

Oracle® Agile

Engineering Data Management

Prerequisites Guide for Agile e6.1.3.0

Part No. E50956-01

January 2014

Copyright and Trademarks

Copyright © 1995, 2014,Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

This documentation is in preproduction status and is intended for demonstration and preliminary use only. It may not be specific to the hardware on which you are using the software. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to this documentation and will not be responsible for any loss, costs, or damages incurred due to the use of this documentation.

The information contained in this document is for informational sharing purposes only and should be considered in your capacity as a customer advisory board member or pursuant to your beta trial agreement only. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle Software License and Service Agreement, which has been executed and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced, or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

CONTENTS

Copyright and Trademarks iii
Preface vii

Configuration Support Overview 1

EDM Server, Oracle WebLogic Server, and Oracle Database Server Support 1
Client Support 2

Hardware Requirements 3

Minimum Network Connectivity and Bandwidth 3
Minimum Memory Requirements 3
Minimum CPU Requirements for Windows 4
Minimum Disk Space 4

Required Software and Configurations 5

Regional Settings Support 5
Java 7 7
Digital Signature 8
FileServer 8
Office Suite 8
- Common Requirements 8
- For Microsoft Office Suite 2003 8
- For Microsoft Office Suite 2007 9
- For Microsoft Office Suite 2010 9

Programs on UNIX 9

Operating System Requirements and Configurations 11

Windows 11
- Microsoft Visual Studio 2005 C/C++ Runtime Libraries 11

IBM AIX 12
- Web References 12
- Generic Requirements 12
- Database Requirements 12
- WebLogic Requirements 15

HP-UX 15
- Web References 15
- Generic Requirements 15
- Recommended HP-UX Kernel Settings 16

Database Requirements 16
WebLogic Requirements 18
Oracle Solaris (SPARC) 19
Web References 19
Generic Requirements 19
SUSE Linux Enterprise Server 20
Generic Requirements 20
Database Requirements 20
WebLogic Requirements 25
Necessary Network Configuration on SLES for the EDM Server 26

Preface

The Oracle documentation set includes Adobe® Acrobat™ PDF files. The Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile.html) contains the latest versions of the Oracle Agile e6 PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Oracle Documentation folder available on your network from which you can access the documentation (PDF) files.

Note To read the PDF files, you must use the free Adobe Acrobat Reader™ version 7.0 or later. This program can be downloaded from the Adobe Web site (http://www.adobe.com).

Note Before calling Agile Support about a problem with an Oracle Agile e6 manual, please have the full part number ready, which is located on the title page.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, 7 days a week. For TTY support, call 800.446.2398. Outside the United States, call +1.407.458.2479.

Readme

Any last-minute information about Oracle Agile e6 can be found in the Release Notes file on the Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile_eseries.html)

Agile Training Aids

Go to the Oracle University Web page (http://www.oracle.com/education/chooser/selectcountry_new.html) for more information on Agile Training offerings.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Chapter 1

Configuration Support Overview

This chapter summarizes the hardware and software configurations supported by the following Agile e6.1.3.0 installation components:

- EDM server
- Oracle WebLogic server
- Oracle database server
- Java Client, Windows Client, and Web Client

EDM Server, Oracle WebLogic Server, and Oracle Database Server Support

The following list shows the platform / operating system configurations supported by the EDM server, Oracle WebLogic server, and Oracle database server:

- IBM AIX 7.1 (Power PC 5 or higher)
- HP UX 11i v3 (11.31) (Itanium 2)
- Oracle Solaris 11.1 (UltraSPARC IIIi or higher)
- SUSE Linux Enterprise Server 11 SP2
- Windows 2008 Server R2 (64bit) Enterprise Edition

Important The EDM server requires a locally installed 32bit version of the Oracle database client for connections to the Oracle database server.

Note We support Oracle WebLogic 12c Release 2 (12.1.2) and the Oracle Database 11g Release 2 (11.2.0.3).

Client Support

The following table shows the hardware and software configurations supported by the Agile e6.1.3.0 clients, as well as the web browsers supported for the Web Client for each configuration.

All supported clients run against the entire supported server platforms described above.

Note More information about the different clients can be found in the Architecture Guide and the Online Help.

The Agile e6 documentation can be found on the Oracle Technology Network (OTN) website (http://www.oracle.com/technology/documentation/agile.html.

Platform/Operating System	Agile e6.1.3.0 Client			
	Java Client	Web Client / WebStart	Windows Client	OfficeSuite
Windows XP Professional (32/64bit)	Yes	Internet Explorer 8 Firefox ESR 24	Yes*	Microsoft Office / Visio 2003 and 2007
Windows 7 (32/64bit)	Yes	Internet Explorer 9 or 10 Firefox ESR 24	-	Microsoft Office / Visio 2007 and 2010**
Windows Server 2008 R2 Enterprise Edition (64bit)	Yes	Internet Explorer 9 or 10 Firefox ESR 24	-	Microsoft Office / Visio 2007 and 2010**
* The Windows Client will run in a 32Bit compatibility mode while running on a 64Bit operating system. ** Only the 32Bit version of Microsoft Office / Visio 2010.				

Chapter 2

Hardware Requirements

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

Minimum Network Connectivity and Bandwidth

- TCP/IP and UDP/IP connections between server, client, Oracle WebLogic server and Oracle database 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.
- 1 GB or higher LAN connection between Oracle WebLogic server, Oracle database server and EDM server.

Note At least a TCP/IP loopback device is required.

Minimum Memory Requirements

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

- Client machines: 1 GB

  Note If you want to use the Agile e6.1.3.0 Windows Client, make sure that you have not set the /3GB parameter in the Microsoft boot.ini file.

- EDM server machine: 2 GB (without Oracle database server and WebLogic)
  - Up to 70 MB per connect
- Oracle database server machine: 1GB (3GB if on the same machine where the EDM server is running)
  - 6 MB per connected user, plus 400 MB for database services
- Oracle WebLogic server: 4 GB

- 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.

Minimum CPU Requirements for Windows

- Intel Pentium 2 GHz equivalent or better.

Minimum Disk Space

Oracle WebLogic server (software only) Windows Unix	 up to 3 GB 600 MB up to 2 GB
Oracle 11g server (software only): Windows Unix	 up to 3 GB up to 8 GB
Oracle 11g client: Windows UNIX	 500 MB 1 to 3 GB
EDM server	1 GB
Windows Client installation on separate machine	80 MB
Java Client installation on Windows machine	40MB
Office Suite	10 MB

Note It is strongly recommended not to install the software on a network file system (NFS) to avoid possible performance issues.

For further information please refer to the document *Hardware Sizing Guide for Agile e6.1.3.0*.

Chapter 3

Required Software and Configurations

Regional Settings Support

Agile e6 supports the following regional settings on the client side:

Regional Setting	Details
English US	▫ Short date: ▫M/d/yyyy ▫ Long date: ▫dddd; MMMM dd, yyyy ▫ Short time: ▫h:mm tt ▫ Long time: ▫h:mm:ss tt ▫ Decimal symbol: ▫. ▫ Digit grouping sign: ▫,
English UK	▫ Short date: ▫dd/MM/yyyy ▫ Long date: ▫dd MMMM yyyy ▫ Short time: ▫HH:mm ▫ Long time: ▫HH:mm:ss ▫ Decimal symbol: ▫. ▫ Digit grouping sign: ▫,
German	▫ Short date: dd.MM.yyyy ▫ Long date: ▫dddd, d. MMMM yyyy ▫ Short time: ▫HH:mm ▫ Long time:

	▫HH:mm:ss ▫ Decimal symbol: ▫, ▫ Digit grouping sign: ▫.
German Swiss	▫ Short date: ▫dd.MM.yyyy ▫ Long date: ▫dddd, d. MMMM yyyy ▫ Short time: ▫HH:mm ▫ Long time: ▫HH:mm:ss ▫ Decimal symbol: ▫. ▫ Digit grouping sign: ▫,
French	▫ Short date: dd/MM/yyyy ▫ Long date: ▫dddd d MMMM yyyy ▫ Short time: ▫HH:mm ▫ Long time: ▫HH:mm:ss ▫ Decimal symbol: ▫, ▫ Digit grouping sign: ▫(blank)
French Swiss	▫ Short date: dd.MM.yyyy ▫ Long date: ▫dddd d MMMM yyyy ▫ Short time: ▫HH:mm ▫ Long time: ▫HH:mm:ss ▫ Decimal symbol: ▫. ▫ Digit grouping sign: ▫'

Java 7

Note You are required to install Java 7 before starting any installation.

All components, except for the Oracle WebLogic server require a 32-bit Java Development Kit (JDK) 7.

The Oracle WebLogic server requires a 64-bit Java 7 JDK.

You can download the latest version of the Java SE Development Kit 7 or Java SE Runtime Environment 7 for the following operating systems from the Oracle Technology Network (http://www.oracle.com/technetwork/java/javase/downloads/index.html)

- Linux
- Oracle Solaris
- Windows

For the following operating systems you have to use Java 7 which is provided by the operating system vendor:

- IBM AIX
- HP-UX

See the following table for the required versions:

Installation Type	Java 7.0 (32bit)	
	Runtime Environment (JRE)	Development Kit (JDK)
Agile e6.1.3.0 server	No	Yes
Windows Client [1) 2)]	Yes	Yes
Java Client [2)]	Yes	Yes
WebStart (on the client operating system) [2)]	Yes	Yes

[1)] Only required if you want to use the Workflow Editor.

[2)] Java Runtime Environment or Java Development Kit

Installation Type	Java 7.0 (64bit)	
	Runtime Environment (JRE)	Development Kit (JDK)
WebLogic Server	No	Yes

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)
- The X509v3 and PKCS12 standard for certificates and private keys is supported.

FileServer

- For Windows the File Server system must be based on NTFS. FAT is not supported.
- The electronic vault must be created on a local hard disk or on a SAN drive which has redundant connections.

Note The SAN should be configured not to share the connection between the File Server and applications like a database that generates a lot of I/O traffic on that connection.

Office Suite

The Office Suite component of Agile e6.1.3.0 installation has the following requirements:

Common Requirements

- Windows Installer 3.1 (Already available if the corresponding service pack from the next chapter is installed)
- Microsoft Visual C++ 2005 Runtime Libraries (please refer to the next chapter for the exact version)

For Microsoft Office Suite 2003

- Microsoft .NET Framework 2.0 SP 2
- Shared Add-in Support Update for Microsoft .NET Framework 2.0 (KB908002)
- Shared Add-in Extensibility Update for Microsoft .NET Framework 2.0 (KB908002)
- Microsoft Office 2003
- Microsoft Office 2003 Primary Interop Assemblies (PIA)

- Microsoft Office 2003 Update (KB907417)

For Microsoft Office Suite 2007

- Microsoft .NET Framework 2.0 SP 2
- Shared Add-in Support Update for Microsoft .NET Framework 2.0 (KB908002)
- Microsoft Office 2007
- Microsoft Office 2007 Primary Interop Assemblies (PIA)

For Microsoft Office Suite 2010

- Microsoft .NET Framework 3.5 SP 1
- Microsoft Office 2010
- Microsoft Office 2010 Primary Interop Assemblies (PIA)

Programs on UNIX

The UNIX scripts require the following commands to be available in the path of the user while installing and running the EDM sever:

Name	Description	UNIX OS
/bin/sh	Bourne Shell	All
/bin/csh	C Shell	All
/bin/ps or /usr/bin/ps	Report process status	All
awk	Pattern scanning and processing language	All
basename	Deliver portions of path names	All
cat	Concatenate and display files	All
chmod	Change the permissions mode of a file	All
dirname	Deliver portions of path names	All
ls	List contents of directory	All
lsb_release	Get the release version	Linux
sed	Stream editor	All
uname	Print name of the current system	All
touch	Change file access and modification times	All

Chapter 4

Operating System Requirements and Configurations

The Agile e6.1.3.0 software has been certified under the following operating system configurations. The following sections describe the configurations supported on your platforms.

Note The EDM product only supports IPv4 addresses. Network connections with IPv6 are not supported.

Windows

The minimum service packs for the supported Windows operating systems are as follows:

Windows Version	Service Pack
Windows XP Professional 32Bit (client only)	SP3
Windows XP 64Bit version (client only)	SP2
Windows 7 32/64Bit (client only)	SP1
Windows Server 2008 R2 Enterprise Edition 64Bit	SP1

Microsoft Visual Studio 2005 C/C++ Runtime Libraries

The Agile e6.1.3.0 software requires a specific installed 32bit runtime library (8.0.50727.6195) which always has to be installed even if there is already a newer version of the runtime library installed.

Execute the <installation_package_root>\tools\bin\Windows\vcredist_x86_vc8.exe file which will install the specific required Microsoft Visual Studio 2005 C/C++ runtime libraries.

Note The version that is bundled with the Agile e6.1.3.0 software should always be installed even if the Microsoft update is used to install updates for the runtime libraries in the future.

IBM AIX

Web References

- IBM fixes: http://www.ibm.com/support/fixcentral/main/System+p/AIX
- IBM Java Runtime Environment: http://www.ibm.com/developerworks/java/jdk/aix/service.html

Generic Requirements

The supported OS version for the IBM workstation is AIX 7.1 and the minimum technology level for the supported AIX operating system is as follows:

AIX Version	Technology Level
7.1	1 (with SP4)

To determine the full operating system version enter the following command into a command shell:

```
oslevel -s
```

The result for AIX 7.1 TL 1 SP4 should look like:

```
7100-01-04-1216
```

The following file sets must be installed:

- bos.adt.base
- bos.adt.libm
- xlC.aix61.rte: 11.1.0.4 or later

To determine which operating system file sets are installed, enter the following command into a command shell:

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

Or, enter the following command to list all the file sets:

```
lslpp -l
```

Database Requirements

Operating System Packages

The following additional operating system file sets are required**:**

- bos.adt.lib
- bos.perf.libperfstat 6.1.2.1 or later
- bos.perf.perfstat
- bos.perf.proctools
- xlC.rte.10.1.0.0 or later
- gpfs.base 3.2.1.8 or later

Note GPFS is required only if you want to use a cluster file system for Oracle cluster ware or database files.

To determine whether the required file sets are installed and committed, enter a command into a command shell as follows:

```
lslpp -l bos.adt.base bos.adt.lib bos.adt.libm bos.perf.perfstat \
bos.perf.libperfstat bos.perf.proctools xlC.aix61.rte gpfs.base
```

If you are using the minimum operating system TL level for AIX 7.1 listed above, then install all AIX 7.1 Authorized Problem Analysis Reports (APARs) for AIX 7.1 TL 0 SP1, and the following AIX fixes:

- IZ87216
- IZ87564

Note If the error message "Error in Invoking target 'agent nmb nmo nmhs' of makefile …" occurs during the installation, refer to the support note 126407.1 on My Oracle Support.

To determine whether an APAR is installed, enter the command into a command shell:

```
/usr/sbin/instfix -i -k "IZ87216 IZ87564"
```

The following compiler is required

- IBM XL C/C++ Enterprise Edition for AIX, V9.0 April 2008 PTF

To determine the supported kernel mode, enter a command similar to the following:

```
/usr/bin/getconf KERNEL_BITMODE
```

The output of this command is 64. If you do not see the expected output, then you cannot install the software on this system.

Configuring the Shell Limits

On AIX systems you do not need to configure kernel parameters. However, Oracle recommends that you set shell limits and system configuration parameters.

Shell Limit	Recommended Value
Soft FILE size	-1 (Unlimited)
Soft CPU time	-1 (Unlimited) (This is the default value)
Soft DATA segment	-1 (Unlimited)
Soft STACK size	-1 (Unlimited)
Soft Real Memory site	-1 (Unlimited)
Processes (per user)	-1 (Unlimited) This limit is available only in AIX 6.1 or later

To display the current value specified for these shell limits, and to change them if necessary, perform the following steps:

1. Enter the following command into a command shell:

   ```
   smit chuser
   ```

2. In the User NAME field, enter the user name of the Oracle software owner, for example oracle.

3. Scroll down the list and verify that the value shown for the soft limits listed in the previous table is -1.

   If necessary, edit the existing value. To edit the values, you can use smit utility. However, to set the value of Soft Real Memory size, you must edit the file /etc/security/limits.

   Note If you have permissions to run smit utility, then you automatically have the permissions to edit the limits file.

4. When you have finished making changes, press F10 to exit.

Configuring the System Configuration Parameters

Verify that the kernel parameters shown below are set to values greater than or equal to the minimum value shown.

- `maxuprocs` 16384
- `ncargs` 128

To verify the values of both parameters, enter the following command

```
smit chgsys
```

Verify the values shown for Maximum number of PROCESSES and ARG/ENV list size in 4K

byte blocks and if necessary, edit the values.

WebLogic Requirements

Operating System Packages

The following additional operating system file sets are required**:**

- bos.adt.lib
- bos.perf.libperfstat
- bos.perf.perfstat
- bos.perf.proctools
- rsct.basic.rte
- rsct.compat.clients.rte
- xlC.rte (version 10.1.0.0)

HP-UX

Web References

- HP-UX Fixes: http://itrc.hp.com/
- HP Java Developement Kit: http://www.hp.com/go/java

Generic Requirements

The supported OS version for the Itanium 2 architecture is 11i v3 (11.31) and the minimum quality pack for the supported HP-UX operating system is as follows:

HP-UX Version	Quality Pack	
	Base	Applications
11iv3 (11.31)	September 2012	September 2012

To determine the full operating system version enter the following command into a command shell:

```
uname -r
```

The result for HP-UX 11iv3 should look like:

```
B11.31
```

The installed base and application patches can be tested with the following command:

```
swlist -l bundle | grep QPK
```

The output should be:

```
QPKAPPS  B.11.31.1209.383 Applications Patches for HP-UX 11i v3,
September 2012
QPKBASE  B.11.31.1209.383 Base Quality Pack Bundle for HP-UX 11i v3,
September 2012
```

Recommended HP-UX Kernel Settings

The HP-UX 11i default value for maximum threads per process is 64. It is recommended that you use the maximum kernel setting for the max_thread_proc and maxusers parameters.

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

Note The values become effective after rebooting.

Database Requirements

Operating System Patches

- PHCO_41479 Disk Owner Patch
- PHKL_38038 VM patch - hot patching/Core file creation directory
- PHKL_38938 SCSI cumulative I/O patch
- PHKL_40941 Scheduler patch : post wait hang
- PHSS_36354 assembler patch
- PHSS_37042 hppac (packed decimal)

- PHSS_37959 Libcl patch for alternate stack issue fix (QXCR1000818011)
- PHSS_39094 linker + fdp cumulative patch
- PHSS_39100 Math Library Cumulative Patch
- PHSS_39102 Integrity Unwind Library
- PHSS_38141 aC++ Runtime
- PHSS_39824 HP C/aC++ Compiler (A.06.23) patch

Kernel Parameters

Verify that the following kernel parameters are set either to the formula or to values greater than, or equal to the recommended value shown:

Parameter	Minimum Value
ksi_alloc_max	32768
executable_stack	0
maxfiles	1024
Maxfiles_lim	63488
max_thread_proc	1024
maxdsiz	1073741824 (1 GB)
maxdsiz_64bit	2147483648 (2 GB)
maxssiz	134217728 (128 MB)
maxssiz_64bit	1073741824 (1 GB)
maxuprc	3686
msgmap	4096
msgmni	4096
msgseg	32767
msgtql	4096
ncsize	35840
nfile	63488
nflocks	4096
ninode	34816
nkthread	7184
nproc	4096
semmni	4096
semmns	8192

Parameter	Minimum Value
semmnu	4092
semvmx	32767
shmmax	The size of physical memory, or 1073741824 (0X40000000), whichever is greater. Note To avoid performance degradation, the value should be greater than or equal to the size of the available memory.
shmmni	4096
shmseg	512
vps_ceiling	64

To display the current value or formula specified for these kernel parameters, and to change them if necessary:

- To start the kcweb application, enter the following command into a command shell:

  ```
  /usr/sbin/kcweb -F
  ```

- Check the value or formula specified for each of these parameters and, if necessary, modify that value or formula.

- If necessary, refer to the kcweb online help for more information about completing this step.

Note If the current value for any parameter is higher than the value listed in this table, then do not change the value of that parameter.

If you modify the value of a parameter that is not dynamic, then you must restart the system.

MSGMAP and NCALLOUT are obsolete in HP_UX 11.31. You need not specify values for these parameters.

WebLogic Requirements

Operating System Packages

- B3394BA (version 2.1.0)

Operating System Patches

- PHKL_36248
- PHKL_36249
- PHSS_37202

- PHSS_37501
- PHCO_38050
- PHSS_38139

Oracle Solaris (SPARC)

Web References

- Oracle Solaris:

  http://www.oracle.com/technetwork/server-storage/solaris11/downloads/index.html

- Oracle Java Development Kit:

  http://www.oracle.com/technetwork/java/index.html

Generic Requirements

The supported OS version for Oracle servers (SPARC) is Solaris 11 and the minimum release level for the supported Solaris operating system is as follows:

Solaris Version	Required Release
11	11.1

To determine the full operating system version enter the following command into a command shell:

```
uname -srvp
```

The result for Solaris 11.1 should look like:

```
SunOS 5.11 11.1 sparc
```

Operating System Packages

In addition, you will need the *Sun Workshop Compilers Bundled libC* (**SUNWlibC**) package to meet the C++ runtime environment requirements.

To get the status of the above package enter the following command into a command shell:

```
pkg info system/library/c++-runtime
```

The exact version of Solaris 11 can be found in /etc/release:

```
cat /etc/release
```

The output should be:

```
                          Oracle Solaris 11.1 SPARC
Copyright (c) 1983, 2012, Oracle and/or its affiliates.  All rights reserved.
                       Assembled 19 September 2012
```

Note No special kernel parameters, packages, or patches are required at the time of this release for Oracle Solaris 11.

SUSE Linux Enterprise Server

Generic Requirements

The patch set for the supported SUSE Linux Enterprise Server operating system is as follows:

SUSE Linux	Required Service Pack
11	SP2

The minimum package levels for the supported Linux operating system are:

Product	Package	Version
Oracle Agile EDM	Kernel	3.0.13-0.27 or later
	glibc	2.11.3-17.31.1 or later
	libstdc++46	4.6.1_20110701-0.13.9 or later

The installed versions of rpm packages can be tested with the following command:

```
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
```

Database Requirements

Operating System Packages

The following packages (or later versions) have to be installed:

- binutils-2.19
- gcc-4.3
- gcc-c++-4.3
- glibc-2.9
- glibc-devel-2.9
- ksh-93t
- libstdc++33-3.3.3
- libstdc++43-4.3.3_20081022
- libstdc++43-devel-4.3.3_20081022
- libaio-0.3.104
- libaio-devel-0.3.104
- libgcc43-4.3.3_20081022
- libstdc++-devel-4.3
- make-3.81
- sysstat-8.1.5

Note The Oracle Database Client for the EDM server requires the following additional 32bit packages:

- glibc-32bit-2.9
- glibc-devel-32bit-2.9
- libaio-32bit-0.3.104
- libaio-devel-32bit-0.3.104
- libstdc++33-32bit-3.3.3
- libstdc++43-32bit-4.3.3_20081022
- libstdc++43-devel-32bit-4.3.3_20081022

To determine whether the required packages are installed, enter a command into a command shell similar to the following:

```
rpm -q <package_name>
```

If a package is not installed, then install it from the Linux distribution media or download the required package version from the Linux vendor's website.

Kernel Parameters

Verify that the kernel parameters shown in the following table are set to values greater than or equal to the recommended value. The procedure following the table describes how to verify and set the values.

Parameter	Minimum Value	File
semmsl semmns semopm semmni	250 32000 100 128	/proc/sys/kernel/sem
shmall	2097152	/proc/sys/kernel/shmall
shmmax	Minimum of the following values: Half the size of physical memory (in bytes) 4GB - 1 byte	/proc/sys/kernel/shmmax
shmmni	4096	/proc/sys/kernel/shmmni
file-max	6815744	/proc/sys/fs/file-max
aio-max-nr	Maximum: 1048576 This value limits concurrent outstanding requests and should be set to avoid I/O subsystem failures.	/proc/sys/fs/aio-max-nr
ip_local_port_range	Minimum: 9000 Maximum: 65500	/proc/sys/net/ipv4/ip_local_port_range
rmem_default	262144	/proc/sys/net/core/rmem_default
rmem_max	4194304	/proc/sys/net/core/rmem_max
wmem_default	262144	/proc/sys/net/core/wmem_default
wmem_max	1048576	/proc/sys/net/core/wmem_max

Note If the current value for any parameter is higher than the value listed in this table, do not change the value of that parameter!

To view the current value specified for these kernel parameters, and to change them if necessary, follow these steps:

1. To view the current values of the kernel parameters, enter the commands into a command shell similar to the following:

Note Make a note of the current values and identify any values that you must change.

Parameter	Command	Description
semmsl, semmns, semopm and semmni	# /sbin/sysctl -a | grep sem	This command displays the value of the semaphore parameters in the order listed.
shmall, shmmax and shmmni	# /sbin/sysctl -a | grep shm	This command displays details of the shared memory segment sizes.
file-max	# /sbin/sysctl -a | grep file-max	This command displays the maximum number of file-handles.
ip_local_port_range	# /sbin/sysctl -a | grep ip_local_port_range	This command displays a range of port numbers.
rmem_default	# /sbin/sysctl -a | grep rmem_default	-
rmem_max	# /sbin/sysctl -a | grep rmem_max	-
wmem_default	# /sbin/sysctl -a | grep wmem_default	-
wmem_max	# /sbin/sysctl -a | grep wmem_max	-
aio-max-nr	# /sbin/sysctl -a | grep aio-max-nr	-

2. If the value of any kernel parameter is different from the minimum value, complete the following steps:

   Use any text editor, create or edit the /etc/sysctl.conf file and add or edit lines similar to the following:

   Note Include lines only for the kernel parameter values that you want to change. For the semaphore parameters (kernel.sem), you must define all the four values. However, if any of the current values are larger than the minimum value, define the larger value.

```
fs.aio-max-nr = 1048576
fs.file-max = 6815744
kernel.shmall = 2097152
kernel.shmmax = 536870912
kernel.shmmni = 4096
kernel.sem = 250 32000 100 128
net.ipv4.ip_local_port_range = 9000 65500
net.core.rmem_default = 262144
net.core.rmem_max = 4194304
net.core.wmem_default = 262144
net.core.wmem_max = 1048586
net.ipv4.tcp_wmem = 262144 262144 262144
net.ipv4.tcp_rmem = 4194304 4194304 4194304
```

Note The minimum value required for shmmax is 0.5 GB. However, Oracle recommends that you set the value of shmmax to 2.0 GB for optimum performance of the system.

Note By defininig the values in the /etc/sysctl.conf file, they persist when you reboot the system.

3. Enter the following command to change the current values of the kernel parameters:

   ```
   /sbin/sysctl -p
   ```

4. Review the output from this command to verify that the values are correct. If the values are incorrect, edit the /etc/sysctl.conf file, then enter this command again.

5. To cause the system to read the /etc/sysctl.conf file when it reboots, enter the following command into a command shell:

   ```
   /sbin/chkconfig boot.sysctl on
   ```

Setting the Shell Limits for the Oracle User

To improve the performance of the software on Linux systems, you must increase the following shell limits for the **Oracle** user:

Shell Limit	Item in limits.conf	Hard Limit
Maximum number of open file descriptors	nofile	65536
Maximum number of processes available to a single user	nproc	16384
Maximum size of the stack segment of the process	stack	10240

To increase the shell limits:

1. Add the following lines to /etc/security/limits.conf file:

   ```
   oracle soft nproc 2047
   oracle hard nproc 16384
   oracle soft nofile 1024
   oracle hard nofile 65536
   ```

2. Add or edit the following line to the /etc/pam.d/login file:

   ```
   session    required     pam_limits.so
   ```

Using MEMORY_TARGET by 11g Installation on Linux

Increase the size of /dev/shm mountpoint - to be bigger than the value of the initialization parameters MEMORY_TARGET and MEMORY_MAX_TARGET. Refer to the Hardware Sizing Guide for Agile e6.1.3.0 document for the value of the initialization parameters MEMORY_TARGET and MEMORY_MAX_TARGET.

For instance, if the value of MEMORY_MAX_TARGET is 8GB, increase the size of /dev/shm mountpoint with the following command:

```
mount -t tmpfs shmfs -o size=8g /dev/shm
```

Also, to make this change persistent for a system restarts, add an entry in the file /etc/fstab similar to the following:

```
shmfs /dev/shm tmpfs size=8g 0
```

When AMM (Automatic Memory Management) is enabled, by setting the initialization parameters MEMORY_TARGET and MEMORY_MAX_TARGET, it uses /dev/shm on Linux. If MEMORY_MAX_TARGET is set over /dev/shm size, you may get the following error message:

ORA-00845: MEMORY_TARGET not supported on this system!

A solution is to increase the */dev/shm mountpoint* size.

WebLogic Requirements

Operating System Packages

The following packages (or later versions) have to be installed:

- binutils-2.19-11.28
- gcc-4.3-62.198
- gcc-c++-4.3-62.198
- gcc-32bit-4.3
- glibc-2.9-13.2
- glibc-32bit-2.9-13.2
- glibc-devel-2.9
- glibc-devel-32bit-2.9-13.2
- ksh-93t
- libaio-0.3.104-140.22
- libaio-devel-0.3.104-140.22
- libaio-32bit-0.3.104
- libaio-devel-32bit-0.3.104
- libgcc43-4.3.3_20081022

- libstdc++43-4.3.3_20081022-11.18
- libstdc++43-devel-4.3.3_20081022-11.18
- libstdc++33-3.3.3
- libstdc++33-32bit-3.3.3
- libstdc++43-32bit-4.3.3_20081022
- libstdc++43-devel-32bit-4.3.3_20081022
- libstdc++-devel-4.3
- make-3.81
- openmotif-2.3.1-3.13
- openmotif-devel-32bit-2.3.1-3.13
- openmotif22-libs-32bit-2.2.4-138.17
- openmotif-libs-2.3.1-3.13
- openmotif-devel-2.3.1-3.13
- openmotif-libs-32bit-2.3.1-3.13
- openmotif21-libs-32bit-2.1.30MLI4-143.2
- openmotif22-libs-2.2.4-138.17
- sysstat-8.1.5-7.8

Necessary Network Configuration on SLES for the EDM Server

The File Server and the DTV Daemon are using the new TI-RPC library on SLES 11. The TI-RPC library is using the system configuration file /etc/netconfig to determinate the preferred RPC connection method.

The default configuration in /etc/netconfig is IPv6 for RPC connections, although this is not supported. As this causes communication failures for the File Server and the DTV Daemon, disable IPv6 in /etc/netconfig by adding the comment character '#' in front of the udp6 and tcp6 entries or delete these two lines completely.

For more information about software configurations and platform matrixes refer to the Agile e6.1.3.0 Release Notes – Platform Support document, available on Oracle Software Delivery Cloud or the Oracle Technology Network.