



CHAPTER 2

Installing the MWTM 6.1.3 on Solaris

This chapter describes how to install the MWTM 6.1.3 on a Sun Solaris system. It also provides information about verifying the installation and uninstalling and reinstalling the MWTM on Solaris.



Note

For more information about installing previous versions of MWTM, see the appropriate documentation at the following URL: http://www.cisco.com/en/US/products/ps6472/prod_installation_guides_list.html

This chapter includes the following sections:

- [Overview of the Installation Process, page 2-1](#)
- [Installation Prerequisites, page 2-2](#)
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- [Verifying the MWTM Installation, page 2-16](#)
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Overview of the Installation Process

When you start the MWTM install tool, it prompts you for a response and displays the default value for each prompt in square brackets []. To accept the default value, press **Enter**. (When in doubt, accept the default).

The MWTM also verifies the availability of all values, such as port numbers, before accepting them.

To stop the MWTM install tool at any time, press **Ctrl-C**.

If you attempt to install the MWTM in one window while installing another product (such as HP OpenView) in another window, the MWTM installation fails. If this situation occurs, wait until all other product installations are complete, then enter the following command from the top of the MWTM CD image:

```
./uninstall.sh -n
```

This command removes all MWTM components and restores your system to a clean state. Then reinstall the MWTM.

**Note**

Starting the client on Solaris after installation requires that you set the variable DISPLAY to your display in your UNIX shell environment. If you used Telnet to get to the server, you will not have access to your display and will not have the DISPLAY variable automatically set.

Installation Prerequisites

Before you run the MWTM install tool:

- Make sure your Solaris system meets the requirements listed in [Server System Requirements, page 1-3](#).

Installing the MWTM 6.1.3 on Solaris

Installing the MWTM requires the following actions, in this order. Many of these steps are partially or fully automated.

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17. [Viewing the Installation File, page 2-14](#)

The MWTM uses separate server and client installation scripts. If you choose to install both the server and client, the server script runs first, followed immediately by the client script.

Preliminary Activities

Complete these preliminary steps:



Caution

These steps include logging in as the root user. As the root user, you can adversely affect your operating environment if you are unaware of the effects of the commands you use. If you are a relatively inexperienced UNIX user, limit your activities as the root user to the tasks described in this guide.

Step 1 If you have not already logged in, log in as the root user:

```
> login: root
> Password: root-password
```

If you are already logged in, but not as the root user, use the **su** command to change your login to root:

```
# su
# Password: root-password
```

Step 2 Mount the DVD-ROM drive.

Step 3 Change to the mounted directory using the following command:

```
# cd /cdrom/MWTM60/solaris
or
# cd /cdrom/cdrom0/solaris
```

Starting the Install Tool

In this step you start the install tool and select the appropriate installation option.

Step 1 Start the install tool by entering the following command:

```
# ./setup.sh
or
# ./setup.sh -i
```



Note

If you are installing the MWTM using an NFS-exported DVD-ROM drive, image checking might take several hours to complete. To avoid this problem, enter `./setup.sh -i`, which disables image checking.

Step 2 The install tool checks the server and client images, then displays the installation menu:

```
1) Review README File First (Recommended)
2) Install MWTM Server and Client
3) Install MWTM Server Only
4) Install MWTM Client Only
5) Exit Setup
```

Please choose an option ->

Choose one of the following installation options:

- To read the latest information about the MWTM in the **README** file, enter **1**, then press **Return**.
- To install both the MWTM server and client, enter **2**, then press **Return**.

The MWTM uses separate server and client installation scripts. If you choose to install both the server and client, the server script runs first, followed immediately by the client script.

- To install the **MWTM** server alone, enter **3**, then press **Return**.
- To install the **MWTM** client alone, enter **4**, then press **Return**.
- To exit the install tool, enter **5**, then press **Return**.

If you selected option **2** or **3**, the install tool displays information similar to the following:

```
===== MWTM Server Install Tool Started =====
Started : date, time
Host : Solaris your_MWTM_server
Version : 6.1.3
=====
INFO: Checking UID... root, OK.
```

where *your_MWTM_server* is the name of your MWTM server.

The install tool now performs a system-requirements check to ensure that all requirements are met. Information similar to the following appears:

```
=====
=====Server Installation Checking:=====
=====
INFO: Checking Host Operating System...SunOS, OK.
INFO: Checking Operating System Version... 4, OK.
INFO: Checking for RHEL Update Number... 6, OK.
```

```
INFO: This product requires:
      RAM          2048 MB
      SWAP         6144 MB
      CPU          1024 MHz
```

```
INFO: Checking RAM... 4000 MB OK
```

```
INFO: Checking Swap... 7993 MB OK
```

```
INFO: Checking CPU... 2994 MHz OK
```

If all requirements are in place, the following appears:

```
INFO: Checking your release... All components present.
```

If any requirement is missing, a warning message appears.

Checking the TCP/IP Address for the MWTM Server

The install tool now performs a TCP/IP address check. Information similar to the following appears:

```
=====
===== TCP/IP Address Check =====
=====
Here are the network-names defined for: your_MWTM_server
localhost
your_MWTM_server
```

where *your_MWTM_server* is the name of the MWTM server.

```
=====
INFO: Machine: "your_MWTM_server" resolves to server_IP_address
```

```
INFO: Verify this data is the same on each of your MWTM client machines.
```

```
INFO: Local address resolution -> Primary:files, Secondary:dns
```

Checking the TCP/IP Port Usage for the MWTM Server

The install tool now performs a TCP/IP port usage check. Information similar to the following appears:

```
=====
----- TCP/IP Port Usage Check -----
=====
INFO: This product uses these port numbers:
INFO: [ 1] Server Name : your_MWTM_server
INFO: [ 2] Web Server  : 1774/tcp
INFO: [ 3] JSP Server   : 1775/tcp
INFO: [ 4] Naming Server : 44742/tcp
INFO: Checking system for available ports to see if these are in use...
INFO: Checking port 1774 for Web Server ... Available.
INFO: Checking port 1775 for JSP Server ... Available.
INFO: Checking port 44742 for Naming Server... Available.
```

where `your_MWTM_server` is the name of the MWTM server.

If any ports are in use, you receive prompts for any ports that need to be configured.

Checking Disk Space Usage

The MWTM installation tool now attempts to determine whether there is adequate space in the default installation directory, `/opt`, to install the MWTM server, and displays information similar to the following:

```
=====
----- Disk Space Usage Check -----
=====
INFO: For this product the default disk space requirements are:
/opt 1024 MB
/var/sadm 1 MB
/var/tmp 1 MB
/tmp 1 MB
INFO: Checking default disk space requirements... OK.
=====
```

- If there is adequate space, installation now continues.
- If there is not adequate space, the MWTM install tool asks you to specify a different directory. When you have specified a different directory, installation continues.

The MWTM install tool also checks the following directories to determine whether there is adequate space: `/var/sadm`, `/var/tmp`, and `/tmp`. If there is not adequate space on any of these directories, a message similar to the following appears:

```
INFO: There is insufficient space in /var/tmp for an installation
INFO: to proceed. Disk Space of at least 1 MB
INFO: is required for the install.
```

The installation process stops and exits.

If errors or warnings are encountered up to this point, you might receive the following message:

```
System does not qualify for a Server Install. Found Errors/Warnings during system check!
Do you want to continue to install the MWTM - Server? (y/n)?
```

Do either of these:

To continue with installation, enter **y**. The following warning appears:

```
WARNING: Installing the MWTM - Server without basic requirements
WARNING: may restrict you to use some of the MWTM - Server features.
```

- To stop installation, enter **n**. The installation stops and exits.

Selecting Express or Standard Installation

The Express Install option uses default settings, minimizing system prompts, and places the MWTM in the */opt* directory.

If your system does not meet the requirements for Express Install, installation now continues with [Selecting the Directory for Installation, page 2-6](#). If you are upgrading, the Express Install is not an option.

If your system does meet the requirements, the install tool displays the following information and prompt:

```
=====
----- Express Install Check -----
=====
The Express Install takes all defaults and places the product
in /opt. No more questions will be asked.
Do you want the Express Install (y/n)? [Y]
```

Step 1 Choose either of these installation options:

- To choose the Express Install, press **Return**.
 - To choose the standard installation, which prompts you for additional information, enter **n**, then press **Return**.
-

Selecting the Directory for Installation

The MWTM install tool then displays the following prompt:

```
INFO: Filesystems on this machine with enough space to install:
Filesystem kbytes used avail capacity Mounted on
/dev/dsk/c0t0d0s0 493688 126228 318092 29% /
/dev/dsk/c0t0d0s4 7153253 677611 6404110 10% /usr
/dev/dsk/c0t0d0s3 1018382 23281 933999 3% /var
/dev/dsk/c0t1d0s5 4573659 1570527 2957396 35% /opt
Where should the product be installed ? [/opt]
```

Step 1 Do either of these:

- To accept the default value, press **Return**.
 - Enter a different location, and press **Return**.
-

Selecting TCP Ports for the Web, JSP, and Naming Servers

The MWTM install tool now checks for port numbers for the web server, JSP server, and naming server and displays information similar to the following:

```
INFO: This product uses these port numbers:

INFO: [ 1] Server Name : your_MWTM_server
INFO: [ 2] Web Server  : 1774/tcp
INFO: [ 3] JSP Server  : 1775/tcp
INFO: [ 4] Naming Server : 44742/tcp

INFO: Checking system for available ports to see if these are in use...
INFO: Checking port 1774 for Web Server ... Available.
INFO: Checking port 1775 for JSP Server ... Available.
INFO: Checking port 44742 for Naming Server... Available.

INFO: Express install disabled.
INFO: You will be prompted for any ports which need to be configured.
```

The MWTM works on standard web port 80. However, any software you install in the future that requires port 80 could conflict with the MWTM. The MWTM install tool therefore now prompts for a TCP server for the web server to use:

```
Which tcp port should Web Server use [1774] ?
```

-
- Step 1** Do either of these:
- To accept the default value (recommended), press **Return**.
 - Enter a different port number, and press **Return**.
- Step 2** The MWTM install tool now displays the following prompt:
- ```
Which tcp port should JSP Server use? [1775]
```
- Do either of these:
- To accept the default value, press **Return**.
  - Enter a different port number, and press **Return**.
- Step 3** The MWTM install tool now displays the following prompt:
- ```
Which tcp port should Naming Server use? [44742]
```
- Do either of these:
- To accept the default value, press **Return**.
 - Enter a different port number, and press **Return**.
-

Reviewing Your Selections

The MWTM install tool now displays the following messages and prompt:

```
=====
----- MWTM Server Summary -----
=====
INFO: The following parameters will be used:
INFO: [1] Server Name : your_MWTM_server
INFO: [2] Web Server : your_web_server_port/tcp
INFO: [3] JSP Server : your_JSP_server_port/tcp
INFO: [4] Naming Server : your_naming_server_port/tcp
```

If necessary, you can change these settings after installing the MWTM by using the following commands:

- To change the Server Name, use the **mwtm servername** command. The **MWTM** client name changes to match the new server name.
- To change the Web Server TCP port number, use the **mwtm webport** command.
- To change the JSP Server TCP port number, use the **mwtm jspport** command.
- To verify the new settings, use the **mwtm props** command.

The MWTM install tool then displays the following prompt:

```
Press Return to continue ->

Preparing... #####
CSCOsgm-s #####
Preparing... #####
CSCOsgm-jre #####
Preparing... #####
CSCOsgm-web #####
Preparing... #####
CSCOsgm-openssl #####

INFO: Adding cron entry for MWTM...

=====
INFO: *** Install mode: NEW ***
=====

INFO: Adding init.d files for MWTM...

INFO: Modifying PAM files for MWTM...

INFO: Updating files...

System.properties
access.conf
srm.conf
httpd.conf
worker.properties
apachectl
server.xml

INFO: Setting MWTM JSP Server Shutdown Port to 1776
```

Integrating the MWTM with CiscoWorks

If CiscoWorks is not installed on your system, installation continues with [Configuring SNMP Traps, page 2-10](#)

If CiscoWorks is installed on your system, the MWTM installation program automatically integrates the MWTM server with CiscoWorks and displays output similar to the following:

```

Registering MWTM Server with CiscoWorks Application Registry...
Integrating MWTM Server with CiscoWorks Common Services...
[Wed Dec 13 13:10:55 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.CMICApplicationRegistry Registering mwtm with ems-svr200 1741 http
[Wed Dec 13 13:10:55 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.CMICApplicationRegistry Registering mwtm with ems-svr200 1741 http
[Wed Dec 13 13:10:55 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.OperateRecords Processing template
/opt/CSCOpX/objects/data/cmf/cmic/mst-templates/mwtm.xml
[Wed Dec 13 13:14:41 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.OperateRecords The number of records to be added : 92
[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.RegistryInteractor Successfully added record to the
registry :91
[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.OperateRecords Writing registered template at
/opt/CSCOpX/objects/data/cmf/cmic/registered-templates/mobilewirelesstransportmanager.5.0.
ems-svr200.1741.http.xml
[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.OperateRecords Setting permissions to casuser:casusers for
registered template.

[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.CMICApplicationRegistry Registering in UNREGISTERDBmwtmwith display
Preference asself
[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.CMICApplicationRegistry Registering in UNREGISTERDBmwtmwith display
Preference asself
[Wed Dec 13 13:15:18 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.registry.CMICApplicationRegistry Retrieving the last registered
application name
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList Setting UNREGISTERDB
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList Setting UNREGISTERDB
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList retring from UNREGISTERDB
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList retring from UNREGISTERDB
End of UnregiseterApplicaionList
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList storing in UNREGISTERDB
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList storing in UNREGISTERDB
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList Added appname:Mobile Wireless Transport
Managerpreferenceself
[Wed Dec 13 13:15:19 EST 2006] INFO [CMICLogger : info] :
com.cisco.nm.cmf.cmic.UnRegisterApplicationList Added appname:Mobile Wireless Transport
Managerpreferenceself

CiscoWorks must be restarted to register MWTM menus:
/etc/init.d/dmgtd stop
/etc/init.d/dmgtd start

```

Integration of MWTM Server with CiscoWorks Complete.

**Note**

This step does not start the CiscoWorks server automatically. If the CiscoWorks server was not running when you began installing the MWTM, you must start it manually.

Configuring SNMP Traps

**Note**

The MWTM can co-exist with HP OpenView on the same box for receiving traps. You need a “trap mux” program that can receive traps on one port and forward them to multiple different destinations. You can set up the MWTM and HP OpenView to listen on two different ports, and then set up trap mux to forward traps to both MWTM and HP OpenView ports.

The MWTM installation tool now displays the following prompt:

```
Would you like to configure MWTM to receive SNMP traps? [ y ]
```

Step 1

Do either of these:

- If you do not want to configure the MWTM to receive SNMP traps, enter **n** and press **Return**.
- If you want to configure the MWTM to receive SNMP traps, press **Return**. When you select an SNMP trap port number for the MWTM server, make sure that your network nodes use the same SNMP trap port number.

The MWTM install tool now displays the following prompt:

```
MWTM can receive traps natively on the standard UDP port number 162
or on any other UDP port chosen. If another application is already
bound to the SNMP standard trap reception port of 162, an alternate
port number for MWTM to receive traps must be specified.
```

```
UDP port number 44750 is the default alternate port.
```

```
Enter trap port number? [ 162 ]
```

Step 2

Do either of these:

- To accept the default value (recommended), press **Return**.
- Enter a different port number, and press **Return**.

If you have accepted the defaults, the MWTM install tool now displays the following information:

```
MWTM SNMP Trap Listener: Enabled
```

```
MWTM SNMP Trap Port: 162
```

```
Default SNMP read community string set to: public
```

Configuring Security Services

The MWTM install tool now displays the following prompt:

```
Would you like to configure MWTM Security Services? [y]
```

Step 1 Do either of these:

- If you do not want to configure MWTM Security Services, enter **n** and press **Return**, then go on to [Discovering your Network, page 2-12](#).
- If you want to configure MWTM Security Services, press **Return**.

If you want to configure MWTM Security Services, enter **y** and press **Return**.

MWTM provides two types of security authentication, `solaris` and `local`.

Local authentication allows creation of user accounts and passwords local to the MWTM system. When using this method, user names, passwords, and access levels are managed using MWTM commands.

Solaris authentication uses the standard Solaris-based user accounts and passwords as specified in the `/etc/nsswitch.conf` file. Using this method, authentication can be provided by the local `/etc/passwd` file or from a distributed NIS or Kerberos system. When using this method, access levels are assigned to user accounts using MWTM commands, but all user names and passwords are managed using Solaris commands.

The valid choices for authentication type are `solaris` and `local`.

Please choose the type of authentication to use: `[local]`

Step 2 Do either of these:

- If you want the MWTM to use local-based authentication, press **Return**. The MWTM install tool displays the following message:

```
Authentication type set to: local.
```

- If you want the MWTM to use Solaris-based authentication, enter **solaris** and press **Return**. The MWTM install tool displays the following message:

```
Authentication type set to: solaris.
```

The MWTM install tool then displays the following information:

```
User-Based Access Protection Is Enabled.  
Use the "mwtm adduser" command to add users.  
Log in with user names and passwords for access to MWTM features.
```

Choosing Network Types

The MWTM can manage eleven types of networks: ITP, IP-RAN, CSG1, CSG2, GGSN, BWG, HA, PDNGW, SGW, PCRF, and PDSN. You are prompted to choose a network type or types:

Select the type of network that you want to manage. To select multiple items, enter the numbers separated by commas:

- 1) ITP
- 2) IP-RAN
- 3) CSG1
- 4) CSG2
- 5) GGSN
- 6) BWG
- 7) HA
- 8) PDNGW
- 9) SGW
- 10) PCRF
- 11) PDSN

Enter your selection ->

- Step 1** Do one of the following:
- Enter **1** to enable **ITP** networks
 - Enter **2** to enable **IP- RAN** networks
 - Enter **3** to enable **CSG1** networks
 - Enter **4** to enable **CSG2** networks
 - Enter **5** to enable **GGSN** networks
 - Enter **6** to enable **BWG** networks
 - Enter **7** to enable **HA** networks
 - Enter **8** to enable **PDNGW** networks
 - Enter **9** to enable **SGW** networks
 - Enter **10** to enable **PCRF** networks
 - Enter **11** to enable **PDSN** networks

The resulting output indicates which selection(s) you have enabled.



Note

You can change the network type after installing using the `mwtm manage` command (see the *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*)

Discovering your Network

The MWTM must discover your network during operation. If the MWTM server installation is successful, and if you do not configure the MWTM server now to automatically discover your network the first time the server starts after installation, the Discovery dialog box and the MWTM main window appear upon client startup. For details about these windows and the discovery process, see the *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

The install tool now prompts for whether or not you want to discovery the network after startup:

Would you like to discover your network after startup? [n]

- Step 1** Do either of these:
- If you do not want the **MWTM** server to automatically discover your network the first time the server starts after installation, press Return and go on to [Enabling TFTP, page 2-13](#).
 - If you want the **MWTM** server to automatically discover your network the first time the server starts after installation, enter **y** and press **Return**.

Step 2 If you chose to discover the network automatically:

a. You receive the following prompt:

Enter name of device to use to seed discovery:

Enter the name or IP address of a seed node and press **Return**.

**Note**

The MWTM does not verify that the node name you enter is a valid node name.

b. You then receive the following prompt:

```
Enter default SNMP read community string: [ public ]
```

Press **Return** to accept the default, or enter in a different SNMP read community string.

c. If you have the **IP-RAN** network type selected, you see the following prompt:

```
Authentication is required for ONS discovery.
Would you like to specify default ONS credentials for use in discovery? [n]
```

Do either of the following:

- Enter **n** to bypass setting ONS credentials. ONS devices will not be discovered.
- Enter **y** to set ONS credentials. If you select yes, you are prompted as follows:

```
Enter default username:
Enter default password:
Confirm default password:
```

Enabling TFTP

The MWTM checks to see if TFTP is installed and enabled on the system.

- If the TFTP server on this system is installed and enabled, the MWTM installation program displays the following messages and prompt:

```
===== TFTP Server Check =====
=====
INFO: Checking TFTP Server... Enabled
```

Installation continues with [Concluding Server Installation, page 2-14](#).

- If the TFTP server on this system is not enabled, the MWTM installation program displays the following messages and prompt:

```
===== TFTP Server Check =====
=====
INFO: Checking TFTP Server... Not Installed
```

```
WARNING: The TFTP server on this system is not installed.
```

```
INFO: If you plan to use this system as a TFTP server to send
INFO: configuration files to ITP devices, install and enable
INFO: the TFTP server.
```

- If the TFTP server on this system is installed but not enabled, the MWTM installation program displays the following messages and prompt:

```
===== TFTP Server Check =====
=====
INFO: Checking TFTP Server... Not Enabled
```

```
WARNING: The TFTP server on this system is not enabled.
```

```
INFO: If you plan to use this system as a TFTP server to send
INFO: configuration files to ITP devices, enable the TFTP server
INFO: and ensure that it is working properly.
```

```
INFO: Check the /etc/inetd.conf file for an entry similar to:
tftp dgram udp6 wait root /usr/sbin/in.tftpd in.tftpd -s /tftpboot
```

```
INFO: and make sure the line is not commented out.
```

Check the specified line in the etc/inetd.conf file, then press **Return**.

Concluding Server Installation

The MWTM install tool next creates client web download images in preparation for installation of the client software, then finishes the installation of the MWTM s

The MWTM install tool displays the following message:

To use this product, set your path to:

```
/opt/CSCOSgm/bin:$PATH
```

To access the MWTM Web Server use the URL:
http://your_MWTM_server:your_web_server_port

Where:

- your_MWTM_server is the name of the MWTM web server.
- your_web_server_port is the TCP port number used by the web server.

This URL is required if you want to install the MWTM client software using the web interface on the MWTM server, as described in [Installing the MWTM Client Using the Web Server, page 2-15](#)



Tip You can also use the web interface on the MWTM server to access server logs, system information, and MWTM documentation.

Viewing the Installation File

The MWTM install tool now displays the following messages and prompt:

```
No Errors were encountered during installation.
Please review /var/tmp/cisco_sgmsvr_install.log for detailed results.
Would you like to view the log? [n]
```

Step 1 Do either of these:

- If you do not want to view the log, installation is complete. Press **Return**.
- If you want to view the log, enter **y** and press **Return**. The server installation log appears, followed by the prompt:

```
Press Return to continue ->
```

Press **Return**.

Installing the MWTM Client Using the Web Server

You can access the MWTM client installation software from the MWTM web server. This is useful if you do not have the DVD-ROM, or if you prefer to download the software from the MWTM server. After you have downloaded the MWTM client installation software to your system, you must install the software on your local system by entering the **setup.sh** command.

The following procedure explains how to download, unzip, and install the MWTM client software on a Solaris system.

To install the MWTM client using the web interface:

-
- Step 1** Create a temporary directory in a disk partition that contains at least 200 MB of space on the system where you want to install the MWTM client software.
- Step 2** From your browser, go to the URL for the MWTM web server:
- ```
http://mwtm_web_server:1774
```
- where *mwtm\_web\_server* is the name or IP address of the MWTM web server and *1774* is the web port being using by the MWTM (**1774** is the default port number). If you do not know the name or web port of the MWTM web server, contact the system administrator who installed the MWTM server software. The MWTM displays the MWTM server home page.
- Step 3** Click **Download Solaris Client**.
- The Download Instructions for MWTM Client on Solaris page appears.
- Step 4** Click **Download the Solaris Client** to download the client software installation files.
- Step 5** When prompted, specify the directory where you want the installation software files to be downloaded, such as */tmp/sgmClient*.
- Step 6** From the Solaris command line, change to the directory where you downloaded the installation software and unzip the files using the following command:
- ```
# unzip mwtmClient61-download-sol.zip
```
- Step 7** Change to the CDImage directory using the following command:
- ```
cd mwtmClient61-download-sol
```
- Step 8** Run the MWTM client software install tool by entering the following command:
- ```
# ./setup.sh
```



Note If you are installing MWTM using an NFS-exported DVD-ROM drive, image checking might take several hours to complete. To avoid this problem, enter **./setup.sh -i**, which disables image checking.

The MWTM install tool displays the installation menu:

```
1) Review README File First (Recommended)
4) Install MWTM Client Only
5) Exit Setup
```

Please choose an option ->

Choose one of the following installation options:

- To read the latest information about the MWTM in the README file, enter **1** and press **Enter**. The README file contains late-breaking information about the MWTM that might not be found in the other product documentation.
- To install only the MWTM client on the system, enter **4** and press **Enter**.

The rest of the MWTM client installation is identical to the steps in [Installing the MWTM 6.1.3 on Solaris, page 2-2](#).

Step 9 After verifying that the MWTM client software installed successfully, remove all installation files in the temporary directory using the following command:

```
# rm -rf tmp/sgmClient
```

Where *tmp/mwtmClient* is the directory containing the downloaded files.

Viewing the Installation Log

You can view detailed results of the server installation at the following location:

```
/var/tmp/cisco_sgmsvr_install.log
```

You can review detailed results of the client installation in the client install log at the following location:

```
/var/tmp/cisco_sgkli_install.log
```

Verifying the MWTM Installation

You can verify successful installation of the MWTM server software by performing the following tasks:

- [Checking for Error Messages, page 2-16](#)
- [Viewing Package Information for the MWTM Server and Client on Solaris, page 2-17](#)
- [Verifying the Installation Directories, page 2-17](#)

Checking for Error Messages

During installation, messages are recorded in a log file to provide diagnostic information about problems that might arise. The location of the installation log file is provided in a message at the end of the MWTM install tool.

To check for installation error messages:

Step 1 Log in as the root user, as described in [Preliminary Activities, page 2-3](#).

Step 2 Use the following command to examine the MWTM server installation log:

```
# more install_directory/install/cisco_sgmsvr_install.log
```

Where *install_directory* is the directory in which the MWTM was installed. The default installation directory for the MWTM is */opt/CSCOsgm*.

Step 3 Press the **Space bar** to scroll through the display one screen at a time.

You can also display the MWTM server installation logs using the `mwtm installog` command. For more information, see the “MWTM Command Reference” appendix in the *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

Viewing Package Information for the MWTM Server and Client on Solaris

You can use the `pkginfo` command to verify that the MWTM server (CSCOSgm-s) and MWTM client (CSCOSgm-c) software packages are installed on your system.

To view package information for the MWTM server and/or client:

Step 1 Enter one of the following `pkginfo` commands:

```
# pkginfo -l CSCOSgm-s
# pkginfo -l CSCOSgm-c
```

Step 2 Verify that you receive output similar to the following display:

```
PKGINST: CSCOSgm-s
NAME: Cisco MWTM Server
CATEGORY: application
ARCH: sparc
VERSION: 6.1.3.4
BASEDIR: /opt/CSCOSgm
VENDOR: Cisco Systems, Inc
DESC: Cisco MWTM Server
PSTAMP:  ems-svr25220090325032447
INSTDATE: Apr 06 2009 08:08
HOTLINE: 1-800-553-2447
EMAIL:  tac@cisco.com
STATUS:  completely installed
FILES:   5133 installed pathnames
         343 directories
         4772 executables
         2 setuid/setgid executables
         428283 blocks used (approx)
```

If the package was not found, one of the following messages are displayed:

```
ERROR: information for "CSCOSgm-s" was not found
ERROR: information for "CSCOSgm-c" was not found
```

The MWTM software package was not installed. Install the MWTM again.

Verifying the Installation Directories

After you install the MWTM, use the `ls` command to verify that you have a new directory structure containing the MWTM software.

- For the MWTM server, the default directory is `/opt/CSCOSgm`.

- If you installed the MWTM in a directory other than */opt*, then the *CSCOsgm* directory is located in that directory.

Starting the MWTM

After you install the MWTM server, verify that you can start the MWTM software using any of these methods:

- [Starting the MWTM Server on Solaris Immediately After Installation, page 2-18](#)
- [Starting the MWTM Server on Solaris from the Command Line, page 2-18.](#)
- [Starting the MWTM Client on Solaris from the Command Line, page 2-18](#)



Note

No harm results from attempting to start an MWTM server if it is already running.

Starting the MWTM Server on Solaris Immediately After Installation

At the conclusion of installation, the MWTM install tool displays the following MWTM start menu:

- ```
1) Start MWTM Server Only
2) Exit Setup
```

Please choose an option ->

- To start the MWTM server immediately after installation, select option **1** and press **Enter**.
- To exit the set up without starting the MWTM server, select option **2** and press **Enter**. Use the command line option to start the MWTM server at a later time.

## Starting the MWTM Server on Solaris from the Command Line



### Note

The following procedures assume that you installed the MWTM in the default directory, */opt*. If you installed the MWTM in a different directory, use the name of that directory in place of */opt*.

To start just the MWTM server from the command line, log in as the root user and use the following commands:

```
cd /opt/CSCOsgm/bin
./mwtm start
```

For a complete list of all of the MWTM commands, see the “MWTM Command Reference” appendix in the [User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3](#).

## Starting the MWTM Client on Solaris from the Command Line

To start the MWTM client from the command line, choose either of these options:

- Enter:  
`/opt/CSCOsgmClient/bin/mwtm client`

- Include the following in your path

`/opt/CSCOsgmClient/bin`

then enter:

`mwtm client`

If the MWTM server installation was successful, and if you did not configure the MWTM server to automatically discover your network the first time the server starts after installation, the Discovery dialog box and the MWTM main window appear upon client startup. For details about these windows and the discovery process, see the *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

## Uninstalling the MWTM

The uninstall tool provides you with a menu similar to that presented for installation. Uninstalling the MWTM is covered in these sections:

- [Overview of the Uninstallation Process, page 2-19](#)
- [Running the Uninstall Tool on Solaris, page 2-20](#)

## Overview of the Uninstallation Process

When you run the uninstall tool, remember the following information:

- The default for each prompt is the value in square brackets [ ]. To accept the default value, press **Enter**.
- To stop the uninstall tool at any time, press **Break** or **Ctrl-C**.
- If you elect to uninstall both the server and client, the uninstall tool uninstalls the client first.

Uninstall both the MWTM server software and client software on a Solaris system, either at the same time or separately, using the following menu options provided by the uninstall program.

1. **Uninstall MWTM Server and Client**—Use when the MWTM server and client software reside on the same Solaris system and you want to remove all of the MWTM software on that system. This option removes all of the MWTM packages from the system: the MWTM server package (CSCOsgm-s) and MWTM client package (CSCOsgm-c).
2. **Uninstall MWTM Server Only**—Use when you want to remove only the MWTM server software on this system. This option removes the MWTM server package (CSCOsgm-s).



**Note** Uninstalling the MWTM server also disables the MWTM client. If you want to uninstall the MWTM server, we strongly recommend that you uninstall both the MWTM server and the MWTM client.

3. **Uninstall MWTM Client Only**—Use when you want to remove only the MWTM client software on this system. This option removes the MWTM client package (CSCOsgm-c).

## Running the Uninstall Tool on Solaris

To uninstall the MWTM software:

**Step 1** Log in as the root user as described in the [Installing the MWTM 6.1.3 on Solaris, page 2-2](#).

**Step 2** If you are running an MWTM client locally, exit all open MWTM windows.



**Tip**

To display a list of all MWTM clients that are connected to the MWTM server, use the **mwtm who** command. To notify all MWTM clients that you are uninstalling MWTM, use the **mwtm wall** command.

You do not need to stop the MWTM server; the MWTM uninstall program stops the server automatically.

**Step 3** To start the uninstall script, enter the following command:

```
/opt/CSCOsgm/install/uninstall.sh
```

If you installed the MWTM client only, enter the following command:

```
/opt/CSCOsgmClient/install/uninstall.sh
```

You can also use the **mwtm uninstall** command; see the “MWTM Command Reference” appendix in the *User Guide for the Cisco Mobile Wireless Transport Manager 6.1.3*.

**Step 4** The MWTM uninstall program displays the uninstall menu. The options displayed depend on what you have installed. For example, if you have installed only the MWTM server, then your only option is to uninstall the MWTM server.

Choose one of the following actions:

- To uninstall both the MWTM server and client software, enter **1** and press **Enter**. The MWTM client is uninstalled, followed by the MWTM server.
- To uninstall only the MWTM server, enter **2** and press **Enter**.
- To uninstall only the MWTM client, enter **3** and press **Enter**.

**Step 5** The MWTM uninstall program asks you to verify that you want to uninstall the MWTM client, server, or both. When prompted, enter **y** and press **Enter**.

When the uninstall procedure is complete, the MWTM uninstall program displays messages indicating that the packages were deleted successfully.

For example, the following example shows the message received when uninstalling the MWTM server:

```
INFO: The following Cisco MWTM packages
INFO: have been successfully deleted from the system: CSCOsgm-s
Please review /var/tmp/cisco_sgmsvr_uninstall.log for detailed results
```

```
Would you like to view the log? [n] ->
```

- If you do not want to view the log, press **Enter**.
- If you want to view the log, enter **y**. The server uninstallation log appears, followed by the prompt:

```
Press Return to continue ->
```

Press **Enter**.

**Step 6** To verify that the MWTM server and its associated services are uninstalled, enter the following **pkginfo** commands:

```
pkginfo -l CSCOsgm-s
```

```
ERROR: information for "CSCOsgm-s" was not found
```

```
pkginfo -l CSCOsgm-c
```

```
ERROR: information for "CSCOsgm-c" was not found
```

---

