

Oracle Insurance IBRU System Operating Environments

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Oracle Insurance Insbridge Rating and Underwriting System Operating Environments

STATEMENT OF PURPOSE

This document describes the preferred operating environments and system requirements needed for the Oracle Insurance Insbridge Rating and Underwriting (IBRU) system version 3.12. This is inclusive of Oracle Insurance Insbridge Rating and Underwriting RateManager (RateManager), Oracle Insurance Insbridge Rating and Underwriting SoftRater (SoftRater), Oracle Insurance Insbridge Rating and Underwriting PricingManager (PricingManager) and the associated database(s).

The primary focus of these recommendations is performance. The hardware requirements for Windows based machines are divided according to the usage that has the least effect on performance:

- **Minimum** – a minimum configuration may work best in an environment with a low number of users where RateManager, SoftRater and the database are on separate machines.
- **Standard** – a standard configuration may be required when the number of users goes beyond 10 with RateManager, SoftRater and the database on separate machines.
- **Optimal** – an optimal configuration may suit a larger company or a company that handles commercial lines. Commercial lines may require more processor time and have larger data files than non-commercial lines and may benefit from having an optimal system configuration.

When selecting a system, the requirements should be based on transactional rating and/or batch needs as well as the physical requirements to be made on the hardware. A low number of users that processes large files may benefit from a more powerful hardware environment. Likewise, a low number of users with smaller rating/batch needs may be able to use the minimum. In cases where RateManager, SoftRater and the database reside on the same machine, an optimal configuration would be recommended because of the load placed on the machine.

Other considerations that may influence your selection of hardware may be: the resources you have to work with, your space requirements, and utilizing the existing equipment that you already have. Another factor to consider is the number of environments that you want to create. It is recommended that at least two environments be setup, one for development and testing and one for production. A preferred setup is to have three environments, one for development, one for testing and one for production. Each environment will have its own requirements.

There are many possible combinations of RateManager, SoftRater, MS SQL Server along with other database platforms and systems, such as Oracle, that can be used. These configurations may require more equipment, may require more space and/or have additional costs. If you chose to use an Oracle or IBM BD2 database, please follow the hardware/software requirements recommended by the distributor.

For further assistance, please contact an Oracle Insurance Insbridge Rating and Underwriting sales representative.

NOTE

Requirements may change without notice. The requirements listed in this document are current as of the publication date found on the first and last pages of this document.

QUALIFYING QUESTIONS

The following questions may help you define the usage and demands that will be placed on the environment. This may also help to get a clearer understanding of all the areas where the Insbridge System may be utilized. Overall, it is very beneficial to get an idea of the anticipated environment, and identify the peak and average activities around rate loading, testing, pricing analytics, and rating before selecting a hardware/software configuration.

RateManager

1. How many concurrent users will be accessing the RateManager design-time tool?
2. Will an N-Tier environment be utilized with a separate database and application server for RateManager?
3. What kind of actuarial activities will Insbridge be used with? How big of a book of business will be used for testing? When will these pricing activities be done?

SoftRater Engine

1. What is the peak and average production rating engine traffic?
2. Will there be a nightly batch cycle (for renewals, endorsements, etc.)? If so, what size will the batch cycles be? Is there a time window involved?
3. What database will be used in that environment? I.e. will a J2EE version of the rating engine be used in production?
4. Will an N-Tier environment be utilized with a separate database and application server for RateManager?

General

1. Is the hardware designated for the Insbridge product exclusive to Insbridge, or will it be shared with other products?
2. What will the change control environment architecture look like? I.e. will there be DEV, QA, UAT, PROD environments?

RETIREMENT NOTICE for VERSION 03.12.00

The following software versions are being retired and will no longer be supported by Oracle Insurance Insbridge Rating and Underwriting after Version 3.12.

- **3.12 will be the last version to support the following:**
 - SQL Server 2000
 - Windows Server 2000. Along with system requirements for IIS 5.0 and .NET 2.0.
 - SoftRater – DB2 V7
 - SoftRater – IIS V5
 - SoftRater – Solaris V8
 - WebSphere 5.1

MINIMUM OPERATING ENVIRONMENT AND SYSTEM REQUIREMENTS

Microsoft Windows

Below is a listing of the minimum operating environment recommended for RateManager, SoftRater or PricingManager on a Microsoft Windows platform. These are general guidelines with the assumption of a maximum of 10 RateManager users where RateManager and SoftRater are on separate machines.

This configuration may also be used with RateManager, SoftRater and the database on the same machine however, performance may be decreased.

OPERATING SYSTEM	SOFTWARE	HARDWARE – Minimum
RateManager, SoftRater and PricingManager will function on any of the listed Microsoft 2000 or 2003 Server operating systems.	RateManager requires that the following software be installed.	For low usage with RateManager and SoftRater on separate machines, the following hardware configuration is recommended.
Microsoft Windows 2000 Server with Service Pack 4	MSXML 4 or above	Dual processor 1.0 GHz or greater
Microsoft Windows 2000 Advanced Server with Service Pack 4	Microsoft IIS 5.0 or Microsoft IIS 6.0	2 GB ECC RAM or greater
Microsoft Windows Server 2003, Data Center	Microsoft .NET Framework 2.0 and 3.5	100 GB SCSI Hardware RAID or greater
Microsoft Windows Server 2003, Enterprise	MDAC Version 2.8 or above	1280 x 1024
Microsoft Windows Server 2003, Standard	MSMQ as included with Windows 2000 Server or 2003 Server	100b T NIC or greater
	MS SQL Server 2000, SP4 or higher MS SQL Server 2005, SP2	RateManager requires a MS SQL Server database that can be located either on the same machine as RateManager or on a separate database server.

These environment and system requirements will also apply to standalone SoftRater and PricingManager machines.

When RateManager and SoftRater are on separate machines, each machine would be required to meet the minimum requirements.

STANDARD OPERATING ENVIRONMENT AND SYSTEM REQUIREMENTS

Microsoft Windows

Below is a listing of the standard operating environment recommended for RateManager, SoftRater or PricingManager on a Microsoft Windows platform. These are general guidelines with the assumption of a maximum of 10 RateManager users where RateManager and SoftRater are on separate machines.

This configuration may also be used with RateManager, SoftRater and the database on the same machine however, performance may be decreased.

OPERATING SYSTEM	SOFTWARE	HARDWARE - Standard
RateManager, SoftRater and PricingManager will function on any of the listed Microsoft 2000 or 2003 Server operating systems.	RateManager requires that the following software be installed.	For standard usage with RateManager and SoftRater on separate machines, the following hardware configuration is recommended.
Microsoft Windows 2000 Server with Service Pack 4	MSXML 4 or above	2x Quad Core 2.0 GHz
Microsoft Windows 2000 Advanced Server with Service Pack 4	Microsoft IIS 5.0 or Microsoft IIS 6.0	4 GB ECC RAM
Microsoft Windows Server 2003, Data Center	Microsoft .NET Framework 2.0 and 3.5	500 GB SATA 10,000 RMP Hardware RAID 5
Microsoft Windows Server 2003, Enterprise	MDAC Version 2.8 or above	
Microsoft Windows Server 2003, Standard	MSMQ as included with Windows 2000 Server or 2003 Server	1000b T NIC
	MS SQL Server 2000, SP4 or higher MS SQL Server 2005, SP2	RateManager requires a MS SQL Server database that can be located either on the same machine as RateManager or on a separate database server.

These environment and system requirements will also apply to standalone SoftRater and PricingManager machines.

When RateManager and SoftRater are on separate machines, each machine would be required to meet the minimum requirements.

OPTIMAL OPERATING ENVIRONMENT AND SYSTEM REQUIREMENTS

Microsoft Windows

Below is a listing of the optimal operating environment recommended for RateManager, SoftRater and PricingManager on a Microsoft Windows platform. These are general guidelines with the assumption of more than 10 RateManager users where RateManager and SoftRater are on separate machines. This configuration is also recommended where RateManager and SoftRater are on the same machine for peak performance.

OPERATING SYSTEM	SOFTWARE	HARDWARE - Optimal
RateManager, SoftRater and PricingManager will function on any of the listed Microsoft 2000 or 2003 Server operating systems.	RateManager requires that the following software be installed.	For optimal performance, high data volume, or where RateManager and SoftRater are on the same machine, the following hardware configuration is recommended.
Microsoft Windows 2000 Server with Service Pack 4	MSXML 4 or above	4x Quad Core 2.93 GHz
Microsoft Windows 2000 Advanced Server with Service Pack 4	Microsoft IIS 5.0 or Microsoft IIS 6.0	16 GB EEC RAM
Microsoft Windows Server 2003, Data Center	Microsoft .NET Framework 2.0 and 3.5	1.5 TB SAS 15,000 RMP Hardware RAID 0+1
Microsoft Windows Server 2003, Enterprise	MDAC Version 2.8 or above	1280 x 1024
Microsoft Windows Server 2003, Standard	MSMQ as included with Windows 2000 Server or 2003 Server	1000b T NIC
	MS SQL Server 2000, SP4 or higher MS SQL Server 2005, SP2	RateManager requires a MS SQL Server database that can be located either on the same machine as RateManager or on a separate database server.

DATABASE OPERATING ENVIRONMENT AND SYSTEM REQUIREMENTS

The hardware configuration for the database depends upon the database platform you select.

MS SQL Server does not need to be installed on the same machine where the Insbridge web applications reside. If the MS SQL Server resides on a separate host from the IBRU web front end, a properly configured network connection from the web server front end to MS SQL Server must exist.

Depending on the load expected on the web server, the database can be placed on a separate server that can either be independent or shared.

Microsoft Windows

OPERATING SYSTEM	SOFTWARE	HARDWARE - Optimal
MS SQL Server will function on any of the listed Microsoft 2000 or 2003 Server operating systems.	RateManager requires that a MS SQL Server database be used.	All settings are relevant on both MS SQL Server 2000 and 2005 instances.
Microsoft Windows 2000 Server with Service Pack 4	Microsoft .NET Framework 2.0 and 3.5	1.0 GHz or greater
Microsoft Windows 2000 Advanced Server with Service Pack 4	SQL Server must use Mixed Mode Authentication	2 GB RAM
Microsoft Windows Server 2003, Data Center	Currently supported are the default SQL Server collation and sort order plus case sensitivity using Latin1_General_BIN as the server collation.	100 GB SCSI Hardware RAID or greater (This may be smaller or larger, depending upon the total volume expected to be used)
Microsoft Windows Server 2003, Enterprise	NT Fibers must not be enabled (not enabled by default)	1280 x 1024
Microsoft Windows Server 2003, Standard	For SQL Server 2005, please make sure the SQL Server Client is installed.	1000b T NIC

If you chose to use an Oracle or IBM BD2 database, please follow the hardware/software requirements recommended by the distributor.

RateManager and PricingManager Database Systems Supported

Microsoft SQL Server

RateManager and PricingManager database schemas support for Microsoft SQL Server.

Versions Supported

- 2000 with service pack 4 or above
- 2005 with service pack 2

NOTE

SQL Server is the required database platform for RateManager. SQL Server and the IBRU System can reside on the same machine. However, it is recommended that you have the SQL Server database on a separate machine for performance and security reasons.

SoftRater Platforms Supported

SoftRater supports multiple database platforms.

Microsoft Windows

Versions Supported

- 2000 with service pack 4 or above
- 2003

Oracle WebLogic

Versions Supported

- 9.2

Red Hat JBoss

Versions Supported

- Application Server Versions 4.2.3

IBM WebSphere

Versions Supported

- 5.1
- 6.0.x
- 6.1.x

SOFTTRATER FOR ORACLE WEBLOGIC

The following minimum operating system and hardware requirements must be met on the server to support the basic installation and use of Oracle WebLogic Server Version 9.2.

Operating System	Software	Hardware
Windows 2000, Windows 2003	Microsoft® Windows 2000® Server with Service Pack 4 (S/P 4) Windows 2000® Advanced Server (S/P 4) Windows Server 2003, Data Center Windows Server 2003, Enterprise Windows Server 2003, Standard MSXML 4 or above IIS 5.0 or IIS 6.0 .NET Framework 2.0 and 3.5 JRockit 5.0 or later, Sun Java 2JDK 5.0 Update or later.	Intel Pentium® processor at 1.3 GHz or faster, minimum of 2 GB available disk space for installation. Minimum memory of 1 GB, 2 GB recommended.
AIX	IBM AIX 5.3 – ML3 and higher IBM Java5 32-bit JDK (Service Refresh 2 or greater) Java version 1.5.0, Java 2 Runtime Environment, Standard Edition, IBM J9 VM. Azul Virtual Machine 2.3.2 and later patches.	POWER4 (1.5 GHz) or higher. Minimum of 2 GB available disk space for installation. Minimum memory of 1 GB, 2 GB recommended.
HP-UX	HP-UX 11i, 11i V2, 11i V3 with HP-UX patches for Java. HP-UX JDK for the Java 2 Standard Edition platform version 5.0.03 HP PA-RISC 2 with Java HotSpot Server VM and all later JDK 5.0 service packs.	PA-RISC at 440 MHz or faster. Minimum 2 GB free disk space for installation (includes SDK). Minimum memory of 1 GB, 2 GB recommended. 11i V3 – HP- Itanium 1.5 GHz.
Linux	Linux 3.0, 4.0 5.0 AS, ES, WS Kernel 2.6.9-11 ELsmp #1 SMP x86_32 GNU_Linux with glibc 2.3.4-2.9 and later updates and errata levels. JRockit 5.0 JDK and all later 5.0 releases. Azul Virtual Machine 2.3.2 and later patches.	Intel Pentium® processor at 1.3 GHz or faster or AMD64 and 64-bit Xeon with 32-bit JDK, minimum of 2 GB available disk space for installation. Minimum memory of 1 GB, 2 GB recommended.
Solaris	Sun Solaris Version 8 Sun Java JDK 5.0 Update 4 with Java HotSpot Client and Server VMs (32-bit) and all later service packs of 5.0. Sun Solaris Version 9 or 10 Sun Java 2JDK 5.0 Update 6 with Java HotSpot Client and Server VMx (32-bit or 64-bit) and all later service packs. Azul Virtual Machine 2.3.2 and later patches.	Ultra SPARC 168MHz or faster, minimum of 2 GB available disk space for installation (includes SDK). Minimum memory of 1 GB, 2 GB recommended.

SOFRATER FOR IBM WEBSHERE

Below is a listing of the operating environments recommended for SoftRater for IBM WebSphere Versions 5.1, 6.0.x and 6.1.x.

OPERATING SYSTEM	SOFTWARE	HARDWARE
IBM AIX	IBM AIX 5.3 – ML3 and higher	POWER4 (1.5 GHz) or faster. Minimum of 2 GB available disk space for installation (includes SDK). Minimum memory of 1 GB, 2 GB recommended.
HP-UX	HP-UX 11i, 11i V2, 11i V3 with HP-UX patches for Java.	PA-RISC at 440 MHz or faster. Minimum 2 GB free disk space for installation (includes SDK). Minimum memory of 1 GB, 2 GB recommended.
Linux	RedHat Advanced Server for Intel (x86) 2.1 SuSE Linux SLES for Intel (x86) V8.0 Service Pack 2A TurboLinux Enterprise Server for Intel V8.0 Service Pack 2A UnitedLinux for Intel V1.0 Service Pack 2A Conectiva Linux Enterprise Edition for Intel V1.0	Intel® Pentium processor at 1.3 GHz or faster, or equivalent. Minimum of 2 GB available disk space (includes IBM SDK). Minimum memory of 1 GB, 2 GB recommended.
Sun Solaris	Sun Solaris operating environment, Version 8 or 9 with the Patch Cluster of November 2003	Solaris SPARC workstation at 440MHz or faster, minimum of 2 GB available disk space for installation (includes SDK), minimum memory of 1 GB, 2 GB recommended.
IBM iSeries	Consult: WebSphere Application Server for iSeries Information Center http://www-306.ibm.com/software/info1/websphere/index.jsp	

Microsoft Windows 2000	Microsoft Windows 2003	Intel Pentium® processor at 1.3 GHz or faster, minimum of 2 GB available disk space for installation (includes IBM SDK). Minimum memory of 1 GB, 2 GB recommended.
Microsoft Windows 2003	Microsoft® Windows 2000 Server with Service Pack 4 or above	
	Microsoft Windows 2000® Advanced Server with Service Pack 4 or above	
	Microsoft Windows Server 2003, Data Center	
	Microsoft Windows Server 2003, Enterprise	
	Microsoft Windows Server 2003, Standard	

SoftRater for WebLogic or WebSphere Database Systems Supported

ORACLE

SoftRater for WebLogic or WebSphere database schema support for ORACLE.

Versions Supported

- 9
- 10

Microsoft SQL Server

SoftRater for WebLogic or WebSphere database schema support for SQL Server.

Versions Supported

- 2000 with service pack 4 or above
- 2005 with service pack 2

IBM DB2

SoftRater for WebLogic or WebSphere database schema support for DB2.

Versions Supported

- 7
- 8

SOFRATER FOR RED HAT JBOSS

Below is a listing of the operating environments recommended for SoftRater for Red Hat JBoss Application Server Versions 4.2.3.

OPERATING SYSTEM	SOFTWARE	HARDWARE
HP-UX	HP-UX i2	RISC, ia64. Minimum 2 GB free disk space for installation. Minimum memory of 1 GB, 2 GB recommended.
Linux	Red Hat Enterprise Linux v5 (Latest Update) Red Hat Enterprise Linux v4 (latest update)	x86, x86_64, IBM System z s390x (64-bit) x86, x86_64, IBM System z s390x (64-bit), s390 (31-bit) Minimum of 2 GB available disk space. Minimum memory of 1 GB, 2 GB recommended.
Sun Solaris	Sun Solaris operating environment, Version 9 or 10	SPARC, x86 SPARC Minimum of 2 GB available disk space for installation. Minimum memory of 1 GB, 2 GB recommended.
Microsoft Windows 2003	Microsoft Windows Server 2003	x86, x86_64 Minimum of 2 GB available disk space for installation. Minimum memory of 1 GB, 2 GB recommended.

SoftRater for JBoss Database Systems Supported

ORACLE

SoftRater for JBoss database schema support for ORACLE.

Versions Supported

- 9

- 10

Microsoft SQL Server

SoftRater for JBoss database schema support for SQL Server.

Versions Supported

- 2005 with service pack 2

IBM DB2

SoftRater for JBoss database schema support for DB2.

Versions Supported

- 8

MINIMUM CLIENT OPERATING ENVIRONMENT AND SYSTEM REQUIREMENTS

Microsoft Windows

Below is a listing of the minimum operating environment recommended for RateManager and PricingManager clients. RateManager must be on a Microsoft Windows platform. These are general guidelines with the assumption that the client machine is under normal working conditions and not performing multiple high use tasks. Client machines with greater demands will require increased computing power.

OPERATING SYSTEM	SOFTWARE	HARDWARE – Minimum
RateManager and PricingManager will function on Microsoft 2000 S/P4 or later.	RateManager requires that the following software be installed.	The following hardware configuration is recommended for average client usage.
Microsoft Windows 2000 with Service Pack 4	Microsoft® Internet Explorer® 7.0, 6.0 or 5.5	Pentium 1 GHz or greater
Microsoft Windows XP Professional with Service Pack 1a or later	Microsoft Office 2000 or later	1 GB RAM or greater
	Adobe Acrobat Reader 7.0 or later	10 GB open hard drive space or more
		1024x768 minimum resolution or higher
		100b T or 1000b T NIC or greater

NOTE

Netscape® and Mac® OS browsers are unable to fully support RateManager.



Oracle Insurance Insbridge Rating and Underwriting System Operating Environments

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