enter**.

NOTE: If you are re-installing or installing a hotfix update, you will not see this prompt. Continue to the next step.

10 At the **Proceed?** prompt, type **Y**, and press **Enter**.

```
MessageWay SFTP Server: [New Install]
SFTP Server Directory:        [/opt/messageway/sftp]
SFTP Configuration Directory:    [/etc/messageway]
SFTP Startup Script Directory:    [/etc/init.d]

MessageWay SFTP Server Install List
-----------------------------------
MWay SFTP Server

Proceed? (Y) : Y
```

For the locations of all files for the SFTP Server, refer to the topic, *MessageWay Servers Default Locations* (on page 8).

For a new install, to create the SFTP service and add the appropriate privileges for the local administrator that owns the service:

1 Log on to the Windows server as the local administrator that installed the SFTP Server.

2 In Cygwin, perform the following commands, replacing the < and > symbols and information within the symbols with the appropriate information:

   a) **cygrunsrv -I "MWSFTPServer" -u** *"<local admin>"* **-w "**<*password*>**" -d "MessageWay SFTP Server" -p "/opt/messageway/sftp/mwsftpd" -a "-D -f /etc/messageway/mwsftpd_config" -e CYGWIN=server**

   b) **editrights -a SeTcbPrivilege -u** *<local admin>*

   c) **editrights -a SeAssignPrimaryTokenPrivilege -u** *<local admin>*

   d) **editrights -a SeCreateTokenPrivilege -u** *<local admin>*

   e) **editrights -a SeIncreaseQuotaPrivilege -u** *<local admin>*

   f) **editrights -a SeServiceLogonRight -u** *<local admin>*

For a new install, you may optionally install the 'CYGWIN syslogd' service if you would like the SFTP server events written to the Cygwin /var/log/messages file instead of to the Windows Application Log. Progress recommends that you only perform this step if SFTP server events are not being written to the Windows Application Log for some reason, or if you would prefer that these events not be written to the Windows Application Log since they could be substantial in volume:

1 Type **cd /bin**, and press **Enter**.

2 Type **./syslog-ng-config**, and press **Enter**.

3 When asked if you want to install syslogd as a service, type **Yes**.

4 To start the logging service, type:

   net start syslogd

Upgrading Cygwin and the SFTP Perimeter Server on Windows

To run MWSFTPD on Windows, you should use the 32-bit Cygwin version 3.1.6 or newer. If you need to upgrade or re-install Cygwin on Windows, you will need to uninstall the existing version of Cygwin and the SFTP Perimeter Server and then install the new versions.

NOTE: You do not need to upgrade Cygwin if you are currently running 3.1.6 or newer. Simply run the MWSFTP upgrade.

To uninstall Cygwin, proceed as follows. You must have administrative rights.

1   Delete the syslogd service, if it exists,

   a)   From the Start menu>Administrative Tools group, double-click *Services* and stop the CYGWIN Syslogd service.

   b)   Start the Cygwin bash shell as an administrator. If you are not an administrator, right-click the bash shell or the .bat file and select *Run as Administrator*.

   •   From the **Start** menu, find and click **Cygwin Bash Shell**, which is typically in a Cygwin folder.

   - or -

   •   From the **Start** menu, click **Run**, browse to the location where you installed Cygwin, double-click the cygwin.bat file, and then click **OK**.

   c)   From the Cygwin bash shell, type:

   sc delete syslogd

2   Delete the MWSFTPServer service, if it exists:

   a)   Stop the MWSFTPServer service within Services (see step 1a for instructions).

   b)   From the Cygwin bash shell type:

   sc delete MWSFTPServer

3   From the Cygwin bash shell type **exit** to close it.

4   *Install Cygwin and the SFTP Perimeter Server* (on page 126).

Start the SFTP Perimeter Server

You start the MessageWay SFTP Server differently, depending on the operating system where the server resides: UNIX/Linux or Windows.

To Start the SFTP Perimeter Server on UNIX or Linux

You start the MessageWay SFTP Perimeter Server with a startup script. The startup script, **mwsftpd**, has the options, **start**,**stop**,**restart** and **status**. Make sure you configure the server before you start it.

IMPORTANT: The script and the daemon process that the script starts and stops can be started only by the user, **root**. Check the system logs for errors if the server daemon process fails to start.

To start the SFTP server daemon, proceed as follows:

1 Log on as the user, **root**.

> **NOTE:** When running, MessageWay temporarily requires root access for the remote execution server, the SFTP proxy server and the FTP and SFTP perimeter servers. The FTP and SFTP perimeter servers require root access because they must listen on low ports (<1024), and both Linux and Solaris require root access to listen on low ports. Also, the SFTP perimeter server runs as root for the listener, but after a connection is accepted, it switches to the MessageWay user.

2 Go to the subdirectory where the script resides by typing:

cd /etc/init.d

3 To start the server daemon process, type:

./mwsftpd start

- or -

To check the server status, type:

./mwsftpd status

- or -

To stop the server, type:

./**mwsftpd stop**

- or -

To restart the server, type:

./**mwsftpd restart**

> **NOTE:** For Red Hat 7.x, MessageWay supports the systemctl utility, including automatically starting MessageWay when the application server is rebooted, and automatically starting MessageWay perimeter servers when the perimeter server is rebooted. The systemctl files are named *messageway.service*, *mwftpd.service*, *mwproxy.service*, *mwresd.service* and *mwsftpd.service*, and are located in **/usr/lib/systemd/system/**, with symbolic links being added in **/etc/systemd/system/multi-user.target.wants/**. See above systemctl files for more details.

> **IMPORTANT:** For SUSE 10, 64-bit systems, if you use password authentication rather than public key authentication, you may need to enable password authentication in the SSH configuration file, typically /etc/sshd_config. If this is not enabled, and you attempt to use password authentication, you will get a 1113 error stating that the system has exhausted authentication methods.

To Start the SFTP Perimeter Server on Windows

From Windows, before you start the MessageWay SFTP Perimeter Server, you must first start Cygwin, which provides command-line access in a Linux type environment. If you have not yet installed Cygwin, refer to the topic, "*To Install the SFTP Perimeter Server on Windows* (on page 126)".

> **CAUTION:** Before you proceed, make sure you do not have duplicate copies of cygwin1.dll installed on your server system. If you do, you will not be able to start syslogd or the SFTP server.

1   If you have not already done so, start the syslogd service as follows:

From Windows Services, right-click **Cygwin syslogd**, and click **Start**.

The status of the server should change to *Started*.

2   From Windows Services, right-click **MessageWay SFTP Server**, and click **Start**.

The status of the server should change to *Started*.

Installing or Upgrading the SFTP Proxy Server

The MessageWay SFTP Proxy Server provides connection service for the MessageWay SFTP Adapter to an external SFTP server. Once the connection is established, the proxy server acts as a pass-thru, and the adapter communicates directly with the external SFTP server.

These instructions allow you to install or upgrade the SFTP proxy server.

For more information about configuring the SFTP proxy server, please refer to the section "Configuring MessageWay Perimeter Servers" in the   *MessageWay User's Guide and Reference*.

Licensing Requirements for the SFTP Proxy Server

The MessageWay SFTP Proxy Server, the MessageWay SFTP Adapter and the MessageWay SFTP Perimeter Server are all included in the MessageWay base license, although you install and configure them separately. For more information, contact **MessageWay Technical Support**.

The SSH keys enable secure communications between the SFTP adapter and an external SFTP server. You can either enter the server key manually, or accept the server key transmitted by the server during the next connection. You use the MessageWay Key Management feature to generate new or import existing client keys. If you are using the proxy server, you configure a shared secret to secure the connection between the adapter and the proxy server.

Install the SFTP Proxy Server

The installation process for the SFTP proxy server varies depending on the operating system where you install the components, UNIX/Linux or Windows.

To Install the SFTP Proxy Server on UNIX or Linux

1   Log on as user, **root**.

> **NOTE:** The installer requires root access in order to create the initial install directories and install the startup script, typically in /etc/init.d.

2   Go to the mwayinstall directory, and untar the MessageWay SFTP Proxy Server tarball, ProxyServerinstall file.

For a UNIX system, issue the following commands:

    a)   **gzip -d** *ProxyServerinstall file name*

    b)   **tar –xvf** *ProxyServerinstall file name*

This creates a subdirectory of the name of the install file.

NOTE: Don't include the **.tgz** extension in the tar command.

For a Linux system, issue the following command:

- **tar -xzvf** *ProxyServerinstall file name*

This creates a subdirectory of the name of the install file.

3   Go to the directory you just created, and run the install script by typing:

    ./install.sh.

To review the locations of files for the SFTP proxy server, refer to the topic, *MessageWay Files and Locations for UNIX/Linux* (on page 13).

To Install the SFTP Proxy Server on Windows

When you are ready to install the SFTP proxy server, the first step is to run the installation program from your install medium:

1   Locate and run the install program from the install package sent by Progress:

    …\messageway_6.1.0\windows\mwproxy-6.1.0-win32-install.exe

2   Click **OK** to begin the installation.

An installation window appears as shown below, followed by a notice regarding the location of the MessageWay documentation files.
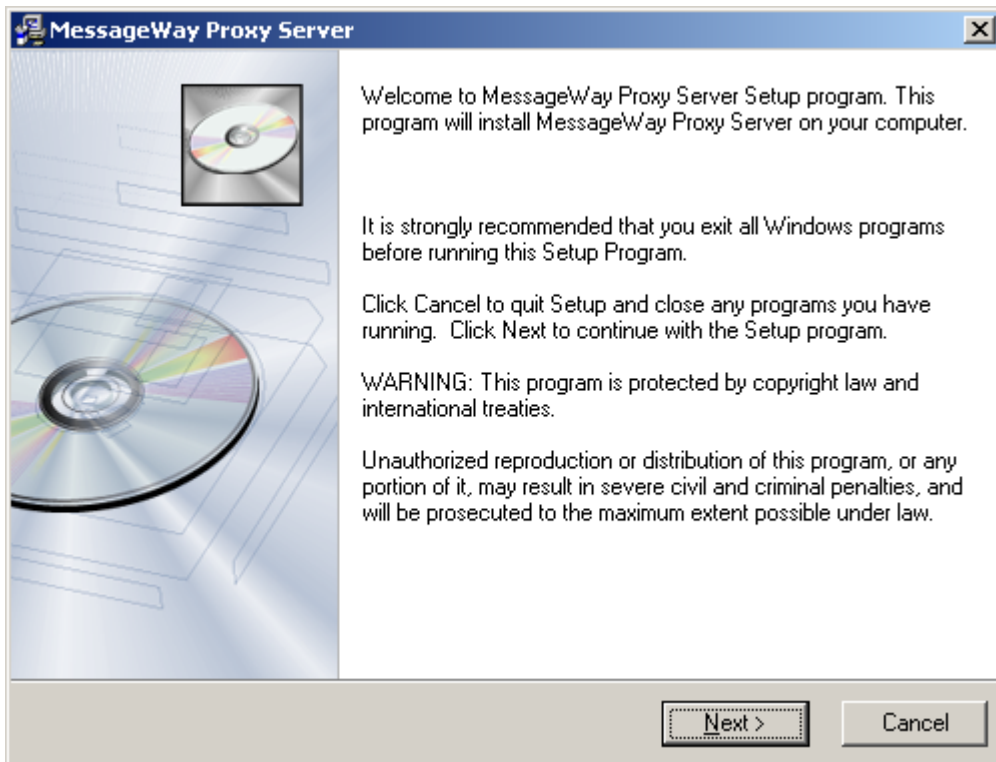
3 Click **Next**.

The MessageWay Proxy Server notice screen appears.

4 Click **Next** to continue.

The MessageWay Proxy Server Directory screen appears.
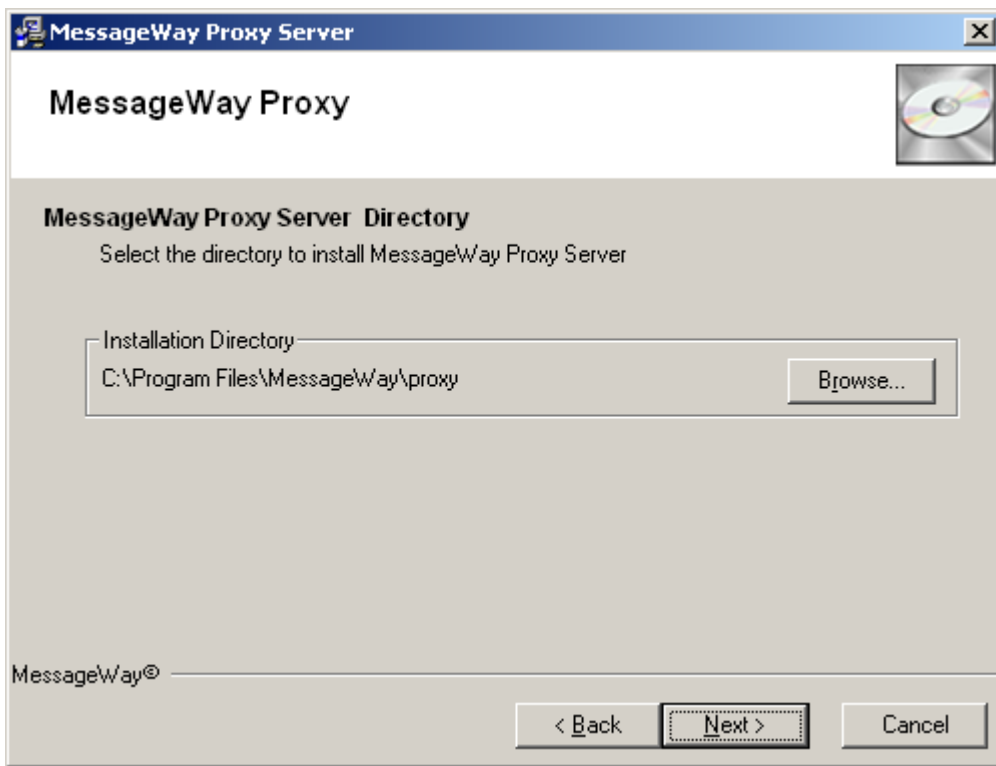
5 Change the directory where you want to install the server by clicking the **Browse** button, then click **Next** to continue.

The Start Installation screen appears.

6   This screen allows you to cancel the installation, if necessary. To continue, click **Next**.
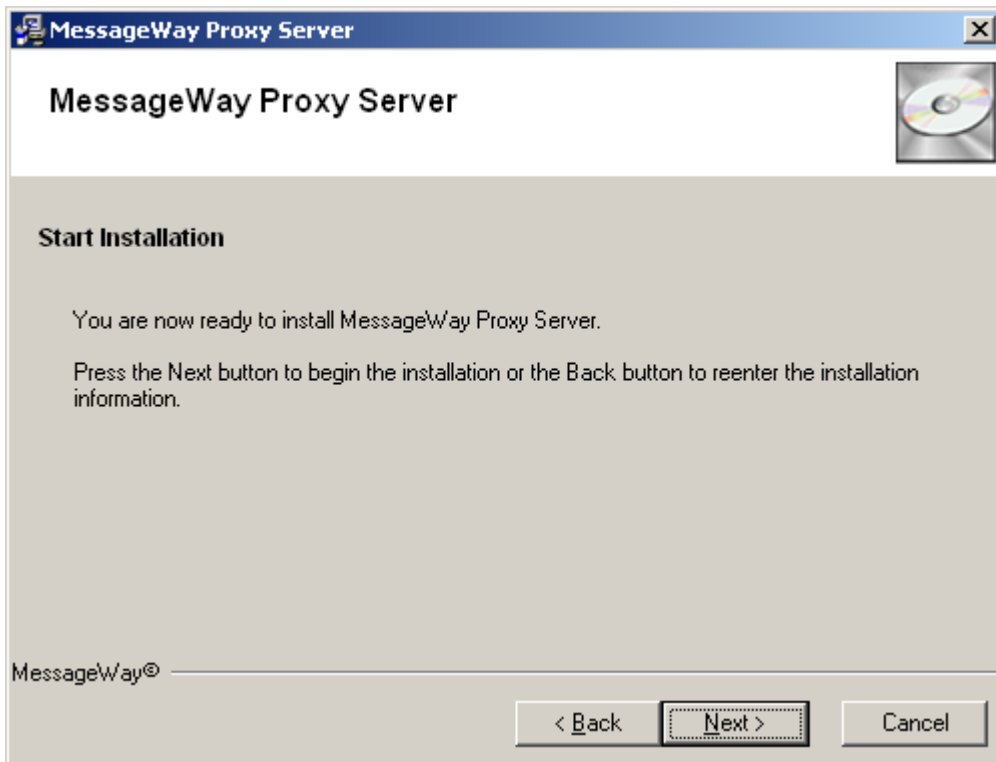
7   When the installation is complete, the final screen will appear. Click **Finish** to exit the installation procedure.

The locations of the main files for the SFTP Proxy Server are as follows:

File Name	Description	Location
mwproxy.exe	SFTP Proxy Server Executable file	\Program Files\MessageWay\proxy
mwproxy.conf	SFTP Proxy Server Configuration file	*AllUsersApplicationFolder*\MessageWay

Start the SFTP Proxy Server

You start the MessageWay SFTP Proxy Server differently, depending on the operating system where the server resides: UNIX/Linux or Windows.

To Start the SFTP Proxy Server on UNIX or Linux

You start the MessageWay SFTP Proxy Server with a startup script. The startup script, **mwproxy**, has the options, **start**,**stop**,**restart** and **status**. Make sure you configure the server before you start it.

IMPORTANT: The script and the daemon process that the script starts and stops can be started only by the user, **root**. Check the system logs for errors if the server daemon process fails to start.

To start the proxy server daemon, proceed as follows:

1 Log on as the user, **root**.

NOTE: When running, MessageWay temporarily requires root access for the remote execution server, the SFTP proxy server and the FTP and SFTP perimeter servers. The FTP and SFTP perimeter servers require root access because they must listen on low ports (<1024), and both Linux and Solaris require root access to listen on low ports.

2 Go to the subdirectory where the script resides by typing:

cd /etc/init.d

3 To start the server daemon process, type:

./mwproxy start

- or -

To check the server status, type:

./mwproxy status

- or -

To stop the server, type:

./mwproxy stop

- or -

To restart the server, type:

./mwproxy restart

NOTE: For Red Hat 7.x, MessageWay supports the systemctl utility, including automatically starting MessageWay when the application server is rebooted, and automatically starting MessageWay perimeter servers when the perimeter server is rebooted. The systemctl files are named *messageway.service*, *mwftpd.service*, *mwproxy.service*, *mwresd.service* and *mwsftpd.service*, and are located in **/user/lib/systemd/system/**, with symbolic links being added in **/etc/systemd/system/multi-user.target.wants/**. See above systemctl files for more details.

To Start the SFTP Proxy Server on Windows

To start the MessageWay SFTP Proxy Server on Windows, proceed as follows:

1 From the **Start** menu, select **Programs|Administrative Tools|Computer Management**.

The Computer Manager window appears.

2 In the left pane, expand the folder **Services and Applications**, and click **Services**.

The Services window appears.

3 In the right pane, scroll to the service, **MessageWay Proxy Server**.

4 Right-click **MessageWay Proxy Server**, and select **Start** from the menu.

The Status column should display **Started**.

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Installing or Upgrading Additional Adapters or Services

MessageWay is licensed and delivered with one copy of each of the following adapters and services enabled:

- MessageWay Compression Service
- MessageWay Character Set Conversion Service
- MessageWay Custom Processing Service
- MessageWay Distribution List Service
- MessageWay Rules Service
- MessageWay Custom IO Adapter
- MessageWay Disk Transfer Adapter
- MessageWay Email Adapter
- MessageWay FTP Adapter
- MessageWay SFTP Adapter

Additional adapters and services including additional instances can be added to the main MessageWay server, but a license must be purchased and installed before they can be started.

NOTE: The perimeter server upgrade procedures are the same as the installation procedures. Please use the applicable installation topic for your perimeter server upgrade.

Before installation, make sure you review the topic, *Pre-requisites to Install Optional Adapters or Services* (on page 23).

NOTE: If you were already running the translation service option Edikit with MessageWay, the upgrade program will automatically install MW Translator. If not, you must install MW Translator separately.

Installing Additional Adapters or Services for Windows

Except for a couple of screens, installing additional adapters or services is similar to the original installation of MessageWay on a Windows server.

IMPORTANT: Before you can use the adapter or service, you must have an updated license. For more information, contact MessageWay Technical Support.

When you are ready to install an additional adapter or service on your Windows server, the first step is to run the setup program:

1   Locate and run the setup program from the install package sent by Progress:

   …\messageway_6.1.0\windows\messageway-6.1.0-win32-install.exe.

2   Click **OK** to begin the installation.

   The same setup screens will appear as shown in the installation of the server earlier in this document.

3   When the User ID/Password window appears, enter the same user and password that were used in the original install, and click **Next.**

   The Select Option window appears.
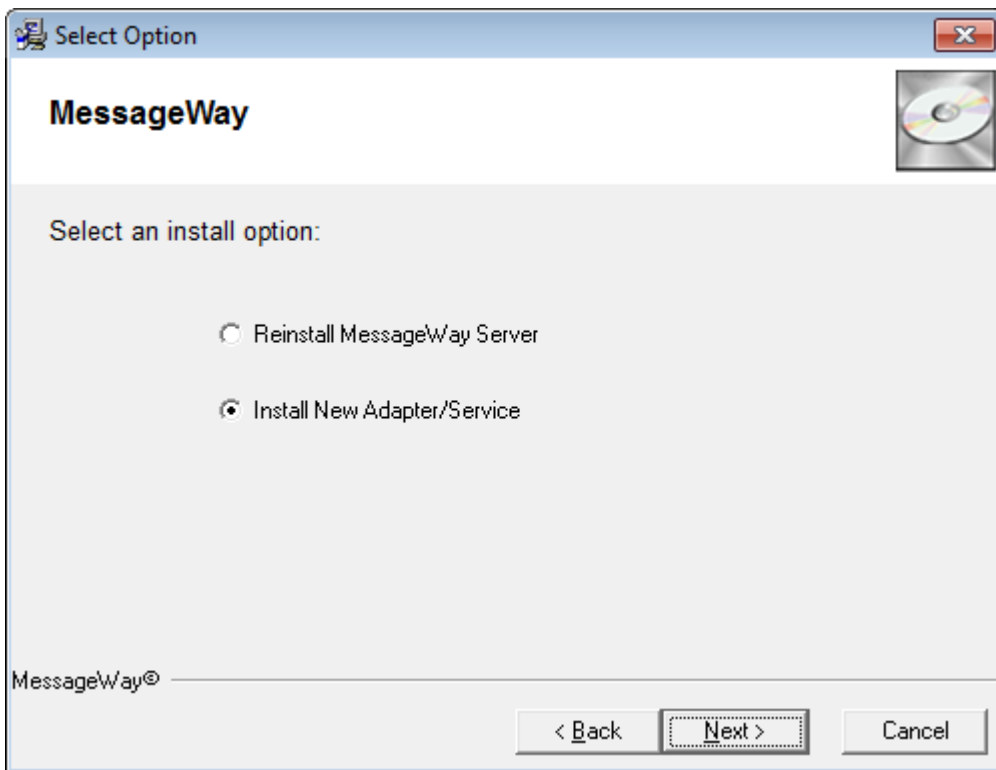
4 Select **Install New Adapter/Service**, then click **Next** to see the list of adapters and services that can be installed.
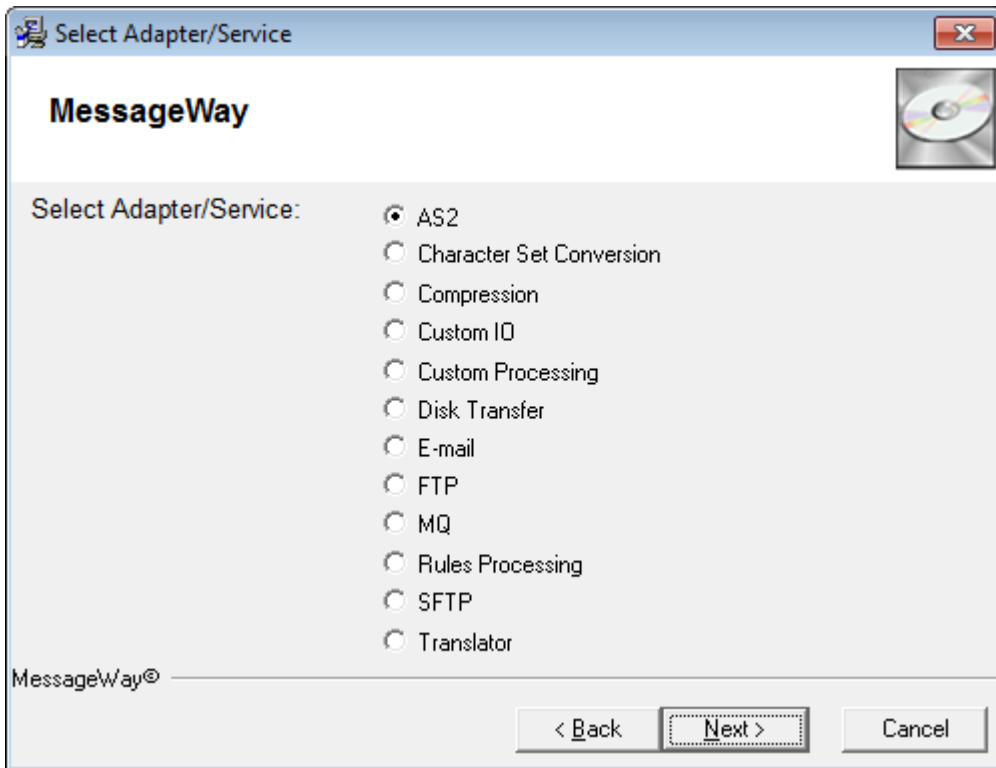
5 Select the adapter or service that you wish to install, and click **Next**.

6 MessageWay allows you to run multiple copies of adapters and services. If the base adapter or service already exists, the Enter Adapter/Service Name window appears to allow you to add another adapter or service of that type with a different name.
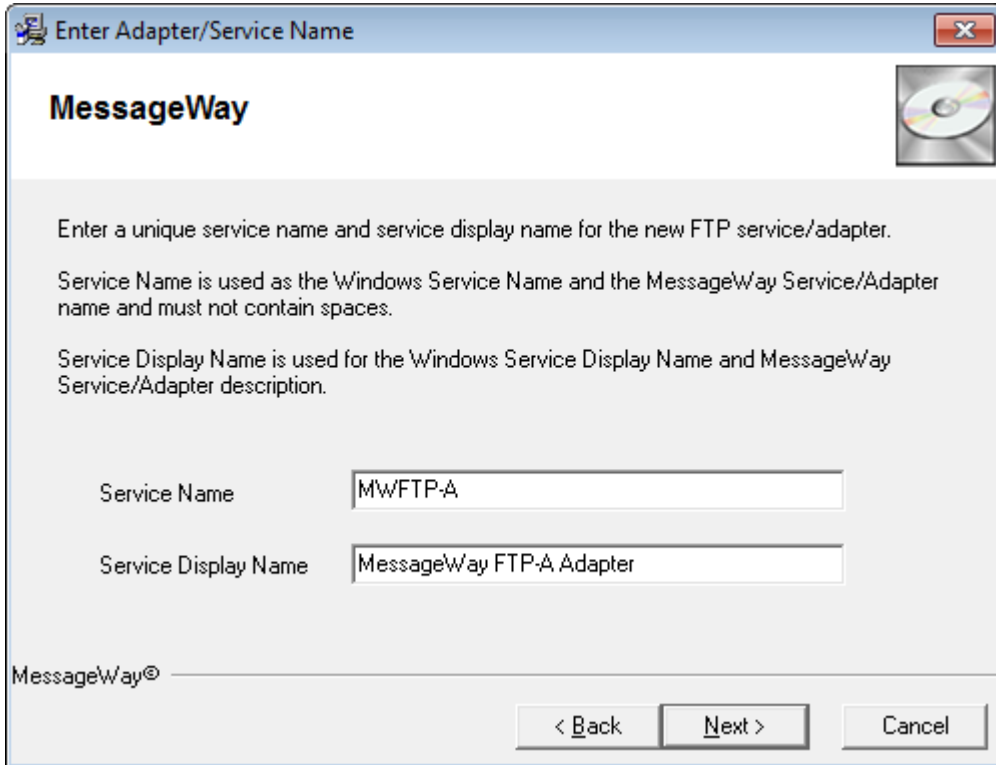
a) In the **Service Name** box, type the name of the new adapter or service. The Service Name may not contain spaces.

b) In the **Service Display Name** box, type the name that will allow you to identify the adapter or service more easily.

7 Click **Next** when complete.

A Start Installation window appears to allow you to double-check your information.

8 Click **Next** again if you are sure you want to create the new adapter.

9 Click **Finish** once the setup program has completed.

10 Restart the MessageWay Manager.

The new adapter or service will appear under the **Adapters/Services** folder.

By default the new adapter or service will be set to **Manual** startup. That can be changed to **Automatic** by double-clicking the adapter or service name and changing the **Startup Type** on the properties window.

Installing Additional Adapters or Services for Linux and UNIX

Installing additional adapters or services on Linux and UNIX servers is similar to the original installation of MessageWay on a Linux or UNIX server.

When you are ready to install an additional adapter or service on your server:

1 Log on as user **root** and access the install directory.

2 Start the installation program by typing:

./install.sh

3 This command will start the installation script and lead you through a series of prompts. The answers provided will which additional adapters or services get added to the server. An example of an adapter installation on Linux or UNIX is shown below:

Installing MessageWay On Host: [LinuxRH] OS: [Linux]

Enter MessageWay System User (mway) :

Enter MessageWay System Group (mway) :

DB User: mway

Enter MessageWay DB Password :

MessageWay install path - /opt/messageway

MessageWay data path - /var/opt/messageway

(R)einstall Messageway or Install new (A)Adapter/Service? (R) : **A**

Enter type of Adapter/Service to add -

(A)S2

(C)ompression

Character Set Con(v)ersion

Custom (I)/O

Custom (P)rocessing

(D)isk Transfer

(T)ranslator

E-(m)ail

(F)TP

(S)FTP

(R)ules Processing

IBM WebSphere M(Q)

? : **I**

Enter name for new Custom I/O Adapter : **MWCustomIO_2**

The following adapter/service will be installed

MessageWay Install List

        MWCustomIO_2, Custom I/O Adapter

Proceed? (Y) : **Y**

Starting Install...

MWCustomIO_2 daemon installed

NOTE: This same process can be used to add other adapters or services. When you add a second copy of an existing adapter or service, the script will prompt you for a new name. The name cannot contain spaces, and will be used by Progress to generate the new license file that contains an entry for the new adapter or service.

Licensing the New Adapter or Service

To enable a new adapter or service, Progress must deliver a new license file. Once the new license has arrived, add it to MessageWay using the procedure shown in the *Post-installation Tasks for All Platforms* (on page 61) section earlier in this document.

Starting the New Adapter or Service

The newly installed adapter or service can be started one of two ways from the MessageWay Manager as follows:

- Right-click the adapter or service name, and click **Start** from the drop down box.

  - or -

- Left-click the adapter or service, and click the green start arrow in the task bar.

Custom Logging of Events in UNIX/Linux

The following steps explain how to route MessageWay events on a UNIX or Linux operating system to a location other than the default messages file.

Overview of Custom Logging in UNIX/Linux

By default, MessageWay writes events to the daemon facility. In most cases, the syslog.conf file does not contain an entry for the daemon facility so MessageWay events get routed by a default or wildcard entry.

The default locations of the MessageWay event log for UNIX and Linux systems are:

UNIX   /var/adm/messages

Linux   /var/log/messages

This information is intended for system administrators and describes the necessary configurations for both MessageWay files and system files.

Changing the Default Logging Locations

In order for MessageWay to isolate events to independent location(s), one of the syslog LOCAL(0-7) facilities must be dedicated to MessageWay.

Changing Logging Locations for UNIX

There are four files that need to be modified. Each file is discussed separately. The following section uses LOCAL2 as the dedicated facility.

IMPORTANT: After you modify the following files, you must stop and restart both MessageWay and the syslogd processes.

1 Edit the messageway file, typically /opt/messageway/init/messageway, and search for $UID. Add the following two modifications shown in bold lettering:
```
if [ $UID -eq 0 ]; then
   su - ${MWAY_USER} -c "${BIN_PATH}/mwaymsg
      -l LOG_LOCAL2"
```

```
else
   ${BIN_PATH}/mwaymsg -l LOG_LOCAL2
fi
```

2 Edit the initfunc file, typically /opt/messageway/init/initfunc, and perform a search for "Start the Service". Make the following modification shown in bold lettering:

```
# Start The Service
#
echo $"Starting ${SERVICE_NAME}: "
export LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:${BIN_PATH}
${BIN_PATH}/$PROG_NAME -l LOG_LOCAL2 $SERVICE_NAME
RETVAL=$?
```

3 Edit the syslog.conf file, typically /etc/syslog.conf. The following is an example of how you might configure your system to log MessageWay events. Changes are shown in bold lettering:

```
# If used, comment existing entry for local2
# insert pound character at column 1.
#
#local2.info  -/var/adm/localmessages
#
# The following example shows info, warning,
# and error events all to one file. Unlike the
# Linux section examples, the Solaris platform
# does not have the ability to log specific
# priority levels to individual log files.
# Instead, when using a particular priority
# level, for example, "info", Solaris will log
# all events of info and greater priority.
# Please use the man utility for syslog.conf
# for further details.
#
local2.info          -/var/adm/MWayAllEvents.log

local1.info        -/var/adm/localmessages
local3.info        -/var/adm/localmessages
local4,local5.info -/var/adm/localmessages
local6,local7.info -/var/adm/localmessages
```

4 Create the file **/var/adm/MWayAllEvent.log**.

5 In the /var/adm folder issue the following command:

```
touch MWayAllEvent.log
```

6   To manage and maintain the new MessageWay log files, add them to the logadm.conf file, typically /etc/logadm.conf. Edit the logadm.conf file to add an entry for the new MessageWay log(s). Changes are shown in bold lettering:

```
#
# Sample entry to rotate MessageWay log files
# each month and keep 5 generations of files.
#
/var/adm/MWayAllEvents.log -C 5 -p 1m -a 'kill
    -HUP `cat /var/run/syslog.pid`'
```

Changing Logging Locations for Linux

There are two files that need to be modified. Each file is discussed separately. The following example uses LOCAL0 (zero) as the dedicated facility.

IMPORTANT: After you modify the following files, you must stop and restart both MessageWay and the syslogd processes.

1   Edit the syslog.conf file, typically /etc/syslog.conf. In bold characters below are three options depending how you want to log the MessageWay events:

```
#
# If used, comment existing entry for LOCAL0.
# Insert pound character at column 1.
#
#local0.*      -/var/log/localmessages
#
# The following are three options shown for
# LOCAL0; <option 1> is # uncommented.
#
# <option 1> info, warning, and error events
# all to one file.
#
LOCAL0.*      -/var/log/MWayAllEvents.log
#
# <option 2> info, warning, and error events to
# separate files. Using an "=" sign before the
# priority will log only that priority level.
#
```

```
#LOCAL0.=info       -/var/log/MWayInfoEvents.log
#LOCAL0.=warning    -/var/log/MWayWarnEvents.log
#LOCAL0.=err        -/var/log/MWayErrorEvents.log
#
# <option 3> info & warning 1 file; err in
# different file.
#
#LOCAL0.=info;LOCAL0.=warning
#  -/var/log/MWayOtherEvents.log
#LOCAL0.=err  -/var/log/MWayErrorEvents.log
#
local1,local3.*    -/var/log/localmessages
local4,local5.*    -/var/log/localmessages
local6,local7.*    -/var/log/localmessages
```

2   As user *mway*, open /opt/messageway/init/logfacility, and edit the logfacility file to reflect the setting used in syslog.conf in Step1.

```
#LOG_FACILITY="-l LOG_LOCAL7"
LOG_FACILITY="-l LOG_LOCAL7"
```

3   Stop and Start the syslog.

```
/etc/init.d/./syslog restart
```

4   Stop and start MessageWay.

```
/opt/messageway/init/./messgeway restart
```

5   To manage and maintain the new MessageWay log files, add them to the logrotate.conf file, typically /etc/logrotate.conf. Edit the logrotate.conf file to add an entry for the new MessageWay log(s), as shown in bold characters:

```
# System-specific logs may be also be configured
# here. This sample entry rotates MessageWay
# log files each month.
#
/var/log/MwayAllEvents.log {
   rotate 5
   monthly
   postrotate
      /sbin/killall –HUP syslogd
   endscript
}
```

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Tuning a MessageWay System

Here are some suggestions to tune your MessageWay system.

Recommendations for High-volume Transfers Through Perimeter Servers on UNIX and Linux

We recommend the following changes to handle high volume transfers via perimeter servers on Linux and Solaris. These are the recommended minimums to handle 1000 parallel sessions for an extended period of time.

CAUTION: MySQL 5.5 does not support the earlier syntax in the my.cnf file that included *set-variable = .*
If you upgrade MySQL to version 5.5 in preparation for an upgrade to MessageWay 6.1, you may need to edit my.cnf and remove all *set-variable =* values that precede the actual parameter setting. For example, if you have the parameter **set-variable = max_connections=1000**, you must change it to read **max_connections=1000**.

Recommendations for a Bash Profile for MySQL

These are recommended personal environment variables to set in the .bash_profile files for the root user and for the owner of MessageWay.

1   Log on as the root user.

2   From the home directory of the owner of MessageWay, typically *mway*, and then *root*, edit the **.bash_profile** files of each user to add the following lines:

The following sets the maximum number of open file descriptors:

> **ulimit -n 2048**

The following sets the maximum number of processes available to a single user:

> **ulimit -u 4096**

The following setting enables core file dumps, which may be required for troubleshooting:

> **ulimit –c unlimited**

3   Save and close the files.

4   Log out and then log back in as the owner of MessageWay.

IMPORTANT: If you have already started MessageWay, you must restart it to make the change take effect.

Recommendations for Hard and Soft Limits on UNIX and Linux

We recommend that you set the HARD and SOFT limits for the owner of MessageWay.

For Linux systems, proceed as follows.

1   Open the file: /etc/security/limits.conf (linux)
2   Add the following lines to set the hard and soft limits for the owner of MessageWay, typically mway. If the owner is some user other than mway, replace mway in the following commands with your user:

mway soft nproc=4096

mway hard nproc=16384

mway soft nofile=2048

mway hard nofile=65536

For UNIX systems (solaris on global zone), proceed as follows:

1   Open the file /etc/system.
2   Add the following lines:

set max_nprocs=16384

set rlim_fd_max=65536

Recommendations for MessageWay Servers

We recommend the following settings for the MessageWay FTP Perimeter Server and the MessageWay Service Interface.

1   Add the following lines to the MessageWay FTP Perimeter Server configuration file /etc/messageway/mwftpd.conf in the Global section:

MaxConnections=1100

PortRange=20000 - 21500

2   Add the following line to the MessageWay Service Interface configuration file /etc/messageway/mwsi.conf in the Global section:

MaxConnections=2200

Recommendations for MySQL Databases

Here are some suggestions to improve performance with a MySQL database.

CAUTION: MySQL 5.5 does not support the earlier syntax in the my.cnf file that included *set-variable = .* If you upgrade MySQL to version 5.5 in preparation for an upgrade to MessageWay 6.1, you may need to edit my.cnf and remove all *set-variable =* values that precede the actual parameter setting. For example, if you have the parameter **set-variable = max_connections=1000**, you must change it to read **max_connections=1000**.

IMPORTANT: Perform the following as the user **root** from the installation directory, such as, /home/mway/mwayinstall/*name of install file*, which is created when you untar the install file as described in the topic, ***Using the Installation File*** *(on page 48).*

The MySQL install for versions 5 or higher does not create the my.cnf configuration file. You should have already created this file, but if not, refer to the topic ***Creating the MessageWay Database in MySQL*** (on page 53).

1   In /etc, open **my.cnf**.

2   In the section **[mysqld]**, add or change the following text in bold using the values specified.

max_allowed_packet=64M (default was 1M)

max_connections=5000 (default was 1000)

lower_case_table_names=1

interactive_timeout=2592000

wait_timeout=2592000

query_cache_size=20M

thread_cache_size=40

innodb_buffer_pool_size=128M

innodb_log_buffer_size=8M

innodb_log_file_size=64M

innodb_flush_log_at_trx_commit = 0

innodb_additional_mem_pool_size = 1M

Recommendations for Oracle Databases

To improve performance, especially when starting adapters, you can execute the following commands:

dbms_stats.gather_schema_stats
(ownname=>'MWAY',
estimate_percent=>20,
degree=>1,
cascade=>TRUE);

dbms_stats.gather_table_stats
(ownname=>'MWAY',
TABNAME=>'MESSAGES',
ESTIMATE_PERCENT=>20,
CASCADE=>TRUE,
METHOD_OPT=>'FOR COLUMNS SIZE 10 status',
degree=>4);

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Installing Hotfixes

Hotfixes are released intermittently as required to correct software issues. They are available as downloads from the support Web site. Hotfixes affect only software object code. Hotfixes never change user configurations or environments.

	Before you install a hotfix, make sure you take a backup of the MessageWay database.
Best Practice	

The process to install emergency repairs is automated. A readme file accompanies each patch with specific information about the changes that it contains and with instructions for installation.

IMPORTANT: When you install a MessageWay Manager hotfix on a Windows 7 or later system, the system may display the following notice from the Program Compatibility Assistant: "This program might not have installed correctly." This is an erroneous notice generated by the Microsoft Program Compatibility Assistant. If you receive this message, click the option "This program installed correctly."

The basic procedure is as follows:

1 Contact MessageWay Technical Support to request a hotfix install package.

2 Read the readme file associated with the hotfix install package.

> **NOTE**: The install file that you download contains a copy of the readme file.

3 Follow the instructions in the readme file, which vary depending on the system where you have installed the software – Windows, Linux or UNIX.

> **NOTE:** The hotfix replaces the software in the /bin directory for the affected components. It does not change environments or user configurations.

  a) For hotfixes that apply to the MessageWay Manager, run the hotfix wherever the manager is installed.

  b) For hotfixes that apply to the MessageWay server and its components, such as adapters, services and related servers, run the hotfix wherever a MessageWay server is installed.

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Uninstalling MessageWay

Users may want to uninstall MessageWay for various reasons, particularly during testing. These instructions describe basic procedures to uninstall the minimal components of MessageWay as well as additional components, depending on a user's needs.

When you uninstall MessageWay, you uninstall two parts:

▪ MessageWay Manager, also called the MessageWay Client
▪ MessageWay Server

To uninstall MessageWay, you will perform the following tasks:

1 Stop the MessageWay servers and then the MessageWay Manager.
2 Uninstall the MessageWay Manager.
3 Uninstall the MessageWay servers.

Stopping the MessageWay Servers

To uninstall MessageWay, you must first stop the MessageWay servers. How you do this will depend on the whether you are running the MessageWay servers on Windows or UNIX/Linux.

How to Stop MessageWay on Windows

On Windows, MessageWay runs as a Windows service. You can stop MessageWay from Windows Services.

IMPORTANT: Closing the MessageWay Manager window does not stop servers or log you off the database.

To stop a MessageWay server on Windows, proceed as follows:

1 Open Windows Services for the machine where the server runs.
2 Right-click the MessageWay Messaging Server, and click **Stop**.

How to Stop MessageWay on UNIX or Linux

Make sure you are logged on as the user that owns MessageWay, typically **mway**. Stop MessageWay as follows:

1 At a command prompt, type the following commands and press **Enter** to:
   a) Change the directory to where the script runs:

        cd /*installation_directory*/init

b) Run the script to stop MessageWay

        ./messageway stop

The MessageWay Server stops other servers and then itself.

2 To check the status of the Messaging Server, type the following command and press **Enter**:

        ./messageway status

Uninstalling the MessageWay Manager

To uninstall the MessageWay Manager, also called the MessageWay Client, proceed as follows:

1 Make sure the MessageWay servers and the MessageWay Manager are stopped.

2 From the Control Panel, which is usually accessible from **Start|Settings**, select **Add or Remove Programs**.

The Add or Remove Programs window appears.

3 From the list, select **MessageWay Client 6.1** and follow the instructions.

Uninstalling the MessageWay Servers

How you uninstall the MessageWay servers depends on the whether you are running the MessageWay servers on Windows or UNIX/Linux.

When you uninstall the MessageWay servers, if you want to save information for a future reinstallation, save these files:

Server Location	Default Location
Windows	▪ *MessageWayUserApplicationsFolder* \messageway\messageway.conf ▪ C:\Program Files\MessageWay\bin\messageway.lic
UNIX/Linux	▪ /etc/messageway/messageway.conf ▪ /opt/messageway/bin/messageway.lic ▪ *RootHome*/.messageway.install

If you do not remove the MessageWay database, the following information remains.

Server Location	Information that remains
Windows	▪ ..\MessageWay\audit folder ▪ ..\MessageWay\archives folder ▪ ..\MessageWay\msgstore folder ▪ ..\MessageWay\db folder ▪ C:\Program Files\MessageWay\bin\messageway.lic ▪ ODBC connection
UNIX/Linux	▪ /etc/messageway.conf ▪ database ▪ ODBC connection

Uninstalling the MessageWay Servers from Windows

When you uninstall MessageWay from a Windows system, it uninstalls the servers controlled from the MessageWay Manager.

IMPORTANT: You must uninstall any optional servers that are not controlled from the MessageWay Manager, such as the MessageWay Remote Execution Server (RES), the MessageWay FTP Perimeter Server or the MessageWay SFTP Perimeter or Proxy Server, from all systems separately.

The Add or Remove Programs process does not delete all files and folders. It only deletes those files that the installation process created initially. Folders whose contents users created while running MessageWay remain. They must be deleted manually, as desired. This process does not delete the configuration database. Users must do that separately also.

To perform a basic uninstall without removing the database and other messaging information, proceed as follows:

1 If you are going to re-install MessageWay on Windows and want to retain your basic settings, you should save a copy of \Users*MessageWayUser*\AppData\Roaming\messageway/messageway.conf.

2 From the Control Panel, which is usually accessible from **Start|Settings**, select **Add or Remove Programs**.

The Add or Remove Programs window appears.

3 From the list, select **MessageWay** and follow the instructions.

To also remove the database and associated files, do the following:

1 To delete the database:

 a) Back up your database, if required.

 b) Delete the ODBC data source name (DSN), typically **MessageWay_DSN**.

 c) Delete the database using your database administrator software.

2 To clean out actual messages or files related to messaging that are used by the database:

 a) To remove audit files, delete the **..\MessageWay\audit** folder.

    b) To remove archive files, delete the **..\MessageWay\archive** folder.

    c) To remove message files, delete the **..\MessageWay\msgstore** folder.

3   To remove all remaining programs and files, delete the **..\Program Files\MessageWay** folder.

4   If a program was added as a service in a separate command process, as we do with mwsftp when we add syslogd as a service, you must also uninstall the service separately. To uninstall a service, such as Cygwin syslogd, at a command prompt type the following:

sc delete syslogd

CAUTION: The display name and the name of the program may be different. For example, the name of the service program is *syslogd*, but the display name is *Cygwin Syslogd*.

Uninstalling the MessageWay Servers from UNIX/Linux

When you uninstall MessageWay from a UNIX/Linux system, you must manually delete the necessary files and directories.

To perform a basic uninstall without deleting the database and its supporting files, proceed as follows:

1   Delete all files in the **/opt/messageway** directory and the directory itself.

2   Delete all files in the **/var/opt/messageway/pipe** directory and the directory itself.

3   Delete all files in the **/var/opt/messageway/server** directory and the directory itself.

To delete the database and additional files, do the following:

1   To delete the database:

    a) Back up your database, if required.

    b) Delete the ODBC data source name (DSN), typically **MessageWay_DSN**.

    c) Delete the database using your database administrator software.

2   To clean out other files:

    a) To remove audit files, delete the files in the **/var/opt/messageway/audit** directory and the directory itself.

    b) To remove archive files, delete the files in the **/var/opt/messageway/archives** directory and the directory itself.

    c) To remove message files, delete the files in the **/var/opt/messageway/msgstore** directory and the directory itself.

    d) To remove configuration files, delete **messageway.conf** from the **/etc/messageway** directory, as well as any other configuration files used for optional processes, such as **mwresd.conf** or **mwftpd.conf**.

    e) To remove certificates, agents file, delete **/etc/messageway/certs** directory and all contents.
       IMPORTANT: This removes keys and certificates for secure processes such as secure FTP, HTTP and Remote Execution Server. To save these files, copy them from the appropriate subdirectories.

    f) To remove daemon files, delete them from the **/etc/init.d** directory.

    g) To remove system logs, delete them from the **/var/log** (Linux) or **/var/adm** (UNIX) directory.