

Oracle Insurance

**Insbridge Rating and
Underwriting
Hardware & Software
Recommendations**

Release 4.5

May 2011

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Oracle Insurance Insbridge Rating and Underwriting Hardware and Software Recommendations

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STATEMENT OF PURPOSE

This document describes the preferred operating environments and hardware setup for the Oracle Insurance Insbridge Rating and Underwriting (IBRU) system release 4.5. This is inclusive of Oracle Insurance Insbridge Rating and Underwriting Framework Administrator (IBFA), Oracle Insurance Insbridge Rating and Underwriting RateManager (RateManager), Oracle Insurance Insbridge Rating and Underwriting SoftRater (SoftRater), and the associated database(s).

Some of the main considerations to keep in mind when selecting a setup are:

- Usage
- Environments
- Resources

USAGE

If the ability to return rates quickly with minimal lag time is the main consideration, the requirements should depend upon usage:

- **Minimum** – a minimum configuration may work best in an environment with a low number of users where RateManager and IBFA/SoftRater for Windows are on one machine and a SQL Server database is on a separate machine.
- **Standard** – a standard configuration may be required when the number of users goes beyond 10. RateManager, SoftRater and the databases should reside on separate machines. A Java version of SoftRater may be used and another database in addition to SQL Server may also be utilized.
- **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. RateManager, SoftRater and the databases would reside on separate machines. A Java version of SoftRater may be used and another database in addition to SQL Server may also be utilized.

The minimum, standard and optimal configurations have two main considerations:

1. The server hosting the design-time tool (RateManager).
2. The server(s) hosting the run-time engine(s) (SoftRater).

On the design-time tool (RateManager) side, the configuration selected should be determined by:

- The number of concurrent RateManager users
- The number of lines of business
- The states of those lines of business

RateManager users are the internal users of the system; product managers, actuaries, and business analysts, rate loaders, etc. This does not include agents or consumers.

- The minimal configuration is suitable for 1 or 2 concurrent users and, typically, not more than 3-5 states of 1-2 lines of business.
- The standard configuration would be suitable for 2-10 concurrent RateManager users with 5-25 states in 3-5 lines of business (or 1 or 2 lines of 50 states).
- The optimal configuration would be suitable for more than 10 RateManager users with more than 5 lines of 30-50 states.

On the run-time engine (SoftRater), the configuration should be determined by simultaneous traffic, both from online transactions as well as batch rating cycles.

- The minimum configuration is suitable for development and testing environments. This configurations in not recommended for production environments.
- The standard configuration is suitable when online transactions and batch rating do not occur at the same time, for example, when batch rating occurs during off-peak hours or in the middle of the night.
- The optimal configuration would be recommended to customers who are performing large batch rating cycles that would require a lot of resources, and those batch rating cycles occur during normal business hours.

When selecting hardware for the IBRU system, the requirements should be based on transactional rating and/or batch needs as well as the physical requirements to be made on the machines. 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.

Usage can also be combined with environment needs. For example, if you have a small number of users who will be creating programs on a machine that will not be rating, that group may be fine with a minimum setup. Most likely, there will not be a great demand placed on the machine. If you have a production group that will be generating large quantities of rates/renewals, that group may require an optimal setup to accommodate their needs.

ENVIRONMENTS

Another factor to consider when selecting a hardware/software configuration is the number of physical environments that you want. A physical environment generally refers to a physical machine where a specific activity is performed. For example, a physical environment called development could be created where users only build ratings. Another physical environment called QA could be created where users only test ratings. There is no limit to the number of physical environments you can have.

It is recommended that three physical environments be setup; one for development, one for testing and one for production. Each physical environment will have space and hardware requirements.

There are a few possible combinations of RateManager, IBFA/SoftRater for Windows, IBSS/SoftRater for Java, MS SQL Server along with other database platforms, such as IBM DB2, that can be implemented. These configurations may require more equipment, may require more space and/or have additional hardware costs.

RESOURCES

If resources are the main consideration, the configuration you choose will depend upon the setup you currently running, the available space you have, the existing equipment that you own, and the usage that you anticipate.

RateManager is not a processor heavy application and the database is not transaction heavy. This means that existing hardware equipment may be used. Depending upon the condition of the machines, the current demands the machine is under and the available space on the machine.

For the setup options:

- **Database** – RateManager and IBFA require a SQL Server database. SoftRater can use a SQL Server, Oracle or DB2 database or a combination of databases. SQL Server may be the only database system used. No other database system is required; however another database system can be used in the IBRU setup if desired, for example an Oracle database can be utilized.

If you chose to use an Oracle or IBM DB2 database, please follow the hardware/software requirements recommended by the manufacturer.

- **Operating Systems** – RateManager and IBFA must run on a Windows Server machine. No other operating environment will be required. SoftRater can be run on a non-Windows machine if a compatible application server platform such as WebLogic, WebSphere, or JBoss is running as well. If a non-Windows machine is used for SoftRater, a Java version of SoftRater will be required. The Java version of SoftRater will need to be loaded onto the machine with the compatible application server platform. Existing equipment can be used and space requirements would not be excessive.

Additional Information

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

NOTE: *It is possible to have RateManager, IBFA/SoftRater for Windows and the SQL Server database all reside on the same machine. This configuration is not recommended due to security and performance issues.*

QUICK VIEW

The table below shows at a glance, what operating systems, application server platforms, and databases can be utilized with the IBRU system.

IBRU System Component	Operating System	Application Server	Database
RateManager	Microsoft Windows Server 2003, Standard Microsoft Windows Server 2003, Enterprise Microsoft Windows Server 2003, Data Center Microsoft Windows Server 2008, Standard Microsoft Windows Server 2008, Enterprise Microsoft Windows Server 2008, Datacenter	IIS 6.0 IIS 7.0	SQL Server 2005 SP/2 SQL Server 2008 SP/1
IBFA/SoftRater for Windows SoftRater Native	Microsoft Windows Server 2003, Standard Microsoft Windows Server 2003, Enterprise Microsoft Windows Server 2003, Data Center Microsoft Windows Server 2008, Standard (32-bit or 64-bit) Microsoft Windows Server 2008, Enterprise (32-bit or 64-bit) Microsoft Windows Server 2008, Datacenter (32-bit or 64-bit)	IIS 6.0 IIS 7.0	SQL Server 2005 SP/2 SQL Server 2008 SP/1 Oracle XE
IBSS/SoftRater for Java	Please see NOTE	Oracle WebLogic 10.3.1 IBM WebSphere 6.0.x, 6.1.x, 7.0 JBoss by Red Hat 4.2.3 GA	Oracle 10g, 11g IBM DB2 9.1 SQL Server 2005 SP/2 SQL Server 2008 SP/1

NOTE: JBoss, WebLogic and WebSphere operate in a variety of environments. As long as the application server is compatible with the operating system, then SoftRater for Java also will be compatible. SoftRater for Java is installed and functions within application server. The external resources that the application server resides in will not affect SoftRater for Java.

SERVER SYSTEM REQUIREMENTS

The primary focus of the following hardware recommendations is usage. The hardware requirements are divided by the components that are most affected by usage; processor, memory and hard drive. Each component will have the minimum requirement recommended.

Processor:	Minimum:	Dual processor 1.8 GHz
	Standard:	2x Quad Core 2.0 GHz
	Optimal:	4x Quad Core 2.93 GHz

Memory:	Minimum:	4 GB ECC RAM
	Standard:	8 GB ECC RAM
	Optimal:	16 GB EEC RAM

Hard Drive:	Minimum:	25 GB
	Standard:	50 GB SCSI Hardware RAID
	Optimal:	100 GB SAS 15,000 RMP Hardware RAID 0+1

All hardware for the IBRU system has a standard minimum requirement for graphics and network.

Graphics:	1280 x 1024
Network:	100b T NIC

Server Software

RateManager and IBFA/SoftRater for Windows must be installed in a Windows environment. The software requirements are standard for any IBRU configuration, regardless of whether you are running a minimum configuration or an optimal configuration.

OS:	Microsoft Windows Server 2003, Standard, Enterprise or Data Center
	Microsoft Windows Server 2008, Standard, Enterprise or Data Center (32-bit or 64-bit)
This software must be installed and running in every Windows environment.	Microsoft IIS 6.0 in Windows 2003 Server
	Microsoft IIS 7.0 in Windows 2008 Server
	Microsoft .NET Framework 3.5
	MSMQ

DATABASE SYSTEM SUPPORTED

The Insbridge Rating and Underwriting System has been certified on:

- Microsoft SQL Server 2005 SP/2
- Microsoft SQL Server 2008 SP/1
- Oracle 10g Enterprise Edition (10.2.0.1.0)
- Oracle 11g Release 2 (11.2.0.1.0)
- IBM DB2 9.1
- Oracle Database 10g Express Edition (Oracle XE)

RateManager and IBFA require a SQL Server database. SoftRater supports multiple databases platforms and can utilize a SQL Server, Oracle or DB2 database or a combination of databases. IBFA acts as a SoftRater in a Windows environment. When used in a Windows environment, SQL Server is the only database that can be used. If another database type is needed, a Java version of SoftRater is required.

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. It is recommended that the database be separate for performance and security reasons.

MS SQL Server should not 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.

Hardware

All settings are relevant on a MS SQL Server 2005 SP/2 and a 2008 SP/1 instance. These settings may be used as a guideline when setting up other database systems.

Processor:	1.8 GHz or greater
Memory:	4 GB RAM
Hard Drive:	500 GB SCSI Hardware RAID or greater (This may be smaller or larger, depending upon the total volume expected to be used)
Graphics:	1280 x 1024
Network:	1000b T NIC
These settings will need to be in place.	Mixed Mode Authentication
	Default SQL Server collation and sort order plus case sensitivity using Latin1_General_BIN as the server collation.
	NT Fibers must not be enabled
	SQL Server Client

If you chose to use an Oracle or IBM DB2 database, please follow the hardware/software requirements recommended by the distributor.

SOFRATER JAVA CONFIGURATIONS

A non-Windows machine requires a Java version of SoftRater. SoftRater for Java will work within a JBoss, WebLogic or WebSphere application server.

The Insbridge Rating and Underwriting SoftRater for Java has been tested on:

- JBoss 4.2.3 GA
- Oracle WebLogic 10.3.1
- IBM WebSphere 7.0

JBoss, WebLogic and WebSphere operate in a variety of environments. SoftRater for Java is installed and functions within the application server. The operating system of the machine where the application server resides will not affect SoftRater for Java. For example, it does not matter if WebLogic 10.3.1 is installed on a Linux machine, an HP-UNIX machine or a Windows machine. If WebLogic works in that operating system, then SoftRater for Java should work within WebLogic.

OPERATING ENVIRONMENT – JBOSS by RED HAT

SoftRater for JBoss Application Server by Red Hat Version 4.2.3 GA.

Version: 4.2.3.GA (build: SVNTag=JBoss_4_2_3_GA date=200807181418)

Version Name: Trinity

Built on: July 18 2008

For minimum operating system and hardware requirements for Red Hat JBoss Version 4.2.3 GA., please see: <http://www.jboss.com/products/platforms/application/supportedconfigurations/#JEAP4.2>

NOTE: *To connect to SQL Server 2008 SP/1, JRE 1.5 is required.*

OPERATING ENVIRONMENT – ORACLE WEBLOGIC 11gR1 (10.3.1)

For minimum operating system and hardware requirements for Oracle WebLogic Server release 11gR1 (10.3.1), please see:

http://www.oracle.com/technology/software/products/ias/files/oracle_wls_certification_10gr3_matrix.xls

OPERATING ENVIRONMENT – IBM WEBSHERE

For minimum operating system and hardware requirements for IBM WebSphere Version 7.0, please see: <http://www-01.ibm.com/software/webservers/appserv/was/requirements/>

CLIENT

Clients are the internal users of the system; product managers, actuaries, and business analysts, rate loaders, etc. This does not include agents or consumers. RateManager client hardware and software requirements 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.

Hardware

Minimum hardware configuration for average client usage.

Processor:	Pentium 1.8 GHz or greater
Memory:	1 GB RAM or greater
Hard Drive:	10 GB open hard drive space or more
Graphics:	1024x768 minimum resolution or higher
Network:	100b T or 1000b T NIC or greater

Software

Require software for clients.

Microsoft:	Internet Explorer 7.0 or 8.0
Adobe:	Adobe Acrobat Reader v9.0 or greater

NOTE: IBRU requires Microsoft Internet Explorer. Other browsers are not compatible at this time.

SOFRATER NATIVE CLIENT/ORACLE XE

Oracle Insurance Insbridge Rating and Underwriting SoftRater Native provides the ability to execute rules and rating logic in environments where access via the SoftRater web-services is not desired or possible. For example, an agent's laptop that is not connected to the web, a network, or a legacy non-web enabled system.

Hardware

Minimum hardware configuration for average SoftRater Native client usage.

Processor:	Pentium 1.8 GHz or greater
Memory:	1 GB RAM or greater
Hard Drive:	10 GB open hard drive space or more
Graphics:	1024x768 minimum resolution or higher
Network:	100b T or 1000b T NIC or greater

Software

Required software for SoftRater Native clients.

Microsoft:	Operating System – Windows XP, Windows 7
Oracle:	Oracle Database 10g Express Edition (Oracle XE)
Oracle:	Java Runtime 1.6

SOFRATER NATIVE SERVER SIDE

When implementing SoftRater Native, an Oracle XE environment must be setup on the machine where IBFA is loaded. The same hardware and software requirements for IBFA will apply to an Oracle XE environment.

NOTE: *Requirements may change without notice. The requirements listed in this document are current as of the publication date found in this document.*
