

EIGNER

Precision Lifecycle Management



Prerequisites Guide

Eigner PLM 5.0 Prerequisites Guide

Includes the Pre-Installation Checklist

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U.S. Headquarters:
EIGNER U.S. Inc.
200 Fifth Avenue
Waltham, MA 02451 USA
Tel.: 781.472.6300
Fax: 781.472.6400

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European Headquarters:
EIGNER Germany GmbH
Ruschgraben 133
D-76139 Karlsruhe
Tel.: +49 / 721 / 62 91 0
Fax: +49 / 721 / 62 91 88

www.eigner.com



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1 Configuration Support Overview

This chapter summarizes the hardware and software configurations supported by the following Eigner PLM installation components:

- PLM Server
- PLM Business and Presentation Services
- Windows Client, UNIX Client and Web Client

1.1 PLM Server and PLM Business and Presentation Services Support

The following table shows the hardware and software configurations supported by the PLM Server and PLM Business and Presentation Services installation components. A “Yes” in the column for a database system or the PLM Business and Presentation Services component indicates that it can be:

- Installed on the given platform/operating system
- Used with a PLM Server running on any other supported platform/operating system.

Platform/Operating System	Database System		PLM Business and Presentation Services
	Oracle 8i (8.1.7)	Microsoft SQL Server 2000, SP2	
HP UX 11.11 (PA-RISC)	Yes	-	Yes
Sun Solaris 8 (SPARC)	Yes	-	Yes
SGI IRIX 6.5 (MIPS)	-	-	-

Platform/Operating System	Database System		PLM Business and Presentation Services
	Oracle 8i (8.1.7)	Microsoft SQL Server 2000, SP2	
IBM AIX 4.3.3	Yes	-	Yes
SuSE Linux 7.3 Kernel 2.4.10 (i386)	-	-	Yes
Windows 2000 Server SP2	Yes	Yes	Yes

1.1.1 About the PLM Business and Presentation Services

The PLM Business and Presentation Services component includes the following:

- The Web Presentation Service, which gives users access to Eigner PLM functionality through their web browsers
- The Workflow module, which provides a robust and scalable solution for the automation of business processes in an engineering organization.

For information on administrating the PLM Business and Presentation Services, refer to the *Administration Guide* (PLM50_ADMIN.pdf on the product CD). For information on using Workflow features, refer to the Eigner PLM online Help: *Using Eigner PLM > Workflow*.

1.2 Client Support

The following table shows the hardware and software configurations supported by the Eigner PLM 5.0 clients, as well as the web browsers supported for the Web Client on each configuration. A “Yes” in the column for a client indicates that you can install it on the given server platform.

Note that all supported clients run against all of the supported server platforms described in Section 1.1.

Platform/Operating System	Eigner PLM Client		
	Windows Client	UNIX Client	Web Client
HP UX 11i (PA-RISC)	-	Yes	Netscape 7.0
Sun Solaris 8 (SPARC)	-	Yes	Netscape 7.0
SGI IRIX 6.5 (MIPS)	-	Yes	Mozilla 1.0
IBM AIX 4.3.3	-	Yes	Netscape 7.0
SuSE Linux 7.3, Kernel 2.4.10 (i386)	-	-	-
Windows XP Professional	Yes	-	IE 5.5 SP2, IE 6.0
Windows 2000 Professional	Yes	-	IE 5.5 SP2, IE 6.0
Windows 2000 Server with SP2	Yes	-	IE 5.5 SP2, IE 6.0
Windows NT Workstation 4.0 with SP6a (Intel)	Yes	-	IE 5.5 SP2, IE 6.0

1.2.1 About the Eigner PLM clients

The Windows Client (also known as the PC Client) is designed specifically for Windows platforms and is installed automatically as a part of the Windows Server installation process. For information on installing the Windows Client on a separate machine from the PLM Server, refer to *Installing the Eigner PLM 5.0 Windows Client* (PLM50_NT_CLI.pdf).

The UNIX Client is available for installation on supported UNIX machines from the setup dialog box. For more information, refer to *Installing the Eigner PLM 5.0 UNIX Client* (PLM50_UNIX_CLI.pdf).

The Web Client, which you configure through the Web Presentation Service, is available for use through supported web browsers. For more information, refer to the *Administration Guide* (PLM50_ADMIN.pdf).



All Eigner PLM documentation is available in the doc directory on the product CD. The installation documentation is shipped in Adobe® Portable Document Format (PDF). To view the files, use the Adobe Acrobat® Reader® software, which is available at no charge at www.adobe.com.

2 Hardware Requirements

To read the Eigner PLM 5.0 CD for installation, your installation machine must have a CD-ROM drive that can read ISO 9660 standard format with Rock Ridge extensions.

To improve the performance and fault tolerance of your database, Eigner recommends that you spread disk space across many smaller drives, rather than a few large drives. A configuration with at least two disk drives is recommended.

2.1 Minimum Network Connectivity and Bandwidth

- TCP / IP and UDP / IP connections between server, client, database and license server(s).
- Network bandwidth for clients via WAN: One exclusive ISDN channel (64 kBit – without file transfer) is good for 2-4 working clients.
- Add bandwidth for sharing documents via WAN connections.
- 100 MBit/s LAN between database server and Eigner PLM 5.0 application server.



At a minimum, a TCP/IP loopback device is required

2.2 Minimum Memory Requirements

The following recommendations are incremental to the amount of RAM required for other applications and the operating system.

- Client machines: 128 MB
- Eigner PLM Server machine: 256 MB
 - Workflow enabled: 23 MB per connect
 - Workflow disabled: 18 MB per connect

- Database system machine:
 - SQL Server: 100 MB for database services
 - Oracle: 6 MB per connected user, plus 100 MB for database services
- Machine hosting the Web Presentation Service: additional 20 MB plus 6 MB per concurrent user.
- Swap space should be a minimum of three times the amount of RAM. On systems with large amounts of memory (more than 1 GB), this can be reduced to two times the amount of RAM.

Windows Minimum CPU requirements:

- For Windows platforms, Intel Pentium 450 MHz equivalent or better.

2.3 Minimum Disk Space

- Eigner PLM Server: 400 MB
- Eigner PLM FileServer: 100 MB
- SQL Server: 270 MB
- SQL Server Client: 70 MB
- Oracle *8i* Server:
 - 1,300 MB for Windows installations
 - 2 GB for UNIX installations
- Oracle *8i* Client:
 - 350 MB for Windows installations
 - 500 MB for UNIX installations
- Windows Client installation on separate machine: 180 MB
- UNIX Client installation on separate machine: 170 MB

3 Module Specific Requirements

3.1 Portals, Client Requirements

- Internet Explorer 5.5 with SP2 or 6.0, or Netscape 7.0 or later
- Windows 2000/XP External Mail
- Your mail application must conform with MAPI and is compatible with Outlook Express and Netscape
- Windows 2000/XP only
- A display with a resolution of 800 by 600 pixels or higher (1024 by 768 or higher recommended)



On some Windows NT 4.0 systems, the file CTL3D32.DLL does not exist. This library is necessary for the external browser. If it is missing from your system, copy it from the installation CD to the system folder:

```
cd e:\windows
copy CTL3D32.DLL c:\winnt\system32
```

For Windows NT 4.0 it is necessary to setup system libraries (DLL) before starting the Eigner PLM installation (`setup.bat`). Execute the Microsoft redistribution package to update the system libraries (DLL). You can find the packages for English and German on the Eigner PLM CD, inside the folder windows.

English:

```
cd e:\windows\eng
vcredist.exe
```

German:

```
cd e:\windows\ger
vcredist.exe
```

3.2 Microsoft NetMeeting, Client Requirements

- Windows 2000/XP only

3.3 Digital Signature

- An official signature, certified by an authorized certification authority, is needed; please refer to: <http://www.verisign.com> (for US); <http://www.trustcenter.de> (for Germany)
- Support of the X509v3 and PKCS12 standard for certificates and private keys

3.4 FileServer

- For Windows the FileServer system must be NTFS based. FAT is not supported.
- The electronic vault must be created on a local hard disk.

4 Recommended Software Configurations

The Eigner PLM 5.0 software has been certified under the following operating system configurations. Please look below for the supported configuration on your platforms.

4.1 Windows

The recommended service packs for the supported Windows Operating systems are found below:

Windows Version	Service Pack
Windows XP Professional (client)	-
Windows 2000 Professional (client)	SP2 or higher
Windows 2000 Server (client & server)	SP2 or higher
Windows NT Workstation 4.0 (client)	SP6a (Intel)

4.2 IBM AIX

The supported OS Version for the IBM workstation is AIX 4.3.3.0, this can be tested with the command:

```
$ oslevel
```

The maintenance level must be at least 09 with some additions, please see below:

```
$ instfix -ik 4330-09_AIX_ML
```

All filesets for 4330-09_AIX_ML were found.

The AIX file sets bos.adt.base and bos.adt.libm must also be installed:

To determine which operating system filesets are installed, enter the following command:

```
$ lslpp -l [fileset_name]
```

Or, if you enter the following command all filesets are listed:

```
$ lslpp -l
```

To determine which operating system patches are installed, enter the following command:

```
$ instfix -a
```

To determine if a patch has been installed, enter the following command:

```
$ instfix -ivk APAR_number
```

See instructions on AIX-Maintenance-Fixes site (see below).

You can get these filesets as APAR IY22024.

Next you need the C++-Runtime Environment APAR IY17981, you can get it at the AIX-Fixes site.

Including these filesets would exceed the capacity of this distribution and break the license agreement with IBM!

4.2.1 Web references

AIX-Maintenance-Fixes:

<http://techsupport.services.ibm.com/rs6k/ml.fixes.html>

AIX-Fixes:

<http://techsupport.services.ibm.com/rs6k/fixdb.html>

IBM-JDK:

<http://www.ibm.com/developerworks/java/jdk/aix/index.html>

4.3 HP-UX 11.11

The Patchbundles from the HP-UX SupportPlus CD December/2001 CD-No 5012-0015, KIT No. 5065-8711 are required. You can check this on your workstation with:

```
$ swlist -l bundle | grep GOLD
```

Output should be:

```
GOLDAPPS11i   B.11.11.0112.6 Gold Applications Patches for HP-UX 11i, December 2001
GOLDBASE11i  B.11.11.0112.6 Gold Base Patches for HP-UX 11i, December 2001
```

These Bundles contain the necessary patches PHCO-24400 'libc cumulative patches'. In addition, you should install patch PHSS_24638 to update the C++ runtime libraries. You can check this on your workstation with:

```
$ swlist -l patch | grep PHSS_24638
```

This should show you the following patches applied:

```
PHSS_24638.CORE-64SLIB    1.0 OS-Core.CORE-64SLIB    applied
PHSS_24638.CORE-SHLIBS  1.0 OS-Core.CORE-SHLIBS    applied
# PHSS_24638 1.0 HP aC++ -AA runtime libraries (aCC A.03.33)
# PHSS_24638.CORE-64SLIB 1.0 OS-Core.CORE-64SLIB    applied
# PHSS_24638.CORE-SHLIBS 1.0 OS-Core.CORE-SHLIBS    applied
# PHSS_24638.LANG-64ALIB 1.0 B.11.11                  applied
# PHSS_24638.LANG-MIN    1.0 B.11.11                  applied
PHSS_24638.LANG-64ALIB  1.0 B.11.11                  applied
PHSS_24638.LANG-MIN     1.0 B.11.11                  applied
```


4.3.1 Recommended HP-UX kernel settings

The HP-UX 11i default value for maximum threads per process is 64. Eigner recommends that you use the maximum kernel setting for the `max_thread_proc` and `maxusers` parameters. Setting `maxusers` to a higher value increases other machine-wide limits, such as `nkthread` (max number of kernel threads). The following table shows the recommended configuration of the HP-UX kernel.

Parameter	Old	New	Description
<code>max_thread_proc</code>	64	1024	Maximum threads per process
<code>maxfiles</code>	60	256	Soft file limit per process
<code>maxusers</code>	32	256	Influences other parameters
<code>nkthread</code>	499	3635	Number of threads total on the system
<code>nproc</code>	276	2068	Maximum number of processes
<code>ncallout</code>	292	2084	Number of pending timeouts

If you want to install the Oracle Server on HP-UX, refer to *Installing Oracle 8i for Eigner PLM on UNIX* (Oralnst817_Unix.pdf) for further kernel adaptations. The values are valid after the next reboot.

4.4 SGI IRIX 6.5

On SGI, the minimum OS level supported is IRIX 6.5.15m with the 'System V Release 4 Networking' and the 'C++ Execution Environment' version 7.3.1.3m installed. The CD-Bundle must be obtained from SGI-Support.

Networking Software `oe.sw.svr4net` subsystem must be installed.

Use following command to check the base operating-systems version and networking software:

```
$showprods -d eoe
```

I = Installed, R = Removed

This should show you:

I/R	Name	Date	Description
I	eoe	01/08/2002 0500	IRIX Execution Environment, 6.5.15m
I	eoe.books	01/08/2002 0500	IRIX Execution Environment Books
I	eoe.books.help	01/08/2002 0500	IRIX Help Books
I	eoe.books.sgi_admin	01/08/2002 0500	IRIX SGI_Admin Books
I	eoe.man	01/08/2002 0500	IRIX Execution Environment Man Pages
I	eoe.man.base	01/08/2002 0500	Basic IRIX Man Pages
I	eoe.man.gifts_perl	04/13/1998 0100	Perl Man Pages
I	eoe.man.gltools	04/13/1998 0100	Graphics Library Tools Man Pages
I	eoe.man.relnotes	01/08/2002 0500	IRIX Release Notes
I	eoe.sw	01/08/2002 0500	IRIX Execution Environment Software
I	eoe.sw.acl	01/08/2002 0500	Access Control Lists
I	eoe.sw.base	01/08/2002 0500	IRIX Base Execution Environment

I/R	Name	Date	Description
I	oe.sw.cdrom	01/08/2002 0500	CD-ROM Filesystem and CD audio Support
I	oe.sw.cpr	01/08/2002 0500	SGI Checkpoint-Restart Software
I	oe.sw.dlpi	01/08/2002 0500	Data Link Provider Interface
I	oe.sw.efs	01/08/2002 0500	EFS Filesystem
I	oe.sw.gfx	01/08/2002 0500	Graphics Execution Environment
I	oe.sw.gifts_perl	04/13/1998 0100	Perl Software
I	oe.sw.gifts_perl_lib	01/08/2002 0500	Perl Libraries
I	oe.sw.gltools	01/08/2002 0500	Graphics Library Tools
I	oe.sw.perf	01/08/2002 0500	Performance Measurement Utilities
I	oe.sw.rm_media	01/08/2002 0500	Removable Media Software
I	oe.sw.svr4net	01/08/2002 0500	System V Release 4 Networking
I	oe.sw.termbase	04/13/1998 0100	Base (required) Terminal Information Files
I	oe.sw.terminfo	04/13/1998 0100	Terminal Information Files
I	oe.sw.usrshare	01/08/2002 0500	Miscellaneous shared text/help/data files
I	oe.sw64	01/08/2002 0500	EOE 64bit Libraries

I/R	Name	Date	Description
I	oe.sw64.gfx	01/08/2002 0500	Graphics 64bit Execution Environment
I	oe.sw64.lib	01/08/2002 0500	IRIX 64bit Libraries

You will also need to verify the correct C++ environment is installed. This can be done on your workstation with:

```
$showprods -d c++_eoe (c++<underscore>eoe).
```

I = Installed, R = Removed

This should show you:

I/R	Name	Date	Description
I	c++_eoe	11/21/2001 0300	Standard Execution Environment (C++ Headers and Libraries, 7.3.1.3m)
I	c++_eoe.man	11/21/2001 0300	Standard Execution Manual Pages (C++)
I	c++_eoe.man.relnotes	11/21/2001 0300	Standard Execution Libraries Release Notes (C++)
I	c++_eoe.sw	11/21/2001 0300	Standard Execution Software (C++)
I	c++_eoe.sw.lib	11/21/2001 0300	Standard Execution Libraries (C++)
I	c++_eoe.sw64	11/21/2001 0300	Standard Execution Software (C++) (64bit)

I/R	Name	Date	Description
I	c++_eoe.sw64.lib	11/21/2001 0300	Standard Execution Libraries (C++) (64bit)

4.5 Sun Solaris

Solaris 8 (SunOS 5.8) with the recommended patches cluster installed from the SunSolve CD January / 2002 rel. 5.0.4 is the supported Solaris version.

In addition, you will need the SUNWlibC packages to meet the Sun C++ runtime environment requirements. You will also need the following operating system packages to be installed on your Solaris machine:

SUNWarc, SUNWbtool, SUNWhea, SUNWlibm, SUNWlibms, SUNWsprot, SUNWtoo

If you enter `pkginfo -i`, all installed packages are listed.

4.5.1 Required operating system patches for Sun Solaris 8

Operating System	Number	Purpose
Solaris 8	108434-01	Shared Library patch for C++
	108435-01	Shared Library patch for 64bit C++

To verify installed patches on you SUN system, enter:

```
$ showrev -p
```

4.6 SuSE Linux 7.3

Eigner used SuSE Linux 7.3 for compilation of the Eigner PLM software-packages.

Installed kernel version was 2.4.10, glibc-2.2, libc-version was 2.1.2-24 and libgpp-version was libgpp-2.95.2-98. You can test installed versions of rpm packages with:

```
$ rpm -q -a | grep <package-name>.
```

To determine the amount of RAM memory installed on your system, enter the following command:

```
$ cat /proc/meminfo | grep MemTotal
```

To determine the bytes of swap space currently configured on your system, enter the following command and multiply the BLOCKS column by 512:

```
$ /sbin/swapon -s
```

For further help on installation and configuration of Oracle 8.1.7 on SuSE Linux see:

```
http://www.suse.com/us/support/oracle/index.html
```

For more information about software configurations, refer to the Eigner PLM Customer Support page:

```
http://www.eigner.com/support
```

5 Pre-Installation Checklist

As a courtesy to you, we have provided a pre-installation checklist to help you prepare for your installation. If Eigner project managers will assist you with the installation, you will need to complete this checklist and return it to them before the planned installation date.

5.1 Company and IT Structure

Company Name: _____

Company Address: _____

System Administrator: _____

Phone _____

Fax: _____

Email: _____

Database Administrator: _____

Phone _____

Fax: _____

Email: _____

Eigner PLM Administrator: _____

Phone _____

Fax: _____

Email: _____

5.2 Installation Media

Please verify:

- We are able to mount and read CDROMS (ISO9660 with rrip) local on each target machine for the Eigner PLM 5.0 installation.

5.3 Node for License Manager

The License manager should be installed on the following target node:

Node Name: _____

Operating system: _____

(uname -a or Windows version)

UCHOSTID: _____ (as shown by uchostid)



Make sure that you run the uchostid program as Administrator (NT) or as root (UNIX) on the license manager node.

Please check:

- The operating system on the target machine for the license server is supported. Please refer to Section 1.1.

For more information regarding the License Manager, please refer to the section "Licensing Overview" in the Eigner PLM Installation Overview.

5.4 Target Platforms

Please check:

- The operating system, database, and patch sets on all target machines are compliant with the currently supported versions. Refer to sections 1, 2 and 4 of this document.

Please check for UNIX only:

- portmapper is running

- lockd is running
- statd is running
- Database – client installation is already installed and configured
- C-Shell is installed (Linux:tcsh)
- X11 is installed
- up-to-date C++ libraries are installed

For both Windows and UNIX:

Please list nodename(s) and version(s) of all target platforms (uname –a or Windows version):

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

Node: _____

Operating system: _____

5.5 System Administration Requirements

Please check:

- A system administrator prepared to login as root (UNIX) and/or (Domain)Administrator (Windows) is available to assist for system specific parts of the installation at any time during the installation process.
- Recovery procedures for installation nodes and trained personnel for recovery are available at any time during the installation process.
- Nodes can be rebooted prior to the installation
- Nodes can be rebooted for startup testing after and during installation

System Administrator Contact:

Name: _____ Phone: _____

Fax: _____

Email: _____

5.6 Database Administration Requirements

Please check:

- The system requirements are met on all target machines running a database or a database client installation as listed earlier in this document.
- Recovery procedures for database nodes/databases and trained personnel for recovery are available any time during the installation process.

Database software:

The database software is already installed and supported as shown earlier in this document.

or

You have purchased you database software through Eigner and it will be installed and configured as part of the contracted installation.

A database administrator who is prepared to log in as database administrator is available to assist for database specific parts of the installation any time during the installation process (for example, to create database users and tablespaces).

Database administrator contact:

Name: _____ Phone: _____

Fax: _____

Email: _____

Checklist filled out by:

Name: _____

Phone: _____

Fax: _____

Email: _____

City, Date

Signature