

CoCreate OneSpace Manager Server HP-UX Installation Guide

Version 2007

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Preface

Manager Server Installation Guide provides step-by-step installation and configuration instructions. Use this material to install servers onto a single machine and then set up networked clients, distributed file servers, and Web Access servers and multiplexer.

This manual also contains information on how to start Manager Server and Workflow and enable automatic startup.

Who should use this manual

The Manager Server System Administrator would typically use the knowledge contained in this document. The expectation is the Manager Server System Administrator has operating system and LAN knowledge.

Purpose of this material

The primary purpose of this material is to help System Administrators successfully install Manager Server software. For administration setup and maintenance, refer to the *Manager Server Administrator Guide*.

How to use this material

Use this material to install Manager Server software. This material assumes you have previously installed a compatible operating system.

The *Platform Support* document identifies the compatible hardware and software for this release. Be sure your system configuration meets or exceeds these requirements.

Installation overview

This material is intended for system administrators who are installing Manager Server for the first time in an HP-UX environment or installing software as part of a Manager Server upgrade. If you are upgrading to a new version of Manager Server, please refer to *Upgrading Manager Server*.

Installation steps

You will perform the following steps during installation:

1. Identify and gather installation information
2. Install database software
3. Add medmgr user for operating system (in the bin group)
4. Install Manager Server Software
5. Install schema
6. Create client configuration files
7. Start the Workflow server
8. Verify proper Manager Server installation

Note Before you install Manager Server, you must have the most recent CoCreate License Server installed and available to the server computer(s), with the appropriate licenses installed and configured. This ensures you have the version of MEIs that was verified with this version of Manager Server.

Typographical conventions

The following typographical conventions are used in this documentation:

Italic is used for

- Directory locations, filenames, document names, and program names.
- Internet domains, network addresses and URLs.
- New terminology, where it is defined.

Bold is used for

- Names of windows, buttons, menu items and other elements on the screen.

`Fixed-width` is used for

- Commands and options that should be typed exactly as they appear.
- Tags and parameters in markup languages, such as HTML or XML, and configuration files.

A grey background is used for

- Important notes and warnings.

Installation information

Please use this form to record your installation information. The lines marked with an asterisk (*) should be determined before you install Manager Server.

Required component information

Oracle Home

Manager Server installation directory

* CoCreate License Server address

* Database Server address

* Database Server port number

* File Server address

* File Server port number

Workflow information

Workflow Server error log name and location

Workflow Server debug log name and location

Web Access Server information

* Web Access Server port numbers

* Web Access Server remote hosts

Remote Web Server Hostname	Port	Remote Web Server Hostname	Port

Web Access Server Multiplexer port number

Compatibility

The most recent version of the CoCreate License Server is required. You must install and configure the license server, and appropriate licenses, before you can install the Manager Server or Manager Server client software.

Schema compatibility

The new functionality featured in Manager Server requires an updated schema. This limits the compatibility between current and previous versions of Manager Server and WorkManager.

The client is backwards compatible to one revision; however, the functionality available to the client is dependent on the version of the schema. For example, both the 14.50 and 15.00 clients can use a 14.50 schema; however, the 15.00 client will not have access to functionality new to version 15.00. Similarly, the 15.00 client can use the 14.00 schema but will not have access to new functionality.

This compatibility allows you to configure a mixed environment of Manager Server clients, which can ease the migration of your environment to the current version. When you are ready to migrate, you should follow these steps:

1. Install servers to support the current versions of database software.
2. Migrate existing clients to the current version.
3. Migrate the schema to the current version.

Important Backwards compatibility applies only to components of Manager Server that exist in both versions. New components are not backwards compatible with older schema versions.

Update database schema

To update to the latest database schema,

1. Start the Manager Server server installation.
2. Click **Update Manager Server Schema**.
3. Follow the instructions to automatically update the schema.

Hardware support and compatibility

Refer to the *Manager Server Platform Support* document to check your system compatibility.

Manager Server installation filesets

The Manager Server software for all supported platforms is listed below.

Fileset definitions

Manager Server 2007 has simplified its HP-UX installation packaging. There is now one tar archive for HP-UX, named *HPUX.TGZ*.

Identify and gather installation information

Names, addresses, port numbers, and other values

You will be asked throughout to provide various data. Within this document you will find more details about obtaining this information. For your convenience, you should record these values in the **Installation information** section.

- To obtain passwords, you need the physical ID of the License Server host.
- If you are using a remote License Server, you need the hostname of the remote License Server
- To start a distributed or remote file server you need:
 - the hostname and port address of the remote file server, if applicable
 - multiple file server hostnames and port addresses and the hostnames and port addresses of each of their neighbors, if applicable
- To install a Manager Server database, identify the system administrator who will support Manager Server. (Refer to the *Manager Server Administrator Guide*).
- To create client configuration files, obtain the name of the database server workstation.
- To run the Manager Server servers, you must create an operating system user for *medmgr*, in the *bin* group. Whenever these servers run, they run as *medmgr*.
- To start the database server, determine:
 - the name of the License Server host
 - the port address of the Database Server
 - the Oracle database password for the medmgr user, Oracle base and Oracle home directories, and Oracle SID.

Install database software

Manager Server supports Oracle 10g in English, French, German, Italian, and Japanese.

For the latest supported version, refer to the platform support document included in the online documentation.

This section assumes you have Oracle 10g installed. You should install the database software according to the Oracle instructions.

Create an Oracle database instance

If you have a database created, you can skip to the next section. If you need to create a database,

1. Log in as the **oracle** user.
2. Verify that the **DISPLAY** variable is set properly to display X windows.
3. Verify that the **ORACLE_HOME** variable contains the correct directory.
4. Change directory to **ORACLE_HOME**.

Now you are ready to start the **Oracle Database Configuration Assistant** and create your database:

Type `bin/dbca` to start the Database Configuration Assistant.

Step 1: Operations: Select **Create a database** and click **Next**.

Step 2: Database Templates: Select **Transaction Processing** and click **Next**.

Step 3: Database Identification: Type a **Global Database Name** and **SID**, which should match the value you set as the `ORACLE_SID` variable, and click **Next**.

Step 4: Management Options: Unless you have a reason not to, accept the default settings and click **Next**.

Step 5: Database Credentials: Type a password and confirm it. Click **Next**.

Step 6: Storage Options: Unless you have a reason not to, accept the default settings and click **Next**.

Step 7: Database File Locations: Unless you have a reason not to, accept the default settings and click **Next**.

Step 8: Recovery Configuration: Unless you have a reason not to, accept the default settings and click **Next**.

Step 9: Database Content: Unless you have a reason not to, accept the default settings and click **Next**.

Step 10: Initialization Parameters: Accept all the default values, except that you may need to change the character set. For a new database, choose the default character set `WE8ISO8859P1` (for Japanese choose `JA16SJIS`). If the database will be an update of an existing database, you must use the character set of the existing database.

Step 11: Database Storage: Unless you have a reason not to, accept the default settings and click **Next**.

Step 12: Creation Options: Click **Create Database** and click **Finish**. A confirmation dialog containing summary information displays. Click **OK** to create the database.

The Oracle instance and corresponding database will be used by the Manager Server installation program to install a Manager Server database.

Note If the Oracle database account is named anything other than `oracle`, you must set the environment variable `ORACLE_OWNER` to the HP-UX user name of the Oracle owner. For example, if you installed the Oracle software as the user `oracle10g`, then you need to set `ORACLE_OWNER=oracle10g`.

Grant database administrator privileges

You should create an operating system user named *medmgr*. You must also use SQLPlus to create *medmgr* as a database user with administrative privileges. To create the database user,

1. Set the **ORACLE_SID** variable to the name given the database when it was created with `dbca`.
2. Give database administrator privileges to the *medmgr* user, and assign an Oracle *medmgr* password with the SQLPlus program. For example, you could grant permissions by executing the following commands:

```
# $ORACLE_HOME/bin/sqlplus system/manager
SQLPLUS> grant connect, resource, dba to medmgr identified by medmgr;
SQLPLUS> commit work;
SQLPLUS> exit;
```

3. Add the *medmgr* user to the Oracle group.
 - a. Find the `oracle` entry in your `passwd` file. You need the group ID.
 - b. Open your `/etc/group` file and find the group ID that matches the one from the `passwd` file. Add “`, medmgr`” to the group. For example:

```
oinstall::199:oracle,medmgr
```

The username *medmgr* is required, but the password for this user is not required to be *medmgr*. You will need to know this password during Manager Server installation. A complete explanation of using SQLPlus should appear in the Oracle database administrator's guide.

Install Manager Server

This section will guide you through the procedures for installing the Manager Server servers, database, and schema(s). Installation results and troubleshooting information is included at the end of the section.

Important You must be logged in as **root** to complete this installation.

Copy the Manager Server files

Copy the Manager Server files to host computers as directed below:

1. Copy Fileset
 - a. Log in as *root*.
 - b. Create a directory to store the installation files, for example:

```
# mkdir -p /opt/cocreate/os_manager
```
 - c. Set the current directory to the directory where you want to load the Manager Server code. For example:

```
# cd /opt/cocreate/os_manager
```
 - d. Copy the fileset. For example,

```
# gunzip < HPUX.TGZ | tar xpvf -
```

To copy the client software to other host computers, copy the fileset to the hosts using the same syntax used on the Database Server. The only requirement for other workstations is that they be networked to the Database Server. Manager Server Configuration includes more information on setting up networked clients and remote file servers.

- e. Verify that, at a minimum, the following directories have been created: *bin*, *clnt800.b*, *install*, *local*, *macros*, *serv800.b*.

Note Although you can place your Manager Server files in any directory, this installation assumes that you are using */opt/cocreate/os_manager*.

Enable the License Server

Obtain and install passwords for Manager Server.

Manager Server products are password protected. At this point, you should obtain and install passwords for each Manager Server product. Refer to the *CoCreate License Server Handbook* and *Password Request* form for directions.

Check and set the LANG variable

The LANG environment variable determines which language and character set the Manager Server client and Manager Server database uses. The *Supported character sets* appendix specifies how to choose the correct LANG variable for your system, language, and desired character set.

1. Check the LANG variable

Execute the command:

```
# echo $LANG
```

If LANG is not set or is set to C or POSIX, Manager Server will search for message catalogs using a value of C.

2. Set the LANG variable

To set the LANG variable, execute:

```
# export LANG=lang_var
```

where lang_var is one of the values reported by `locale -a` on your system. Typical values include C, de_DE.iso88591, de_DE.roman8, ja_JP.SJIS, and ja_JP.eucJP.

Configure and start Manager Server servers

1. Open the Manager Server Installation Window

To open the installation window, log in as root, then

- a. Go to the Manager Server bin directory, for example:

```
# cd /opt/cocreate/os_manager/bin
```
- b. Start the installation program with the command:

```
# ./workmgr -i
```

Warning If you are updating the Manager Server schema, refer to the *Updating Manager Server* document for more information.

During installation, events are recorded in two files in the installation directory (*/opt/cocreate/os_manager/install*).

- *install.log*
This file logs the prompts, commands, and values returned while the installation process is running.
- *install.mem*
This file records values you entered in dialog boxes. If you run the installation program more than once, the program will look for the default values, and place them in the dialog boxes. This file is written when you exit the installation program.

Two macro execution trace files are created in the installation directory. These files may be useful if there is a problem during installation.

- *trace.startup.log*
- *trace.log*

Files used as input to SQLPlus and the output from that execution are created in the installation directory.

- Input:
 - *enable_trig.sql*
 - *mm_trig.sql*
 - *oracle.ksh*
- Output:
 - *enable_DBAtrig.trace*
 - *enable_trig.trace*

Start the License Server

The License Server must be running before you attempt further installation procedures. This process can be running on either a local or a remote workstation on your network. If the License Server is not running, the other installation procedures will fail. Refer to the *CoCreate License Server Administration Guide* for instructions on starting, configuring, and maintaining the License Server.

To check the status of the License Server, open a browser and type the URL:
http://hostname:17171/

Set connection passwords

Set or confirm your connection passwords.

1. Click **Set Connection Passwords** from the installation menu.
2. Specify or confirm the following information:
 - a. **Manager Server**: The password for the Manager Server system administrator (such as *medmgr*).
 - b. **Oracle**: The password you want assigned to your database for the user *medmgr*.
3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.)

Start the Database Server

After the License Server is running, start a Database Server.

Note You need a separate database server process for each database to which you connect.

1. Click **Start the Database Server** from the installation menu.
2. Specify or confirm the following information:
 - a. Database server's port address; the default is 9898. If this port address is in use, look in */etc/services* to see what port addresses are assigned, and select a different number.
 - b. Oracle information:
 - Oracle base directory
 - Oracle home directory
 - Oracle SID for the empty Oracle database you set up prior to Manager Server installation
 - Oracle password for the *medmgr* user; the default is *medmgr*.
 - Oracle NLS_LANG variable
 - Oracle server version (executable to match with your installed database). Refer to the platform support document database server section for the list of supported database versions. **Note**: Oracle 9i is not the default selection.
 - Oracle TNS listener
 - Database directory

The values should match those you entered when you set up your Oracle database and *medmgr* user with the *dbca* program.

Note Manager Server includes a new HP-UX environment variable, *ORACLE_OWNER*. This variable allows you to specify any desired Oracle user name. If the variable is set to a non-empty string, its value is used in those portions of the Manager Server install program (*workmgr -i*) that run programs as **oracle**.

3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.) A message appears showing that the startup script, *me_dserv.ora.rc*, has been created.
4. Click **Clear**.

Note The Oracle database instance will be altered during the install process to use Oracle Managed Files for Manager Server tablespaces.

Start the File Server

Once the Database Server is running, you can start the File Server.

1. Click **Start the File Server** from the installation menu. If the system does not present a new dialog box and appears to hang, make sure the device filename of the License Server workstation is correct.
2. Specify or confirm the following information:
 - **File server's port address**; the default is 9899. If this port address is being used, look in */etc/services* to see what port addresses are already assigned, and select a different number.
 - **Up to six file storage directories**. Specify one directory per file system. If the directory does not exist, it is created the first time Manager Server stores a file in it. Six file storage directories should be sufficient. If you need more, refer to *Customizing the File Server Startup File*.
 - **Name of the License Server** if you are using distributed file servers. Enter either a hostname or an IP address (in dot notation).
 - **Up to four neighbor file servers** if you are using distributed file servers. Enter either a hostname or an IP address (in dot notation) and port address. Leave this field blank if you have only one file server.
 - **If you need to specify more than four neighbors**, refer to *Customizing the File Server Startup File* for instructions.
 - **HTML Password**. Enter the password you will use to access the File Server HTML configuration screen. This will allow you to change the file server configuration from an HTML browser.
3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.) A message appears showing that the startup script, *me_fserv.rc*, has been created.
4. Clear the display.

Install Manager Server database

Once the database and file servers are installed, you can install a Manager Server database schema. The database will be created under the directory path name you specified when you started the database server:

1. Click **Install a Manager Server Database** from the installation menu.
2. Specify or confirm
 - a. the Database Server's port address.
 - b. the File Server's port address.
 - c. the Manager Server password of the *medmgr* user (administrator).
3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.)

Installation takes several minutes.

The installation process will install a schema ready for use with Model Manager, Drawing Manager, and Design Data Management.

Note See the Oracle logfiles for installation results and information on changing passwords and other Oracle account information: `$ORACLE_HOME/admin/$ORACLE_SID/create/*`.

Create client configuration files

Create one copy of the client configuration files on the server. This allows you to run the Manager Server client on the database server machine. You will add networked clients later.

Each Manager Server client that accesses the server requires configuration files.

To create the configuration files:

1. Click **Create Client Configuration Files** on the main menu.
2. Specify or confirm the following information:
 - a. Name of the License Server host.
 - b. Name of the Database Server workstation.
 - c. Database Server's port address.
 - d. Name of the File Server workstation. If you have multiple file servers, specify the name of the closest one.
 - e. File Server's port address.
3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.)

Note The `/opt/cocreate/os_manager/local` directory is empty until the client configuration files are created.

The installation process creates the following files in the `/opt/cocreate/os_manager/local` directory:

```
db_defaults
defaults
passwords
text_ed.inp
ui_defaults
ui_defaults2
ui_startup
```

Start the Workflow Server

To start a Workflow Server with user interface (HP-UX only), the X server must allow X connections from the user `medmgr`. The Workflow Server runs as `medmgr`; therefore `medmgr` must be allowed to connect to the login user's X server. You can allow such access with either the `xauth` program, or by executing: `xhost +`hostname``

To start a Workflow Server from the Manager Server install program, the client configuration files must be created to match the server. Select and complete **Create client configuration files** before starting the server.

To enable Workflow:

1. Select **Start the Workflow Server** from the installation menu.
2. Specify or confirm:
 - a. The location of the Workflow error log. This file stores messages related to Workflow. The default is */tmp/wf_err.log*.
 - b. The location of the server debug log. This file stores program information used for debugging Workflow. The default is */tmp/wfserver.log*.
 - c. The level of debugging desired. The value can be set to 0 (log nothing), -1 (log everything), or to an integer that specifies which objects and events should be logged. This function is useful during process development and troubleshooting and is described further in the *Manager Server Administrator Guide*. For normal installations, set the value to 0.
 - d. Check interval. This number (in seconds) specifies how long the program waits before checking for new activity. If the server is processing a large process, set this time longer to save resources.
3. Click **Confirm** to accept the values you entered. (Click **Cancel** to close the dialog box without making changes.)

A message appears showing that the startup script, *workflow.rc*, has been created. You may clear the display and close the installation window.

Verify installation

To verify that Manager Server is properly installed

1. Start Manager Server from the Manager Server client workstation.
2. Execute the startup command from the Manager Server directory. For example, type:

```
bin/workmgr -doc &
```
3. Three windows appear, showing the Manager Server copyright, command status, and login information.
4. Log in as the administrative user (*medmgr*) and click **Confirm**; the Manager Server main window appears.
5. From the Manager Server main window, select **File**, then **Exit Manager Server**; all windows close.

Installation results

This section briefly describes the installation results. Review this list to understand which files changed. The following description assumes you used `/home/medmgr` for the medmgr home directory.

Note Many files created during the installation process are owned by `root`. Some of the files may need to be modified from time to time. If you do not change the owner of the files, superuser access will be needed to maintain Manager Server in the future. If the administrator does not have superuser access, you may want to change the owner to medmgr. An easy way to do this is to execute the command:

```
find /opt/cocreate/os_manager -user root -exec chown medmgr {} \;
```

During installation, the executable:

- For Oracle:
 - Checked that an Oracle user exists.
 - Checked that an Oracle home directory exists and that `bin/oracle` is under it.
- If necessary, it also created the database directory (you specified the path when you installed the database software) with the following owner, group, and permission mask.
- If you specified `/users/database` for Oracle, the long listing entry would look like this:
`drwxrwx--- 2 oracle dba 1024 Mar19 09:58 /users/database`
- Created a Manager Server database using installation macros.
- Configured the file servers.
- In Manager Server, created the `sysadmin` group, and added the Manager Server administrative user you specified to this group.
- Created the DEFAULT0 access control list. The `sysadmin` group and PUBLIC are in the DEFAULT0 access control list.
- Set up default access control lists, data dictionary entries, classes, class types, class relations, notes, and user folders.
- Set up a minimal database including:
 - groups and access control lists.
 - classes and attributes.
 - states and routing lists.
 - default packets.
 - default forms.
 - default data dictionary entries.
 - database files in the database directory you specified during installation. The database name is specified by the Oracle administrator.
- Created the following client configuration files on the database server in the `/opt/cocreate/os_manager/local` directory:
 - `db_defaults`
 - `defaults`
 - `passwords`
 - `text_ed.inp`
 - `ui_defaults`
 - `ui_defaults2`
 - `ui_startup`

- Created the client configuration files on the Database Server in the `/opt/cocreate/os_manager/bin` directory:
 - `from_tape`
 - `send_notify`
 - `text_editor`
 - `to_tape`
 - `workmgr`
- Created a file named `/opt/cocreate/os_manager/install/install.log` that logs the prompts, commands, and values returned while the installation process is running.
- Created a file named `/opt/cocreate/os_manager/install/install.mem` that records the values you enter in dialog boxes while running the installation process.
- Created the following startup scripts:
 - `/opt/cocreate/os_manager/serv800.b/me_dserv.ora.rc`, which starts the Database Server.
 - `/opt/cocreate/os_manager/serv800.b/me_fserv.rc`, which starts the File Server.
 - `/opt/cocreate/os_manager/serv800.b/workflow.rc`, which starts the Workflow server.
- Installed the Model Manager schema

Installation troubleshooting

If you cannot complete installation, check the following:

- Is there a passwords file on the Manager Server client workstation (for example, in `/opt/cocreate/os_manager/local/passwords` or in the directory where you installed Manager Server)?
- Does the passwords file contain a valid hostname for the License Server host?
- Is the License Server running on the License Server host? If you are refused a connection, you may need to execute MEIs on the License Server host. See the section “*Start the License Server*” or refer to the *CoCreate License Server Handbook* for information.
- Are you running a previous version of the License Server? If you are, the system may appear to hang while trying to connect to the License Server. You can check which version of the License Server you are running by entering `what /etc/MEIs`.
- Is your computer's hostname allowed by the appropriate certificate in the `/etc/MEIs.conf` file? Refer to the *CoCreate License Server Handbook*.
- Is the hostname of the Manager Server listed in the `db_defaults` file?
- Are the hostnames you refer to listed in `/etc/hosts` on the client workstation?
- Have you installed the client configuration files in the `/opt/cocreate/os_manager/local` directory? If not, you could see a message asking you to input a file.
- Are the entries in the `db_defaults` file on the client correct? Remember, Manager Server looks for `db_defaults` first in the current directory, second in the search path directory provided by `WORKMGR_DIR`, and third in the local directory under the Manager Server installation directory (such as `/opt/cocreate/os_manager/local`).
- Is the client workstation properly connected to the network?
- Does your system have a user named `medmgr` who is a member of the group `bin`?
- Read the information in the **Troubleshooting** sections of the *Manager Server Administrator Guide* and the *CoCreate License Server Handbook* to diagnose other connection problems.

Configuration

This section describes the procedures used to configure the Manager Server servers and clients.

Set up remote or distributed File Servers

If you have one or more remote file servers, you must install the software on each file server's disk and start the File Server. Follow these steps:

1. Copy the fileset (see *Copy the Manager Server server files* section).
2. Run the installation program:
 - a. Log in as `root` on the File Server workstation.
 - b. Set the current directory to the directory where you copied the Manager Server Database Server code. For example:

```
# cd /opt/cocreate/os_manager/bin
```

- c. Start the installation menu by typing the command:

```
# ./workmgr -i
```

- d. Select **Start the File Server** from the installation menu. (If the system does not present a new dialog box and appears to hang, make sure the device filename of the License Server workstation is correct.)
- e. Specify the following information:
 - File Server's port address. The default is 9899. If this port address is being used, look in `/etc/services` to see what port addresses are already assigned, and select a different number.
 - Up to six file storage directories. Specify one directory per file system. If the directory does not exist, it is created the first time Manager Server attempts to store a file in it.
 - Six file storage directories should be sufficient. If you must specify more, refer to the next topic, *Customizing the File Server startup file*.
 - The License Server name if you are using multiple file servers. Enter either a hostname or an IP address (in dot notation).
 - Up to four neighbor file servers if you are using multiple file servers. Enter either a hostname or an IP address (in dot notation) and port address.
 - If you must specify more than four neighbors, refer to the next topic, *Customizing the File Server startup file*.
3. Click **Confirm**. A table appears showing that the file `me_fserv.rc` has been created.

Customizing the File Server startup file

To take advantage of File Server options not available through the install program, edit the `me_fserv.rc` script.

Note If you edit a server startup script with a text editor, you must start the server from the command line. If you start it with the installation program, you will overwrite the edited startup file.

You can modify the following variables:

-a	Lets you specify additional storage directories (the installation program lets you specify up to six directories). You must enter <code>-a</code> before each storage directory name.
-n	Lets you specify additional file server neighbors (the install program lets you specify up to four neighbors). You must enter <code>-n</code> before each file server neighbor.

	<p>Specify as follows: <code>-n file_server:port_address</code></p> <p>Specify the file server as either the hostname or IP address in dot notation. Specify the port address in numeric format or use a name from <code>/etc/services</code>.</p>
<code>-f</code>	<p>Lets you specify the minimum free disk space on your file server's file system. The default is 10 Mbytes (10M).</p> <p>Note When less than the minimum amount of disk space remains, distributed file server (DFS) copies are removed.</p> <p>Specify as follows:</p> <pre>xg x gigabytes xM x megabytes xk x kilobytes xb x bytes</pre>
<code>-m</code>	<p>Lets you specify the maximum length of time a DFS copy is retained since it was last referenced. The default is 30 days (30d). When it has been 30 days since a user last accessed a DFS copy, the copy is deleted. Please see the <i>Manager Server Administrator Guide</i>, "Understanding File Servers" chapter for more information.</p> <p>Specify as follows:</p> <pre>xw x weeks xd x days xh x hours xm x minutes xs x seconds</pre> <p>You can create combinations such as <code>1h20m</code>.</p>
<code>-c</code>	Lets you specify the interval in which the file server performs cleanups. The default is 6 hours (6h). Specify the time as for the <code>-m</code> option.
<code>-t</code>	Lets you specify a log file name where file names and locations will be recorded. This is useful if your network fails and you need to find a file.
<code>-d</code>	Disable cleanup - never delete files from area.
<code>-h</code>	HTTP access - allow direct HTTP access to files in area.
<code>-l</code>	License Server - may be specified multiple times to add alternate license servers.
<code>-w</code>	Encrypted password - password required to change admin through HTTP.
<code>-p</code>	Port - port on which file server will accept requests.

An example startup line looks like this:

```
/bin/su medmgr -c "me_fserv -p 9905 -f 15M -c 3h -a /users/dbs/area1"
```

Note The `me_fserv` startup line may also include a `-w` option. This command was placed in the startup line during installation. It specifies the HTML configuration password (encrypted) that you entered at installation. Without this option, you could not change file server configuration from the HTML browser. To change the password, go back to the installation program (Start the servers) and replace the current password. Changing the `-w` command-line option is not recommended.

Set up networked Web Access Servers

A Web Access Server handles Manager Server queries from web browsers.

Installing Web Access Servers

Create a Web Access Server as you would a Manager Server client, as described in **Enabling Networked Clients**. Start Web Access Servers as directed in the next section.

Enabling the Multiplexer and starting Web Access Servers

The following instructions demonstrate how to start the Multiplexer and Web Access Servers:

1. Make Manager Server client files available to all Web Access Servers as directed in the previous section.
2. Copy the server file sets onto the machine that will host the Multiplexer.
3. Log in as root on the Multiplexer workstation.
4. Start the installation menu with: # ./workmgr -i
5. Select **Start Web Access Servers** from the installation menu.
6. Specify or confirm the following information:
 - a. Addresses of Web Access Servers. Enter the hostname and port address of each Web Access Server in your network.
 - b. Multiplexer port address. The default is 8080. If this port address is being used, look in */etc/services* to see what port addresses are already assigned, and select a different number.
7. Click **Confirm**.

Enabling automatic server startup

During installation and configuration, you started several servers using the installation menu. You can enable automatic startup so these servers start when the system boots.

Startup script contents

Startup scripts for the servers were created during Manager Server installation when you first started the servers. The following list explains the content of the server startup scripts. Note If you edit a server startup script with a text editor, you must start the server from the HP-UX shell command line. If you start it with the installation program, you will overwrite the edited startup file.

Database Server Startup Script

- The *me_dserv.ora.rc* script contains the command to start the Database Server, which looks similar to this:

```
su medmgr -c "/opt/cocreate/os_manager/serv800.b/me_dserv -p port_address  
-l license_server_name -n database_environment -e LANG=language"
```

File Server Startup Script

- The *me_fserv.rc* script contains the command to start the file server. To customize the file server startup file, see "Customizing the File Server Startup File."

Workflow Server Startup Script

- The *workflow.rc* script contains the command to start the Workflow Server:

```
su medmgr -c "/opt/cocreate/os_manager/serv800.b/wfserver -his"
```

Web Access Server Startup Script

- The *webserver.rc* script contains the command to start the Web Access Servers and the Multiplexer:

```
su medmgr -c "/opt/cocreate/os_manager/serv800.b/webserver -p  
port"  
su medmgr -c "/opt/cocreate/os_manager/serv800.b/multiplexer -p  
port -c configuration_file_name"
```

Enabling startup scripts

The following examples show how to register startup scripts for execution during system startup. The commands in the following examples should be executed by the root user:

1. Copy the desired scripts into the `/sbin/init.d` directory.
2. Create symbolic links in the `/sbin/rcN.d` directory that point to the scripts in the `/sbin/init.d` directory, where N is a single integer representing the run level at system startup for scripts in that directory. Link names should start with an "S" followed by a three-digit number that represents the sequence of execution (the scripts under a `/sbin/rcN.d` directory are executed in alphabetical order). The sequence number should be followed by the script name. Invoke the man page on "rc" for additional information.

Example:

```
cd /sbin/init.d
cp /opt/cocreate/os_manager/serv800.b/me_dserv.rc me_dserv.rc
cp /opt/cocreate/os_manager/serv800.b/me_fserv.rc me_fserv.rc
(continue to copy any other desired script files ...)
cd /sbin/rc3.d
ln -s /sbin/init.d/me_dserv.rc S900me_dserv.rc
ln -s /sbin/init.d/me_fserv.rc S901me_fserv.rc
(continue to create links to any other copied script files ...)
```

Note The database that you are using may require some special procedures for automatic startup at system boot time. The Manager Server servers will fail to execute if the database is not already up and running. Check your database manuals to determine how to ensure that your database will be running at system startup time.

Startup options

This section explains how to start Manager Server, Workflow, and the Web Access server and multiplexer.

Start Manager Server

Execute workmgr as follows using command-line options:

```
/opt/cocreate/os_manager/bin/workmgr -a -mod -d display -h -i -options &
```

The valid options are:

-a	Starts Manager Server without the Admin menu.
-mod	Specifies which Manager Server client module to run. You can specify multiple modules, with the - sign preceding each module. Only the first three letters of the module name are needed. Valid entries are: <ul style="list-style-type: none">o doc -- Documents moduleo pac -- Packets moduleo con -- Configuration moduleo cla -- Classification moduleo his -- History moduleo wfl -- Workflow module worker (includes a packets module) Note Except History, you need a corresponding license for each module you specify.
-d	Specifies which display driver to use. This option sets the environment variable MEDISPLAYDRIVER.
-h	Provides basic help information on the startup command.
-i	Specifies to run the Manager Server installation program. You must be the root user to run the installation program.
-options	Specifies additional X11 Window System parameters, such as geometry and fonts.
&	Returns control to HP-UX window.

For example:

```
/opt/cocreate/os_manager/bin/workmgr -doc -pac &
```

Start the Web Access Server and Multiplexer

- To start the Web Access server, execute the following command from the Web Access host:

```
webserver -p port_address &
```

- To start the multiplexer, execute the following command from the machine that hosts the multiplexer:

```
multiplexer -p port_address &
```

The default port address is 8080.

Directory structure

The following tables identify the files contained in the main directories used by Manager Server:

- */opt/cocreate/os_manager*
- *<database directory>*

/opt/cocreate/os_manager

Although we strongly recommend you use */opt/cocreate/os_manager*, you can choose where to place your server software.

Directory	Contents
<i>bin</i>	Executables, including the startup script, <i>workmgr</i> . This script calls the <i>workmgr</i> executable which resides under the <i>clnt800.b</i> directory.)
<i>clnt800.b</i>	Manager Server Client code
<i>desktop</i>	Design Data Management files
<i>doc</i>	Manager Server documentation
<i>icons</i>	Manager Server icons
<i>install</i>	Installation program. The schema subdirectory contains Manager Server default schemas. The <i>integrate</i> subdirectory contains OneSpace Designer integration macros.
<i>lib</i>	Message files to support for localized message files for macros and templates.
<i>local</i>	User configuration files, which you can customize for your organization's users.
<i>macros</i>	Binary macros for Manager Server
<i>serv800.b</i>	Manager Server server code
<i>src</i>	ASCII versions of macros for Manager Server
<i>webdocs</i>	Web Access Server documents, macros, templates, and gifs.

/opt/cocreate/os_manager/local

During installation, the following client configuration files were created in the */opt/cocreate/os_manager/local* directory:

File	Purpose
<i>db_defaults</i>	Contains the location of the Database Server and the File Server, and sets other Manager Server values
<i>defaults</i>	Contains system-wide defaults, such as printer configuration
<i>passwords</i>	Lists the name of the License Server workstation
<i>text_ed.inp</i>	Contains text editor integration macros
<i>ui_defaults</i>	Contains customizable Manager Server user interface macros
<i>ui_startup</i>	Inputs the files needed to start Manager Server

The `/opt/cocreate/os_manager/local/ui_defaults` file contains macros you may want to modify for a particular Manager Server installation. The `ui_defaults` file defines the following:

- The attribute list for editor tables.
- The Scan query macros that determine how to select an element.
- The Release macro available from the Packet Editor's Edit menu.
- The display tables and attribute lists used for default formatting of query results.
- The Classification Module's default node and element queries.

To customize any information in the `ui_defaults`, copy it to a customize file and make the changes in that file. Do not change `ui_defaults`, as it is overwritten when you upgrade to a newer version of Manager Server.

Refer to comments in the file for more information about each macro.

/opt/cocreate/os_manager/bin

During installation, the following client configuration files on the database server were installed in the `/opt/cocreate/os_manager/bin` directory:

File	Purpose
<i>from_tape</i>	Used to read from a tape drive to restore data
<i>send_notify</i>	Sends mail to users when a packet is sent
<i>text_editor</i>	Shell script used with text editor integration
<i>to_tape</i>	Used by archive code to write to tape
<i>workmgr</i>	Shell script that starts Manager Server

<database directory>

Directory	Contents
<i>area1</i>	Storage area directory that contains files (such as drawings, solid models, and documentation) that are managed by Manager Server.
<i>database_files</i>	Files that define the database tables for Oracle Note This directory may have additional storage area directories.

Installation Reference

This appendix provides reference information for installing Manager Server.

- Server command-line options
- Killing server processes
- Environment variables

Server command-line options

Server	Command	Variables
Database Server	me_dserv	-p port
		-l license_server_name
		-n location_of_oracle_database_files
		-s oracle_sid
		-h oracle_home_directory
		-e environment_variable_value
		-t create_database_server_logfile
		-k location_of_classes_file_login_history
		-h (allow direct HTTP access to files)
File Server	me_fserv	-a storage_directory_name
		-l license_server_name
		-p port
		-n neighbor_hostname
		-t logfile_name
		-f minimum_free_diskspace
		-m maximum_age_of_file
		-c interval
		-w encrypted_password
		-d (never delete files from area)
		-h (allow direct HTTP access to files)
		-h (allow direct HTTP access to files)
		-h (allow direct HTTP access to files)
-h (allow direct HTTP access to files)		

You can set almost all of the variables with the installation program. The values are then written into the server startup files: *me_dserv.rc* (Database Server) and *me_fserv.rc* (File Server).

Killing server processes

Click **Show Processes** at the bottom of the installation menu. A window will pop up with a list of the server processes currently running on the workstation.

- To kill a database server (and its related processes started by clients connected to the database), go to the HP-UX shell prompt and type,

```
# /opt/cocreate/os_manager/serv800.b/me_dserv.rc stop
```

where the Manager Server path is appropriate for your system.

- To kill a file server process, type:
/opt/cocreate/os_manager/serv800.b/me_fserv.rc stop
- To kill the Workflow server, type:
/opt/cocreate/os_manager/serv800.b/workflow.rc stop
- To kill the Web Access server and multiplexer, type:
/opt/cocreate/os_manager/serv800.b/webserver.rc stop

Environment variables

The following table lists the Manager Server environment variables.

Variable	Description
LANG	Specifies your language variable
WORKMGR_DIR	Sets the search path used to look for files
MEDISPLAYDRIVER	Specifies the graphics display type. The default is Motif. The workmgr script does not change the value of this variable if it is set.
WORKMGR_ADMIN	Specifies whether the Manager Server Admin menu should be active. This variable can be set to 0 (off) or 1 (on). The default is 1.
WM_DOCUMENTS WM_PACKETS WM_CONFIGURATION WM_CLASSIFICATION WM_HISTORY	Specify whether a particular Manager Server client module should be active. These variables can be set to 0 (off) or 1 (on). The default is 0.
WORKMGR_LOCAL	Specifies the full path name to the Manager Server local directory. The system assumes the local directory has the same path as the workmgr script. Although this variable does not appear initially in the workmgr script, you can add it if you want to define a different local directory path.
WM_WORKFLOW	Turns on the Workflow module

Supported character sets

If you are installing a new database, you must:

1. Choose the appropriate character set.
2. Set your LANG variable so the appropriate character set is used.

Supported character sets

The following character sets are supported:

- Roman 8. (HP-UX only, recommended NOT to be used for new installations)
- ISO 8859-1. (recommended for all European languages)
- Shift JIS (Japanese Industry Standard).
- Japanese EUC character set (2 byte).

Databases created prior to release 2.5 were created with the Roman 8 or SJIS character set, no matter which platform was used as a server. Beginning with WorkManager 2.5, we recommend you choose the character set best suited for your database and platform.

Use ISO 8859-1 for all European languages (English, French, German, Italian). The ISO 8859-1 character set is the standard for European languages.

These recommendations only apply to new installations. If you have an existing database, you must continue to use the existing character set as your database character set, regardless of the platform.

Warning Once a character set has been chosen, there is no way to convert your database from one character set to another. Most database vendors do not support such a conversion. Because it would also require conversion of customer data files, we cannot support such a conversion.