
WebMentor
Enterprise
Learning Management System

Pre-Installation Notes

Software Version: 4.0
Document Updated: 2/28/02

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Preface

Audience

This document is for system administrators who are preparing to install the WebMentor Enterprise Learning Management System onto a server.

Prerequisites

This document assumes that you have experience installing and configuring software products on Windows NT systems.

Technical Support

Contact Avilar for technical support issues related to WebMentor Enterprise at:

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Preface

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1 OS and Web Server Notes

WebMentor Enterprise Learning Management System relies on communication with the operating system and other running applications in order to execute effectively. This document explains the system conditions which must be met before and after installation of WebMentor Enterprise to assure correct and efficient execution of the product. ***We recommend that you install WebMentor Enterprise with direct assistance from Avilar Technical Support. Please schedule a telephone support call with your Sales person.***

WebMentor Enterprise operates within the following general system configuration:

- Windows NT Server 4.0 SP 5 or 6a
OR
Windows 2000 Server SP 2
- Microsoft SQL Server 7 SP3
OR
Microsoft SQL 2000 SP1
OR
Oracle8
- Microsoft IIS 4.0 (NT) or 5.0 (Windows 2000)
OR
Netscape Web Server 3.0+
OR
Other web server that is supported by Cold Fusion 5.0
- Macromedia Cold Fusion 5.0

Installation Sequence

Avilar recommends installing system software on the server that executes WebMentor Enterprise in the following sequence:

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1. Base operating system
2. Service Packs (128-bit versions recommended)
3. Web server software
4. Microsoft Data Access Objects (DAO) 3.5
5. Microsoft OLE (Windows 9x only)
6. Microsoft Data Access Components (MDAC) 2.1 (English version)
7. A ODBC data source with Administrative privileges for database files
8. An Oracle database (if Oracle is used)
9. Access to a SMTP (email) server
10. Cold Fusion 5.0

The WebMentor Enterprise installation program attempts to install some of these components itself (DAO, OLE, MDAC) if the installer determines that they are absent or need to be upgraded; however, we recommend that you install these items individually before installing WebMentor Enterprise. Doing so makes any errors that may occur during installation of these other products easier to identify and correct.

The WebMentor Enterprise installation adds the following components to the general configuration shown above:

11. WebMentor files
12. Two ODBC data sources: WMData and WMConferences
13. SQL Server devices, user account, and databases (if SQL Server is used)

Windows NT Server 4.0 and Service Packs

Windows NT Server 4.0 (or later) is required. If you are installing NT Server 4.0 onto a clean system, the installer prompts you to install Internet Information Server 3.0 along with the operating system. Avilar recommends that you accept this option and allow NT Server to install IIS 3.0. Although you must upgrade to IIS 4.0, Avilar has found that installing IIS 3.0 first makes the upgrade to IIS 4.0 much smoother.

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Once you have completed the NT Server installation you must install (at least) Service Pack 5. If you do not have a copy of this service pack, you can download it from the Microsoft web site. You must install this service pack before proceeding with the installation of IIS 4.0.

We have tested WebMentor Enterprise with SP6a, and cautiously recommend it. Other vendors have reported serious problems with SP6a.

If SP4 is the latest installed service pack on your server, make sure to apply the post-SP4 Y2K fixes that are in SP5.

Note: There are several hotfixes to SP5 and SP6a that you should also apply—particularly those affecting system security.

If you are going to be running IIS with SSL, we recommend using the 128-bit versions of the service packs (US/Canada only). Once you apply the 128-bit version, never apply the 56-bit version.

Internet Information Server 4.0

Internet Information Server 4.0 is included in the Microsoft Windows NT 4.0 Option Pack, available for download from Microsoft's web site. The newest version of the option pack requires you to install Internet Explorer 4.01 before installing the option pack. We recommend that you install IE 4.01 Service Pack 2.

IIS 4.0 Optional Component

The option pack installation detects the previously-installed IIS 3.0 and gives you the choice of “Upgrade only” or “Custom Installation”. Select “Custom Installation”. From the Custom Install window, select “Windows Scripting Host” in addition to the items already selected and then proceed with the install. This assures that all necessary IIS components are installed.

IIS 4.0 Cold Fusion Mappings

The WebMentor installation program configures IIS with an ISAPI DLL so that Cold Fusion `.cfm` and `.dbm` files are processed correctly.

Sometimes IIS doesn't accept the application mappings for these file types. This causes any reference to a `.cfm` file to prompt a user to download the file. It is also possible for IIS to map multiple DLLs to the same file extension (for example, to two DLLs that reside in different directories). In this case, it is unclear which DLL takes precedence. We recommend that you remove redundant mappings if they occur.

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The WebMentor installation program uses two scripts to configure IIS:

- `mkwebdir.vbs` - Creates an association between a web site and WebMentor. This is the program that creates the various mappings for WebMentor and CFIDE.
- `chaccess.vbs` - Changes the WebMentor and CFIDE trees to be executable.

Sometimes, for reasons Microsoft cannot explain, these scripts do not work. When this happens, WebMentor fails because Cold Fusion can't find things. Please call Avilar when this happens, and we will lead you through a workaround.

A web site served by IIS consists of a name (such as "Default Web Site") and an index number, which starts at 1 and increments for each additional site. Web sites have additional characteristics, such as the port that IIS uses for a particular site. The WebMentor installation program attempts to determine these values during installation, if possible, and prompts you to supply values that override the defaults or supply information that cannot be determined automatically. Occasionally this process fails with an error 80070003. We are trying to determine the cause and implications of this error.

We also provide the script `mkw3site.vbs` for those people wanting to create their own site. `mkw3site.vbs` can be run on any machine that has IIS installed. It creates a new virtual web server so that you can access a directory tree on your machine as a web page. To see the parameter list, run this script with no parameters in a command window.

WebMentor Uninstall

The WebMentor Enterprise uninstall program leaves the IIS configuration information on the system. To remove WebMentor completely:

- Delete the `.cfm` and `.dbm` application mappings
- Delete any WebMentor directories that exist within the various web sites served by IIS.
- Stop IIS, then delete the ISAPI DLL used by Cold Fusion. This DLL usually remains behind when you uninstall WebMentor, since IIS has it locked while IIS is running.

IIS Security Issues

Check the Microsoft Security web site (<http://www.microsoft.com/security/>) regularly for detailed instructions about securing IIS. There are some real security

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holes in IIS, particularly when SQL Server is installed on the same system. We recommend deleting all samples, examples, scripts, etc. that come with IIS as part of the solution. Unfortunately, some of the solutions require registry entries.

Netscape Web Server

If you install WebMentor Enterprise on a system that is running the Netscape web server, the installer attempts to determine the Netscape web server version. Unfortunately, the installer may incorrectly differentiate between Netscape versions unless Cold Fusion 4.01 is already installed. With older versions of Cold Fusion, the installer may attempt to install the wrong Cold Fusion DLL (ns2cf.dll for Version 2, ns3cf.dll for Version 3, and ns35cf.dll for version 3.5). This error can result in Netscape web server failing to restart after WebMentor installation.

Configuration changes that affect WebMentor occur in the file C:\Netscape\SuiteSpot\https-spock\config\obj.conf. The Netscape administration server detects any changes in this file, made either by the installer or by hand, and prompts you to load the latest configuration changes. It is safe to do so.

The installer adds the following lines obj.conf to enable the NSAPI DLL for Cold Fusion support:

```
Init fn="load-modules" funcs="DoCFRequest" ...
NameTrans fn="pfx2dir" from="/webmentor" ...
Service fn="DoCFRequest" ...
```

It also adds (perhaps redundantly) the commands to enable cgi-bin execution anywhere in the tree.

```
<Object ppath="*/cgi-bin/*">
Service fn="send-cgi" type="magnus-internal/cgi"
</Object>
```

The WebMentor uninstall does not remove any of these lines from obj.conf, and typically does not delete the Cold Fusion DLL file, either, since it is locked while the Netscape web server is running. When you stop the web server, the DLL is removed. Then you should manually delete the lines shown above from obj.conf. We recommend that you delete these lines whenever your uninstall or reinstall WebMentor.

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2 Database Notes

This chapter provides pre-installation notes about database setup and configuration.

ODBC Drivers

WebMentor Enterprise requires specific versions of Microsoft Data Access Components (MDAC) and Data Access Objects (DAO).

MDAC

The WebMentor Enterprise installation provides MDAC 2.1 SP2 ODBC Drivers.

Warning: Do not install these drivers if you have already installed the MS SQL Server SP5a patches. The SQL Server patches contain upgraded drivers somewhere in the MDAC 2.0 range.

The MDAC 2.1 SP2 release has an additional patch for the Jet driver. Be aware that using later releases MDAC may reduce performance with the Jet driver (our Access database). This is because the WebMentor database is still Jet 2.5. The Jet driver in later MDAC releases is Jet 4.0 (Access 2000). Consequently, all calls get translated to the older driver, which degrades performance.

For robust database products like SQL Server and Oracle, WebMentor Enterprise requires a data source that is configured for administrative access to the DBMS server. There are two reasons for this.

1. WebMentor uses the administrative account to establish the database and a “webmentor” user account for routine access.

The WebMentor installer creates two data sources: `WMData` and `WMConferences`. These data sources are created with the same connection technology used by the administrative account (either “Named Pipes” or TCP/IP).

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2. WebMentor uses `dbupgrade.exe` to populate these data sources.

WebMentor Enterprise requires MDAC 2.1 SP2 (MDAC 2.1.2.4202.3). Although this is not the latest version of MDAC, we recommend it because of Y2K fixes and problems with Oracle drivers in MDAC 2.5. Please note, however, that MDAC version with international language support (for example, 2.0.3002.23) may be preferable.

Although MDAC 2.1 SP2 is built into the WebMentor Enterprise installer, we recommend that you use Microsoft's installation, since it offers options that the WebMentor installer does not provide.

If you are installing WebMentor Enterprise onto a brand new server system, we recommend MDAC 2.0 SP2 because of a DAO problem that appears in subsequent releases.

DAO

WebMentor Enterprise requires DAO 3.5.

There is a bug in the Microsoft installation of MDAC 2.1 SP2 or MDAC 2.5 which causes both DAO and the WebMentor install to fail. To work around this problem, re-register two DLLs after installing DAO.

1. Run the `daolook.exe` test program to verify that a fix is required. If this test program generates a Dr. Watson runtime error, proceed with the following steps.
2. Verify the presence of the following files:

```
C:\Program Files\Common Files\Microsoft Shared\DAO\
DAO350.DLL
C:\Program Files\Common Files\Microsoft Shared\DAO\
DAO2535.TLB
```

3. Recreate the DAO registry keys by executing the following command lines:

```
REGSVR32.EXE /U "C:\...\DAO350.DLL"
REGSVR32.EXE "C:\...\DAO350.DLL"
```

where "..." represents the path discovered in Step 1.

4. Run the `daolook.exe` test program again to verify the fix. It should now run cleanly.

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`dbupgrade.exe` should now work as well. `dbupgrade.exe` can fail when DAO is not correctly installed. Although users never invoke this program directly, it is used in many of the WebMentor upgrade and install programs. Often, it is this program's failure that brings the DAO problem to light. Therefore, the workaround described above is the one to attempt if you are having Dr. Watson errors that reference `dbupgrade.exe`.

The installation program installs the most recent release of MFC 4.2 (derived from Visual C++ 6 SP3). Installing MDAC 2.5 provides the same MFC support.

Microsoft SQL Server

Microsoft SQL Server 6.5 provides a great deal of power and scalability. It can also be complex to administer. Avilar recommends that installation be performed by an experienced SQL Server administrator.

The following common installation mistakes can affect the WebMentor Enterprise server.

- The SQL Server 6.5 installation prompts you with a License Agreement dialog which sets the default number of licenses to zero. If you do not increase the number of licenses, WebMentor will not be able to connect to the SQL Server database and will not install properly.
- Once you have completed the SQL Server installation, you must register the server and make note of the administrator account (e.g. "sa") and password. You will need to supply this information when you install WebMentor Enterprise.

Patches

For SQL Server 6.5, WebMentor Enterprise requires all patches through SP5a.

For SQL Server 7.0, WebMentor Enterprise requires all patches through SP1. (Note: Avilar does *not* recommend upgrading from SQL Server 6.5 to a 7.0 as a prerequisite for the WebMentor install.)

For SQL Server 2000, WebMentor Enterprise requires all patches through SP1.

WebMentor Database Installation

The WebMentor Enterprise installer prompts you to specify an SQL Server data source that has administrator access to the database server, then verifies that this data source is suitable.

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While the installer is installing the databases, there is a period of time during which no activity is apparent: all you see is a dialog indicating that installation is in progress. Please do not interrupt the installation during this time.

If you are installing WebMentor Enterprise onto a remote database server, the database files and log files reside on the remote server. The directories that hold those files **MUST EXIST** prior to installation.

Cleanup

An SQL Server 6.5 database that is properly configured for WebMentor contains WebMentor devices, two WebMentor database files, and a “webmentor” user. If the installation was not clean or you wish to uninstall WebMentor, you must remove these items by hand using the SQL Server Manager. Remove the items in the following order:

1. Databases - wmdb and wmdbconfdb
2. User - webmentor
3. Devices - wmdb, wmdblog, wmdbconfdb, wmdbconfdblog

Remember that the physical files are not deleted when you delete the databases. You must use the File Manager to delete these files. This is primarily a concern for remote installations, since you may not have access to the File Manager. In this case, make the partition on the remote machine containing the databases mountable so that you can delete these files.

The database installation is handled by a batch file named **database.bat**. Use this file to recreate the database if necessary.

Oracle8

WebMentor Enterprise supports any release of Oracle8 except for 8i.

WebMentor Enterprise requires the Microsoft driver for Oracle and *not* any of the other Oracle ODBC drivers.

Unlike the SQL Server installation, you must create your own Oracle database before installing WebMentor Enterprise.

Warning: Avilar recommends MDAC 2.1 SP2 for use with Oracle8. There is a serious bug in MDAC 2.5 which causes significant processing overhead in connecting to the database. Microsoft acknowledges this problem and a fix is available in MDAC 2.6. However, if your

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system already has MDAC 2.5 installed, there is no way to fall back to a previous release.

Unfortunately, MDAC 2.1 SP2 has its own limitation: a memory leak in the Oracle driver that necessitates periodic server reboots. Contact Avilar for more information about this problem.

Follow these steps to prepare for an Oracle8 installation. (These steps should be familiar to Oracle administrators.)

1. Create an Oracle8 database using the standard Oracle toolset. Avilar recommends creating the default database provided by Oracle during installation, purged of all tables, to simplify configuration complexity.

If you anticipate that the default database may be too small for a production WebMentor Enterprise server, you can use “Oracle Database Assistant” to create a new database. When prompted, select the “Custom” database option so that you may set parameters for the new database appropriately. (Specifying the database parameters correctly is beyond the scope of this document.) If you create your own database, make sure to note the SID and internal username/password, as these are required for subsequent steps.

2. Use the Oracle8 Navigator to create at least one administrative user. Avilar has used “PO8” successfully as the example user. PO8 is created during the Oracle installation of its example database. The administrative user must have (at least) the ability to create users, define privileges, and add tables and columns. These are provided by the DBA role.
3. Use the Oracle8 Net Assistant to establish services that define how the database server should be contacted. Avilar has used “Tcp-loopback.world” successfully, which is installed with the server but presumes that Oracle is on the same system and uses the default database with a SID of ORCL. Oracle provides examples of other services for remote access like “TcpExample.world”. The fastest service is “BEQ-LOCAL”, which works as long as the Oracle server is local to WebMentor.
4. Use the Windows NT ODBC Datasource Administrator to create a data source with administrative access. Avilar has successfully used the PO8 user for administrative access with a data source called “LocalOracle” that uses the “Microsoft ODBC for Oracle driver” (version 2.573.4202.00). Configure this datasource using the service “tcp-loopback.world” with default options if you are running Oracle on the same system as WebMentor; otherwise, use a service you set up in the previous step. When configuring the ODBC data source, enter the “service” name in the

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“server” field.

5. Use Oracle Navigator or Oracle ODBC Test to confirm that you can contact the database you created using the service you created. If you use the default database, clean out all the example tables using Oracle Navigator. Besides creating clutter, these tables have some unfortunate properties that cause warnings during WebMentor installation.

