

An abstract graphic of a sphere composed of a dense grid of thin, light blue lines. The sphere is positioned on the left side of the page, with its center slightly off-center towards the left. The lines create a sense of depth and perspective, with the sphere appearing to recede into the background.

AVEVA

MARINE

Marine Software Installation Guide

www.aveva.com

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Software Installation Guide

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1 Introduction

This guide explains how to install and set up AVEVA Marine (hereafter referred to as Marine) on a workstation running the Microsoft Windows XP operating system (hereafter referred to jointly as 'Windows'). **Local Administrator** rights are required to perform the installation.

This guide assumes you are familiar with the concepts of folder/file hierarchies for storing data on disks and with basic Windows terminology and commands. If you are not, you may also need to refer to your operating system documentation while you carry out the installation.

The guide also assumes that you have already gained access to the Marine installation files via a DVD, from the AVEVA Web site, or by some other route.

1.1 Contents of this Guide

Hardware and software requirements are described in: [Hardware and Software Requirements](#). For completely up-to-date information, please see the AVEVA Website at <http://www.aveva.com/support> and refer to the Customer Support Hardware pages. The Web pages also give hints on ways of setting up and running Marine on different computers in order to achieve the most efficient performance.

[Installing the Software Suite](#), describes how to install and license the software.

[Setting Up the Windows Environment](#), explains how to configure the Windows operating system before you run Marine.

[Running Marine Under Windows](#), gives some advice on using Marine in a Windows environment.

[Troubleshooting](#) describes solutions for some of the errors that you could encounter when running Marine.

1.2 Associated Products

There are various AVEVA products that may be used in conjunction with Marine. You may wish to consider installing these at the same time. Those closely associated with Marine include the following DESIGN products:

- Global - for synchronisation of Marine projects between world-wide sites
- Model Management - for change & status control of engineering objects (e.g. pipes, welds, ...) from system DESIGN through detailing and into deliverable production
- SQL Direct
- MDS
- ABA ADP

For details of the installation of these 'add-on' products, please refer to the relevant installation guide. If they are required, it may be advisable to read these before installing Marine.

2 Hardware and Software Requirements

2.1 Windows Workstation

AVEVA Marine is normally installed on workstations and projects are normally stored on a Network Server.

Minimum System Requirements:

OS	Windows XP Pro SP2, plus .NET 2.0
CPU	2 GHz Intel Pentium
RAM	1 GB DDR RAM (2GB Recommended)
HDD	4 GB free disk space
Display	1024 x 768 dpi (1280 x 1024 Dual display recommended)
Graphics	see Graphics in Workstation Notes below
File System	NTFS
Network	100 Mb/sec LAN (Gigabit recommended)
Firewall	Microsoft ICF disabled (see Workstation Notes below)
Other	<p>Scroll mouse</p> <p>DVD drive</p> <p>MS VISIO Standard (for Marine Diagrams)</p> <p>Adobe SVG Viewer (for AVEVA P&ID 3D Integrator) Download from: http://www.adobe.com</p>

2.1.1 Workstation Notes

OS: Windows XP Service Pack 2 has been successfully tested with AVEVA Marine and will be supported with previous software versions in line with their respective support status ratings.

AVEVA Marine is not supported on Windows Vista. Software testing is being carried out, but no commitment regarding AVEVA Marine / Vista can be made at this time.

Although a full software installation requires approximately 4 GB of drive space, extra capacity is required if you store project files and databases on the workstation. Please contact your local AVEVA Support Office if you require more information.

Graphics: See Verified Graphics Cards Reports or go to: <http://www.aveva.com/support>.

Firewall: If Microsoft's Internet Connection Firewall (ICF) is left enabled (default), it must be configured to enable access to the database server and the licence server.

2.2 Windows Server

AVEVA Marine is designed to perform most of its work on the workstation, so the Server's main function is to provide rapid and secure access to the Project files and databases.

Minimum System Requirements, based on 50 clients:

OS	Windows 2000 Server or Windows 2003 Server, plus .NET 2.0
CPU	2 GHz Intel Pentium (Dual core or dual processors recommended)
RAM	2 GB DDR-2 RAM
HDD	4 GB free disk space (RAID 0+1, using high performance hard drives recommended)
File System	NTFS
Network	Gigabit PCIe LAN

2.2.1 Server Notes

OS: .NET version 3.0 has not been tested, although it is expected that it will perform satisfactorily.

CPU: Multiple core processors will increase the performance for multiple workstations.

RAM: High performance, high capacity RAM will increase the performance for multiple workstations.

Network: The network should provide a minimum of 100 Mb/sec for each workstation. Two or more network cards are recommended for increased performance and redundancy.

2.3 Licence File

To operate, AVEVA software must be able to access the correct Flexman 3.1 licence file, which should be installed on either the Server, on your workstation, or on a networked workstation.

3 Installing the Software Suite

3.1 Basic Installation

Local Administrator rights are required to:

1. To install from DVD - Insert the DVD into your DVD-ROM drive. If you have AutoRun enabled for the drive, the installation starts automatically. Otherwise, run **Start.htm** on the DVD.
If you are installing from the network - Click **Start>Run** on the Windows taskbar and type the path to the **Start.htm** file on your network.
2. Click check **DVD CONTENTS** and select the product which you want to install (in this case AVEVA Marine), then click **INSTALL**. Click **OK** on any confirmation forms which appear.
3. On the File Download form, select Run this program from its current location (IE 5.0) or Open (IE 5.5 or later) to install the program files directly from their current location onto your hard disk. Select Yes on the Security Warning Query about an Authenticode signature.
4. This starts the InstallShield® Wizard, which will lead you through the rest of the installation process.

It is recommended that you use the default settings for folder paths etc. unless you have good reasons for doing otherwise.

Important: You must not use embedded spaces in folder path names.

When the process is complete, shortcuts to AVEVA Marine applications can be found on the start menu **Start>Programs/AVEVA Marine 12.0**.

3.1.1 NET Framework Installation

The software requires that Microsoft's .NET Framework 2.0 be installed. The .NET Framework is supplied on the installation DVD, and is installed automatically if it is not already installed.

3.2 Uninstalling and Reinstalling

If InstallShield detects an existing installation, it will display the options for modifying/repairing/removing the files rather than simply offering the standard installation options.

To remove installed components from your hard disk, or to add additional components to an existing installation, select **Start>Settings>Control Panel** and use the **Add/Remove Programs** tool.

As an alternative procedure, repeat Steps 1 to 4 of the installation sequence detailed above. The InstallShield® Wizard will detect your existing installation and will give you the following options:

- **Modify**
Displays the same list of options as the **Custom** installation. Select new components to be added and/or deselect any currently installed components to be removed.
- **Repair**
Reinstalls all currently installed components (to correct any corrupted files etc.).
- **Remove**
Removes all currently installed components.

Note: Uninstalling AVEVA Marine will not uninstall Microsoft's .NET Framework: this must be removed separately if required.

3.3 Flexman License Manager

You must install and set up the Flexman license system before launching the installed software. This will usually be done only on the server. Please see the *Flexman Installation Guide*. News and update information is also available for Flexman on the AVEVA support web-site.

3.4 Silent Installation of Marine 12

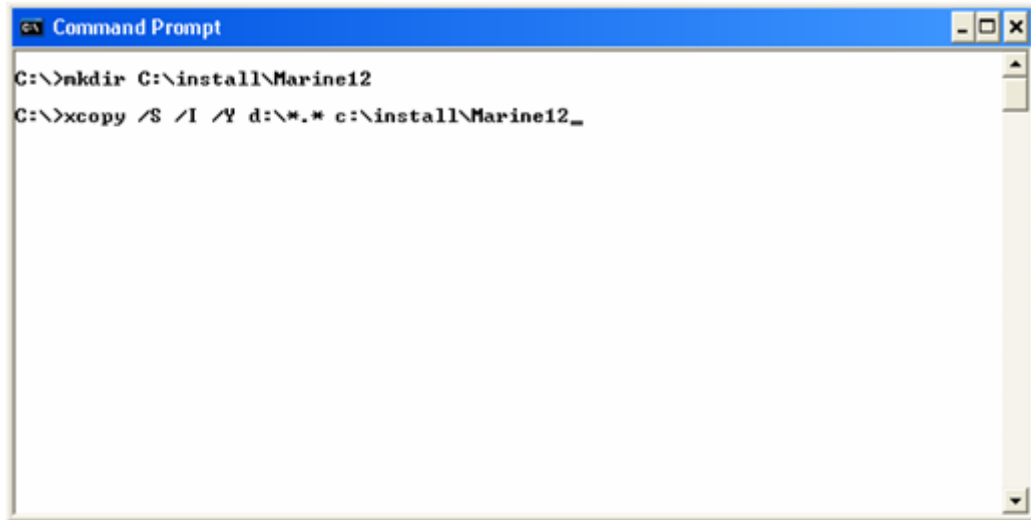
3.4.1 Introduction and Purpose

This guide will instruct the user on how to perform a silent installation of Marine12.

The following assumptions are made within the manual:

- That the user defined path names do not contain spaces.
- That the network share that is being used is shared and that the users performing the installations have access rights to the necessary folder. You can access these commands either from a UNC path or a network drive. A network drive is used in this manual.
- That the folder names in this manual are variable and the user can specify their personal choices.
- The number of files demonstrated within the screen shots may vary depending on what version is being implemented.

1. Copy the contents of the DVD to a network share.

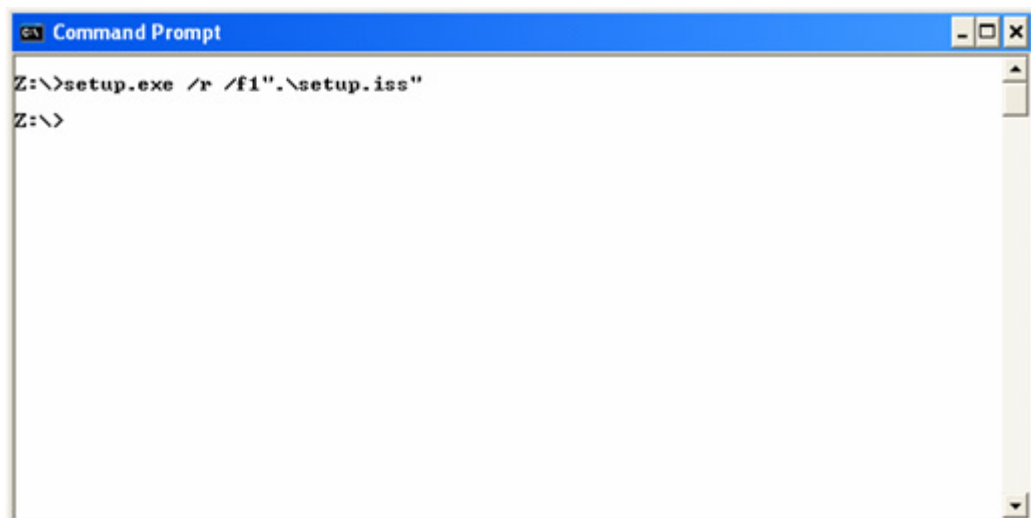


```

C:\>mkdir C:\install\Marine12
C:\>xcopy /S /I /Y d:\*. * c:\install\Marine12_
  
```

2. Create a Windows installer response file from a workstation.
3. On a workstation create an InstallShield Response File.

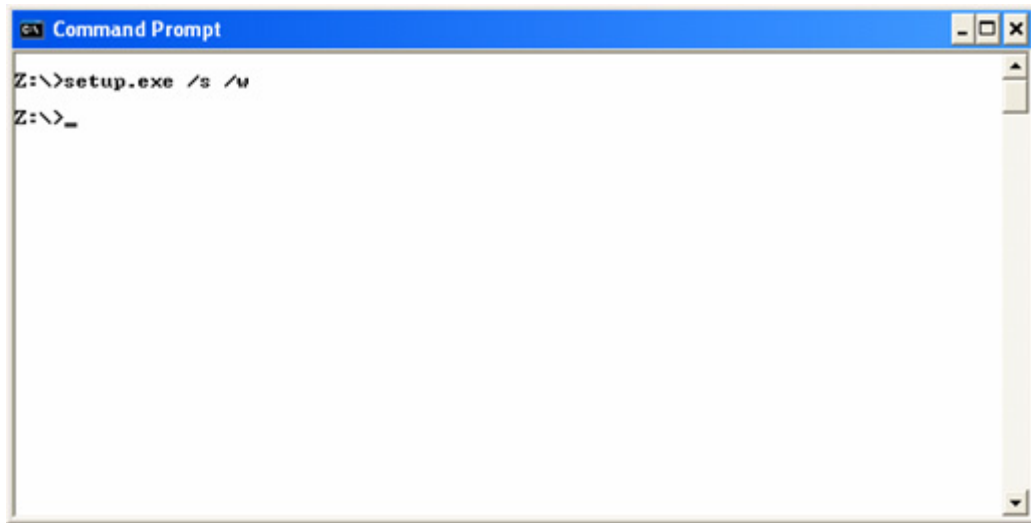
Please see the following screenshot to create the `setup.iss` file:



```

Z:\>setup.exe /r /f1".\setup.iss"
Z:\>
  
```

4. Follow the instructions in the Marine installation wizard to complete the creation of the InstallShield Response File.
5. To deploy the software silently on other computers use the `/s /w` switches in conjunction with `setup.exe`. It is also optional to create a log file of the installation using the `f2` switch (an example being `setup.exe /s /w /f2"%TMP%\setup.log"`) This can be illustrated as follows:



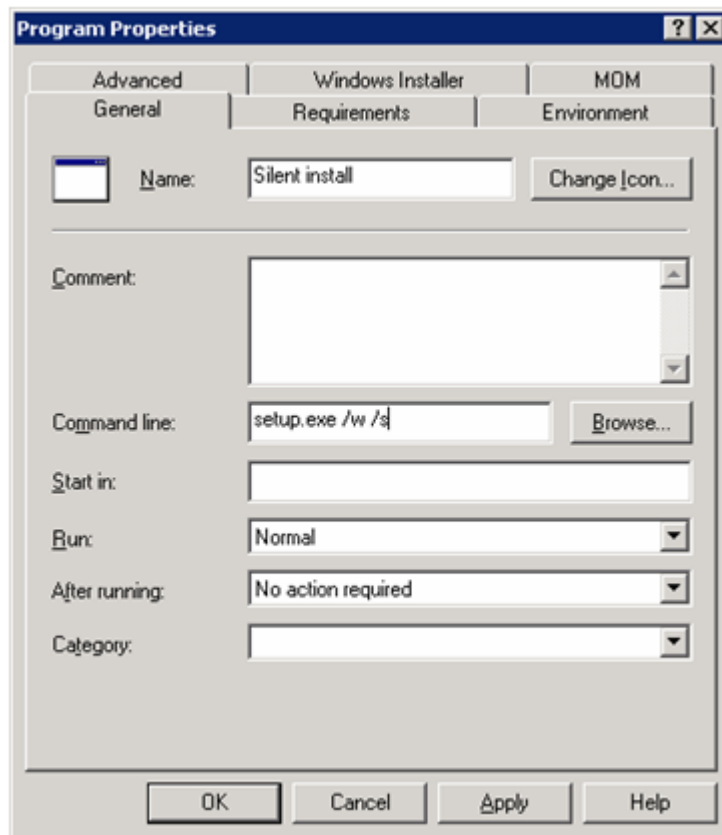
3.4.2 Deployment Across a Network

There are numerous methods for such a deployment. However here are three commonly used methods of deploying the software across a network. These can be depicted in the following section of the manual. This is not a step-by-step approach as the installation will depend on the environment the user has installed.

- **Deployment Using SMS**

Please use the standard procedures for deploying with SMS and use the setup.exe /w /s at the command line.

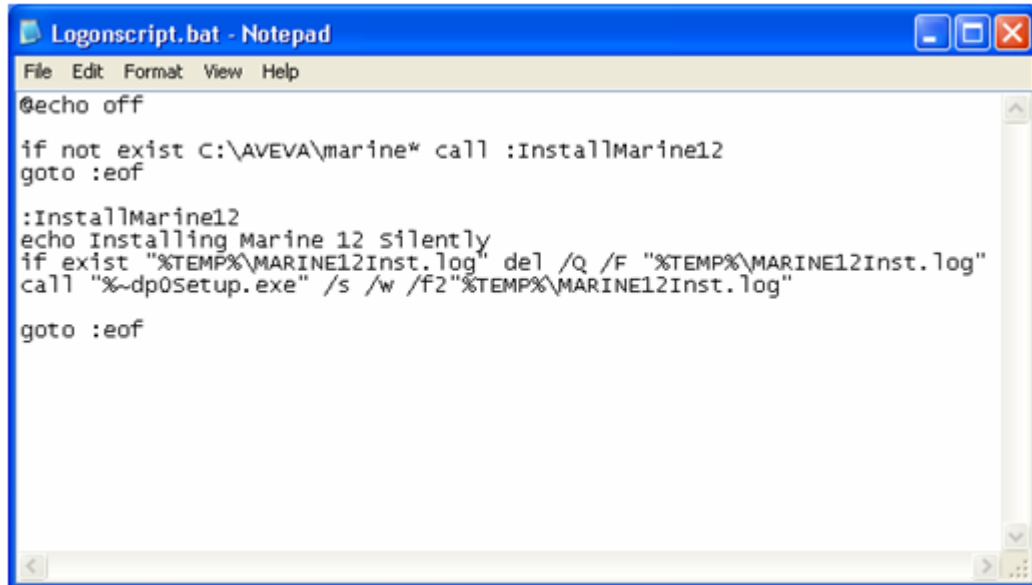
Below is an example of such a dialogue box:



- **Deployment Using Logon Script**

In your logonscript check if Marine is installed. If not, then install it.

Logonscript example:



```

File Edit Format View Help
@echo off

if not exist C:\AVEVA\marine* call :InstallMarine12
goto :eof

:InstallMarine12
echo Installing Marine 12 silently
if exist "%TEMP%\MARINE12Inst.log" del /Q /F "%TEMP%\MARINE12Inst.log"
call "%~dp0setup.exe" /s /w /f2"%TEMP%\MARINE12Inst.log"
goto :eof
  
```

- **Deployment Using GPO**

Create a Software Installation Settings file (Zap)

Example zap file:

Reference here: <http://technet2.microsoft.com/windowsserver/en/library/3512b600-5bb4-4dae-8b2c-7b71ef9951a01033.mspx?pf=true>

[Application]

FriendlyName = "AVEVA Marine 12"

SetupCommand = "\\Server\Install\Path2InstallScript\Deploy.bat"

DisplayVersion = 12.0

Publisher = AVEVA

Example of deploy.bat:

```

:InstallMARINE12
:: Install AVEVA MARINE 12.0 Silently
echo Installing AVEVA MARINE 12.0
if exist "%TEMP%\MARINE12Inst.log" del /Q /F "%TEMP%\MARINE12Inst.log"
call "%~dp0setup.exe" /w /s /f2"%TEMP%\MARINE12Inst.log"
:: Check if installation is okay
findstr /I /C:"resultcode=0" "%temp%\MARINE12inst.log" 1>nul 2>&1
IF "%ERRORLEVEL%" EQU "0" (
    echo Installation succeeded
    exit /b 0
ELSE (
    echo Installation failed
    exit /b 1
)
  
```

4 Setting Up the Windows Environment

This chapter describes how to configure the Windows operating system before you run AVEVA Marine. Following installation of AVEVA Marine, you should perform the following steps:

- Check the settings for your graphics card: See [Graphics Card Settings](#).
- Ensure the Flexman License Manager daemon is running, and set environment variables relating to Flexman: See [Setting the License File Location](#).
- Configure Windows parameters for Marine: see [Marine Environment Variables](#).
- You can then run Marine by clicking on the Marine shortcut or icon, which will set up the remaining environment variables required.

Note: In the following instructions it is assumed that AVEVA Marine has been installed in folder **C:\AVEVA**. If it has been installed elsewhere, substitute **C:\AVEVA** with the name of the installation folder.

4.1 Graphics Card Settings

You should set your display to a resolution of at least 1024 x 768 and the colour depth to True colour or 16.7 million colours.

Due to the rapidly changing list of hardware accelerated OpenGL graphics cards commercially available, an up-to-date list of supported graphics cards, graphics device drivers and recommended device driver configuration cannot be included in this document. However, the AVEVA Support Web pages <http://www.aveva.com/support> contain a current list of both tested and supported graphics cards, along with advice on configuration of graphics device drivers.

4.2 Setting the License File Location

Before you can use Marine, you must set up the Flexman license system and connect to the Flexman License Manager daemon (see the *Flexman Installation Guide*). A licence file should be requested from AVEVA Customer Services.

4.3 Marine Environment Variables

AVEVA Marine uses Windows Environment variables to locate folders containing Marine system files and users project data. This allows you to locate these folders anywhere on the file system. The location for Marine system files is C:\AVEVA\Marine\OH12.0, unless the default location was changed during the installation.

Marine is supplied with a file **evars.bat** in the Marine executables folder which sets default values for the environment variables so that they point to the folder structure as installed. It also sets the **PATH** variable to include the PDMSEXE folder containing Marine executables.

You may need to modify this file to reflect the folder structure of your own installation. The following is a list of the variables you may need to reset, with a brief description of each one and the default setting.

Note: That all environment variables must be UPPERCASE.

- **Search Paths of Folders Containing Spaces**

Search paths of folders can contain spaces, by using a semicolon as the separator between folders, for example:

```
set PDMSUI=C:\Local Marine\Appware;M:\Project Marine\Appware;
a:\Company Marine\Appware
```

Note: That in order to define an environment variable that contains just one item including spaces, it must explicitly include a final semicolon. For example:

```
set PDMSUI=C:\Local Marine\Appware;
```

- **Length of Search Path Environment Variable**

The lengths of Marine search path environment variables can be up to a maximum of 5120 characters.

- **Recursive Expansion of Environment Variables**

An environment variable defining a search path can itself contain references to other environment variables. For example:

```
set MPATH=%ROOT%\Standard Version;%ROOT%\Update Version
set ROOT=C:\Program Files\AVEVA; (note final semicolon)
```

Then on PDMS:

```
*$m%MPATH%\mac
```

Will check in turn for:

```
C:\Program Files\AVEVA\Standard Version\mac
C:\Program Files\AVEVA\Update Version\mac
```

System Environment Variables

The following environment variables refer to the location of Marine system files.

PDMSEXE	Executable folder C:\AVEVA\Marine\OH12.0\
PDMSEXEMAIN	Copy of MarineEXE, but can be a search path C:\AVEVA\Marine\OH12.0\
PDMSUI	Application User Interface folder (PML 1) C:\AVEVA\Marine\OH12.0\pdmsui

PMLLIB	Application User Interface folder (PML 2) C:\AVEVA\Marine\OH12.0\pmllib
PDMSDFLTS	Applications defaults folder C:\AVEVA\Marine\OH12.0\pdmseui\dfits
PDMSPLOTS	Applications PLOTS folder C:\AVEVA\Marine\OH12.0\pdmsui\plots
PLOTADC	Pointer to the PLOT executable. C:\AVEVA\Marine\OH12.0\plot\plot.exe
PDMSHELPPDIR	Online help data files. C:\AVEVA\Marine\OH12.0\onlinehelp
PDMSHELPPDIR	Online help data files. C:\AVEVA\Marine\OH12.0\onlinehelp

User Environment Variables

The following environment variables refer to the location of users Marine folders. Users must have write permission to these folders.

PDMSWK	Temporary Marine work file folder C:\temp
PDMSUSER	Application Users save/restore setup area (<i>or the users 'home' folder</i>) C:\AVEVA\Marine\OH12.0\pdmsuser
PDMSREPPDIR	Marine Applicationware Report Input and Output folder. C:\AVEVA\Marine\OH12.0\pdmsui\reports
PDMSDFLTS	Applications defaults folder. Note that individual users may not have permission to change Marine System defaults in C:\AVEVA\Marine\OH12.0\pdmsui\dfits, but they should have their own local defaults area. This is achieved by setting a MarineDFLTS search path, e.g. 'C:\USERDFLTS C:\AVEVA\Marine\OH12.0\pdmsui\dfits'.

Project Environment Variables

For each Marine project, ten more environment variables must be set. For example, for a project ABC:

ABC000	Project database folder
ABCISO	Project ISODRAFT options folder
ABCMAC	Project Inter-DB connection macro folder
ABCPIC	Project DRAFT picture file folder
ABCDRG	Hull drawings
ABCDWG	Outfitting drawings

ABCMAR	Project Hull database folder
ABCDIG	Diagrams
ABCSTE	Stencils
ABCTPL	Templates

Marine is installed with sample project data. Marine Project Environment variables for these projects are set in evars.bat.

4.4 Running Marine from a Command Prompt Window

You can run Marine from a Command Prompt window rather than using the Start/Programs menu. To do this you must set your **PATH** variable to include the folder where Marine is installed.

Windows XP

- Open the **Control Panel**.
- Select **System**, and pick the **Advanced** tab.
- Click on the **Environment Variables** button.
- Edit the system variable **Path** to add the Marine folder (for example, C:\AVEVA\Marine\OH12.0) to the list of folders in the Path variable.

Once the Path variable includes the Marine folder, you can run Marine by typing marine at a command prompt.

5 Running Marine Under Windows

5.1 Spaces in Windows pathnames

To run macros with spaces in the filenames, you must enclose the filename in quotes, without a leading slash. For example:

```
$m'c:\Program Files\Macros\space.mac' arg1 arg2
```

Due to the way in which Marine parses its command lines this format is also recommended for use with filenames containing Asian characters.

5.2 Linking to Microsoft Excel

You can make your reports load directly into a Microsoft Excel spreadsheet, as comma-separated files:

- Select **Utilities>Reports>Modify** from the Marine main menu bar.
- Pick a report template.
- Click on **OK**: the *Modify Template* form is displayed.
- Select **Options>Other Formats...** from the *Modify Template* form menu bar. This displays the *Report Format* form. From this form:
 - Choose the **CSV** option from the **Format** drop-down list.
 - Click on **OK**: this returns you to the *Modify Template* form.
- Select the **Overwrite** radio button.
- For the filename enter %PDMSUSER%/fname.csv (the .csv extension is important).
- In the System command text box enter.
- 'cmd/c "C:\<excel folder>\excel.exe" %PDMSUSER%\fname.csv'.
 where C:\<excel folder> is the location of Excel on your system. Note that it is necessary to enclose Windows command arguments in double quotation marks if the argument contains embedded spaces. :<excel folder>\.

5.3 Windows Parameters

The following setting can be used to improve performance when repositioning forms in Marine. These are optional Windows Parameter settings.

Windows XP

- Open the **Control Panel**. Select **Display**, then select the **Appearance** tab and click on the **Effects...** button. On the form, *uncheck* **Show Window Contents While Dragging** and **Show shadows under menus**.

6 Troubleshooting

Here are some suggestions about solving some problems you may encounter when using Marine under Windows.

6.1 General

- | | |
|---------------------|---|
| Error: | The dynamic link library DFORMD.dll could not be found in the specified path. |
| Explanation: | This is supplied with Marine. Perhaps you have not set your PATH variable. The PATH setting must include 'C:\AVEVA\Marine\OH12.0' |
| Error: | STOP. The application failed to initialise properly (0xc0000135). Click on OK to terminate the application. |
| Explanation: | This occurs after a number of other errors. The most likely reason is a problem with the PATH variable. |

6.2 License Manager Errors

- | | |
|------------------|--|
| Error: | When you start up lmgrd it says <time> (lmgrd) Can't make folder C:\FLEXlm, errno: 2 No such file or folder, etc. |
| Solution: | <p>There is no C: drive for the license manager to write to. As the System Administrator or a Power User, you need to make a shared disk called C:. This can be done on a networked or non-networked computer.</p> <p>Within the Windows Explorer's File menu, create a new folder (e.g. D:\C_drive) and make it current. Select File>Properties and select the Share tab. Click on the Shared As: option button and then click OK.</p> <p>Then from the Tools menu select Map Network Drive. Select C: from the Drive: drop-down list in the displayed form and type: \\hostname\C_drive in the Path box. Then click on OK. (C:) should now appear in the list of available drives in Explorer</p> |
| Error: | <time> (lmgrd) "<host>": Not a valid server hostname, exiting. |

- Explanation:** The hostname used by AVEVA to create the license file does not correspond with the computer on which you are running Marine. The hostname comes from the variable `COMPUTERNAME`, which you can obtain by typing `'env|findstr COMPUTERNAME'` in a Command Prompt window. Compare this with the license file contents, and resubmit if necessary.
- Pop-up Mess.:** FLEXlm: checkout failed: Cannot connect to license server (-15, 10:10061) WinSock error code.
- Explanation:** lmgrd has not been started up - see above for details.
- Pop-up Mess.:** FlexLM: checkout failed: Cannot find license file (-1,73:2) No such file or folder.
- Explanation:** lmgrd has not been started up - see above for details.
- Pop-up Mess.:** FlexLM: checkout failed: Licensed number of users already reached (-4,132).
- Explanation:** You have exceeded the permitted number of users specified in your license file.

6.3 Entering Marine

- Error:** (43,9) Environment Variable not defined for project name.
- Explanation:** You have not set the environment variable for the project, e.g. XYZ000.
- Error:** (43,1) Project <xxx> not available!
Error 7 allocating system database.
- Explanation:** The environment variable for the project does not point to the correct location. Either the disk and/or folder do not exist or are not readable.
- Error:** <username> not found. Invalid username or password.
or
Bad Password
- Explanation:** You are trying to enter Marine without a valid Marine username and/or password.
- Error:** PDMSWK environment variable not set.
- Solution:** Set PDMSWK to `c:\temp` or some other folder where Marine can create temporary files.
- Error:** Error 34 opening variables file.
- Explanation:** You cannot create a file in the location pointed to by environment variable PDMSWK.

- Error:** Project <xxx> is pre version 8.
- Explanation:** This can happen if you have transferred the project from UNIX using FTP in ASCII rather than Binary format.

6.4 Problems with Graphics

- Error:** Cannot pick certain items in DESIGN 3D shaded views.
- Solution:** There is probably a problem with the display driver for the graphics board that you are using. Make sure you have the version of the display driver recommended on our supported display drivers Web page.
- Error:** Incorrect colours.
- Solution:** Check the setting of your Display. The colour resolution should be set to 'True Colour' or 16.7 million colours.
- Error:** Graphics speed (for example in 3D views) is poor.
- Solution:** Check the setting of your Display.

6.5 Troubleshooting the .NET Installation

6.5.1 Version Error

- Error:** System.IO.FileLoadException: The located assembly's manifest definition with name 'MarineResources' does not match the assembly reference.
- Solution:** All .Net assemblies must be the same version. Check File>Properties>Version Assembly Version on all assemblies is 12.0.0.0 or whatever the current version is.

6.5.2 Wrappers or a Dependency Missing

Error: An exception 'System.IO.FileNotFoundException' has occurred in mon.exe.

Additional information: File or assembly name Wrappers, or one of its dependencies, was not found.

Solution: All the .NET assemblies are Private assemblies and are installed under %PDMSEXEX% (Assembly Base directory) or a subdirectory below. .NET loads private assemblies from the base directory of the application. If it can't find the private assembly here, it uses the application's configuration file called <module>.exe.config to see whether it contains any path hints. Path hints are stored in the <probing> element. So, for example, marhdes.exe.config has the following probing path <probing privatePath="Design" />. This means that Wrappers.dll is loaded from the subdirectory DESIGN below the application directory. Each Wrappers.dll depends on the given modules Win32 DLL e.g. DESIGN's Wrappers.dll found in the Design subdirectory depends on des.dll. Win32 DLL loading rules apply here. These are:

- The directory from which the importing component loaded. (i.e. the DESIGN subdirectory where Wrappers.dll is loaded in the case of DESIGN)
- The (application's) current directory (where it's run from)
- The Windows directory (default: C:\Windows) (we don't install anything here)
- The directories that are listed in the PATH environment variable

Since the module DLL does not live in the same directory as the Wrappers.dll then unless Marine is running from %PDMSEXEX% the %PATH% will be used to locate the module DLL. (The Wrappers.dll subdirectory is effectively is the directory which is first looked in for all the Win32 DLL's which Wrappers depends on i.e. <module>.dll, sglnet.dll, udDNet.dll, °)

Make sure that both %PDMSEXEX% and %PATH% point to the root directory in which Marine is installed.

6.5.3 No Add-ins

Problem: Add-ins missing from module

Solution: Add-ins loaded by each module are defined in xml files, as example below:

```
<application>addins.xml
```

If Add-ins are missing, check that these files exist in %PDMSEXEX%

6.5.4 Window Layout

Problem: Window layout is not restored e.g. Add-ins position and/or docked state, ...

Solution: The file <module><version>WindowLayout.xml in the %PDMSUSER% directory stores this information for the each GUI module. If this file is deleted then the window layout will return to its default.

6.5.5 Serialization

Serialization is the process used to store the data - e.g. history stacks, toolbar state - for the GUI in a .NET environment.

Problem: Information is stored per project and per module in the following files in the %PDMSUSER% directory:

<project><version>Settings.bin

<module><version>Settings.bin.

Solution: These files may be deleted or transferred between users working on the same project.

