

Oracle Insurance

**Insbridge Enterprise
Rating**

**Hardware & Software
Recommendations**

Release 5.5

September 2017

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Oracle Insurance Insbridge Enterprise Rating Hardware & Software Recommendations

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STATEMENT OF PURPOSE

This document describes the supported operating environments and possible hardware setup for the Oracle Insurance Insbridge Enterprise Rating (Insbridge) system release 5.5.x. The Insbridge system is inclusive of:

- Oracle Insurance Insbridge Enterprise Rating RateManager (RateManager)
- Oracle Insurance Insbridge Enterprise Rating Framework Administrator (IBFA)
- Oracle Insurance Insbridge Enterprise Rating SoftRater (SoftRater)
- Associated database(s)

Definitions

- **RateManager** – RateManager, the design-time environment, is the component within Insbridge where users manage the product definition and modification process, including rating and underwriting logic. RateManager users are the internal users of the system; product managers, actuaries, business analysts, rate loaders, etc. This does not include agents or consumers.
- **Insbridge Framework Administrator** – IBFA is an administrative tool used to configure Insbridge applications and setup RateManager database connections. IBFA also can be used as a run-time SoftRater, SoftRater for Windows.
- **SoftRater** – SoftRater, the run-time environment, is the engine that executes the rating, rules and underwriting instructions defined within RateManager. The rating environment for runtime execution and processing of business content. SoftRater can be deployed to a Windows server or a Java server via an application server.

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

CONSIDERATIONS

When planning for an Insbridge system, there are many considerations to keep in mind. In addition to required software and hardware, there are other factors such as usage, how the Insbridge system will be setup in your network and already existing resources. The considerations covered in this document are:

- Hardware
- Software
- Usage
- Desired Insbridge Setup

Configuration Examples

Three possible configuration examples are described in this document. These configurations can be used to estimate the software and hardware needed for an Insbridge system.

- **Minimum** – Minimum has the smallest footprint. This configuration keeps costs down by using the least amount of equipment and by limiting the number of environments used. A minimum configuration can be expanded at a later time.
- **Standard** – Standard has a mid-sized footprint. This configuration is fairly common and includes a SoftRater for Java setup in Production and QA environments.
- **Optimal** – Optimal has the largest footprint. This configuration is designed for larger data requirements, larger number of users, and for multi-layered environments.

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

Additional Information

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

HARDWARE CONSIDERATIONS

When selecting hardware for the Insbridge 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.

For hardware requirements, 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.

Design-time Tool RateManager

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

- The number of products or lines of business to be implemented.
- The number of states for those products or lines of business.
- The number of concurrent RateManager users:
 - 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.

Run-time Engine SoftRater

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.

SOFTWARE CONSIDERATIONS

RateManager, IBFA/SoftRater for Windows are .NET applications and must run on a Windows Server machine and utilize a Microsoft SQL Server database. SoftRater for Java is more flexible and can be loaded to an Oracle WebLogic, IBM WebSphere, or Red Hat JBoss application server and utilize an Oracle, Microsoft SQL Server or IBM DB2 database.

For required or optional software platforms, such as an IBM DB2 database or Microsoft Windows, please follow the hardware/software requirements recommended by the manufacturer.

- **Databases Supported:**
 - **Microsoft SQL Server** – Required for RateManager and IBFA/SoftRater for Windows. Can be used by SoftRater for Java
 - **Oracle** – Optional for SoftRater for Java
 - **IBM DB2** – Optional for SoftRater for Java

- **Operating Systems Supported:**
 - **Microsoft Windows Server** – Required for RateManager and IBFA/ SoftRater for Windows

- **Application Servers Supported:**
 - **IIS** – Required for RateManager and IBFA/ SoftRater for Windows
 - **Oracle WebLogic** – Optional for SoftRater for Java
 - **IBM WebSphere** – Optional for SoftRater for Java
 - **Red Hat JBoss** – Optional for SoftRater for Java

The Insbridge system may be added to a network or machine you currently have, provided there is available space and that the usage will allow for it.

The Insbridge applications and databases can be tenants in an already existing setup. IBFA uses port 80 by default. Please check with your system administrator for port conflicts with the existing setup. The ports used by SoftRater for Java can be changed from the default to a fixed port if needed.

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.

It is recommended that the databases be on separate machines from the applications due to performance and security issues.

USAGE CONSIDERATIONS

If the ability to return rates quickly with minimal lag time is a consideration, the Insbridge configuration should factor in usage. Usage is defined as the amount of demand placed on the hardware.

RateManager or the design-time tool may be a tenant in the machine but for optimal usage, it is recommended that RateManager have a dedicated machine. SoftRater or the run-time engine should have a dedicated machine as well.

- 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 MS SQL Server database is on a separate machine. No other processes or applications are running on the RateManager and IBFA/SoftRater for Windows machine.
- A **standard** configuration may be required when the number of users goes beyond 10. RateManager, SoftRater and the databases should each reside on separate machines. A Java version of SoftRater may be used and another database in addition to MS SQL Server may also be utilized. The RateManager or design-time tool may be a tenant in the machine along with other applications. It is recommended that SoftRater or the run-time engine be on a machine with minimal demand from other applications or processes.
- 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 each reside on separate machines. A Java version of SoftRater may be used and another database in addition to MS SQL Server may also be utilized.

The design-time machine and the run-time machine can each have their own usage requirements. For example, if you have a small number of users who will be creating programs on a machine that will not be used for 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.

SoftRater Engine Instance Sizing Reference

If you are planning capacity for the Soft Rater engine, the sizing chart may give you an idea of how to plan. The numbers in the chart are based on a lab environment. Please be sure to plan additional space for growth.

Approximate 80-90% CPU Utilization

Transactions/Minute (Approximate)			
	2,400	11,000	92,000
Server	2 Core @ 2.53GHz or higher with 16 GB Ram	4 Core @ 2.53GHz or higher with 32 GB Ram	8 Core @ 2.53GHz or higher with 64 GB Ram

Figure 1 SoftRater Engine Sizing Chart

INSBRIDGE SETUP

Another factor to consider when selecting a hardware/software configuration is the number of physical environments that you want in your Insbridge system. 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 and send the rating either to production or back to development for further work. When the rating is ready and has passed testing, it can be placed into production.

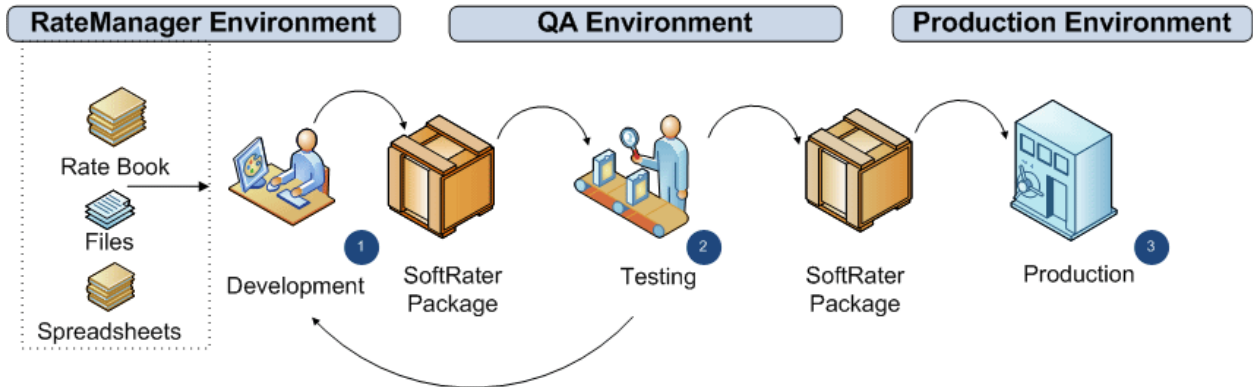


Figure 2 Simple Insbridge Setup

There is no limit to the number of physical environments you can have. However, each environment will require hardware space and a database instance.

It is recommended that at least three physical environments be setup; one for development, one for testing and one for production. These environments can be together on one machine (a minimum configuration) or two machines (a standard configuration) or three machines (an optimal configuration). How you choose to configure your environments is up to you.

There are a few possible combinations of RateManager, IBFA/SoftRater for Windows, IBSS/SoftRater for Java, MS SQL Server, Oracle and IBM DB2 that can be implemented. These configurations may require more equipment, more space, and/or have additional costs. For more information regarding environments, please see the Insbridge Implementation Guide.

Clustered Environments

SoftRater for Java may also utilize a cluster environment. A clustered environment is where multiple instances of SoftRater for Java are created on one or more servers of the same type and share the same configuration. The benefits to a cluster are that all instances in the cluster work together to provide high availability, reliability, scalability, and increased performance. Clusters can be host one the same server or across multiple servers of the same type. Consideration to the size of the cluster utilized should also be considered when sizing a SoftRater for Java environment.

QUICK VIEW

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

	RateManager	IBFA/SoftRater Windows	SoftRater Java
Operating Systems			
Microsoft Windows Server 2008, Standard	S	S	
Microsoft Windows Server 2008, Enterprise	S	S	
Microsoft Windows Server 2008 R2 S/P2, Standard	S	S	
Microsoft Windows Server 2008 R2 S/P2, Enterprise	S	S	
Microsoft Windows Server 2012, Standard	S	S	
Microsoft Windows Server 2012 R2, Standard	S	S	
Application Server			
IIS 7.0	S	S	
IIS 7.5	S	S	
IIS 8.0	S	S	
IIS 8.5	S	S	
Oracle WebLogic 12c (release 12.1.3.0) min JDK 1.7			S
Oracle WebLogic 12c (release 12.2.1.0) min JDK 1.8			S
IBM WebSphere 8.5 (version 8.5.5.0) min JDK 1.7			S
JBoss by Red Hat Enterprise Application Platform 7.0.0 EAP min JDK 1.8			S
Database			
MS SQL Server 2008 R2 Standard edition (version 10.0.4064)	S	S	S
MS SQL Server 2008 R2 Enterprise edition	S	S	S
MS SQL Server 2012 Standard edition (version 11.0.2100.60)	S	S	S
MS SQL Server 2012 Enterprise edition	S	S	S
MS SQL Server 2016 SP1 (version 13.0.4001.0)	S	S	
Oracle 11g release 2 (release 11.2.0.3.0)			S
Oracle 12c (release 12.1.0.1.0)			S
IBM DB2 Enterprise Server Edition 11.1			S

Where S = Supported

NOTE: *WebLogic, WebSphere, and JBoss 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 the application server. The external resources that the application server resides in will not affect SoftRater for Java.*

RATEMANAGER AND IBFA

RateManager and IBFA are installed on the same machine which must be Windows.

Hardware 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 has the minimum requirement recommended.

Processor:	Minimum:	2 Core 2.53 GHz
	Standard:	4 Core 2.53 GHz
	Optimal:	8 Core 2.53 GHz

Memory:	Minimum:	16 GB RAM
	Standard:	32 GB RAM
	Optimal:	64 GB RAM

Hard Drive:	Minimum:	100 GB
	Standard:	500 GB SCSI Hardware RAID
	Optimal:	500 GB SAS 15,000 RMP Hardware RAID 0+1

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

Graphics:	1280 x 1024
Network:	100b T NIC

Software Requirements

The software requirements are standard for any Insbridge configuration, regardless of whether you are running a minimum configuration or an optimal configuration.

OS:	Microsoft Windows Server 2008, Standard (64-bit) Microsoft Windows Server 2008, Enterprise (64-bit) Microsoft Windows Server 2008 R2 S/P1, Standard (64-bit) Microsoft Windows Server 2008 R2 S/P1, Enterprise (64-bit) Microsoft Windows Server 2012, Standard (64-bit) Microsoft Windows Server 2012 R2, Standard (64-bit)
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This software must be installed and running in every Windows environment.	Microsoft IIS 7.0 in Windows 2008 Server Microsoft IIS 7.5 in Windows 2008 R2 S/P1 Server Microsoft IIS 8.0 in Windows 2012 Server Microsoft IIS 8.5 in Windows 2012 R2 Server
	Microsoft .NET Framework 4.5.2
	MSMQ

SOFTRATER FOR WINDOWS

SoftRater for Windows must be installed in a Windows environment.

Hardware 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 has the minimum requirement recommended.

Processor:	Minimum:	2 Core 2.53 GHz
	Standard:	4 Core 2.53 GHz
	Optimal:	8 Core 2.53 GHz

Memory:	Minimum:	16 GB RAM
	Standard:	32 GB RAM
	Optimal:	64 GB RAM

Hard Drive:	Minimum:	100 GB
	Standard:	500 GB SCSI Hardware RAID
	Optimal:	500 GB SAS 15,000 RMP Hardware RAID 0+1

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

Graphics:	1280 x 1024
Network:	100b T NIC

Software Requirements

The software requirements are standard for any Insbridge configuration, regardless of whether you are running a minimum configuration or an optimal configuration.

OS:	Microsoft Windows Server 2008, Standard (64-bit) Microsoft Windows Server 2008, Enterprise (64-bit) Microsoft Windows Server 2008 R2 S/P1, Standard (64-bit) Microsoft Windows Server 2008 R2 S/P1, Enterprise (64-bit) Microsoft Windows Server 2012, Standard (64-bit) Microsoft Windows Server 2012 R2, Standard (64-bit)
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This software must be installed and running in every Windows environment.	Microsoft IIS 7.0 in Windows 2008 Server Microsoft IIS 7.5 in Windows 2008 R2 S/P1 Server Microsoft IIS 8.0 in Windows 2012 Server Microsoft IIS 8.5 in Windows 2012 R2 Server
	Microsoft .NET Framework 4.5.2
	MSMQ

SOFTRATER FOR JAVA

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

Hardware 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 has the minimum requirement recommended.

All settings are relevant on Oracle WebLogic running on MS Windows 2008, Windows 2008 R2 or MS Windows 2012. These settings may be used as a guideline when setting up other application servers.

Processor:	Minimum:	2 Core 2.53 GHz
	Standard:	4 Core 2.53 GHz
	Optimal:	8 Core 2.53 GHz

Memory:	Minimum:	16 GB RAM
	Standard:	32 GB RAM
	Optimal:	64 GB RAM

Hard Drive:	Minimum:	100 GB
	Standard:	500 GB SCSI Hardware RAID
	Optimal:	500 GB SAS 15,000 RMP Hardware RAID 0+1

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

Graphics:	1280 x 1024
Network:	100b T NIC

Software Requirements

The software requirements are standard for any Insbridge configuration, regardless of whether you are running a minimum configuration or an optimal configuration.

OS:	WebLogic, WebSphere, and JBoss operate in a variety of environments. As long as the application server is compatible with the operating system, then the Insbridge system also will be compatible.
	NO REQUIRED SOFTWARE

Supported Application Servers

The Insbridge Enterprise Rating SoftRater for Java supports:

- Oracle WebLogic 12c (release 12.1.3.0)
- Oracle WebLogic 12c (release 12.2.1.0)
- IBM WebSphere 8.5.5.0
- JBoss 7.0 EAP

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 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.

Oracle WebLogic

For minimum operating system and hardware requirements for Oracle WebLogic 12c (release 12.1.3.0), and Oracle WebLogic 12c (release 12.2.1.0) please contact Oracle support.

IBM WebSphere

Version: 8.5.5.0

Version: Integrated Solutions Console

Build #: gm1319.01

Built on: 5/14/13

For minimum operating system and hardware requirements for IBM WebSphere, please visit the IBM download site.

JBOSS by Red Hat

SoftRater for JBoss Application Server by Red Hat Version 7.0 EAP

Version: 7.0.0 EAP

For minimum operating system and hardware requirements for Red Hat JBoss, please visit the Red Hat download site. You may be required to create a log in ID.

NOTE: Java JDK is required for application servers. You can find the download for Java from Oracles website: <http://www.oracle.com/technetwork/java/javase/downloads/index.html>, select the Java version for your server environment.

Java Version

- WebSphere requires Java 1.7. Failure for the .EAR file to deploy may be a result of the wrong Java version being used.
- JBoss requires Java 1.8. Failure for the .EAR file to deploy may be a result of the wrong Java version being used.
- There are two .EAR files for WebLogic 12c. The 12c (12.1.3.0) .EAR file is for WebLogic instances that utilize Java 1.7. The 12c (12.2.1.0) .EAR file is for WebLogic instances that utilize Java 1.8. Failure for the .EAR file to deploy may be a result of the wrong .EAR file for the default Java version being used.

INSBRIDGE DATABASE

The Insbridge Enterprise Rating System supports the following databases:

- Oracle 11g (11.2.0.3.0)
- Oracle 12c (12.1.0.1.0)
- Microsoft SQL Server 2008 R2, (X64) Standard and Enterprise editions
- Microsoft SQL Server 2012 Standard and Enterprise edition
- IBM DB2 11.1

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

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 Insbridge web front end, a properly configured network connection from the web server front end to MS SQL Server must exist.

Hardware Requirements

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

All settings are relevant on a MS SQL Server 2008 R2 and 2012 instances. These settings may be used as a guideline when setting up other database systems.

Processor:	Minimum:	2 Core 2.53 GHz
	Standard:	4 Core 2.53 GHz
	Optimal:	8 Core 2.53 GHz

Memory:	Minimum:	16 GB RAM
	Standard:	32 GB RAM
	Optimal:	64 GB RAM

Hard Drive:	Minimum:	500 GB
	Standard:	1 TB GB SCSI Hardware RAID
	Optimal:	1 TB SAS 15,000 RMP Hardware RAID 0+1

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

Graphics:	1280 x 1024
Network:	100b T NIC

Software Requirements

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

Oracle

OS:	Oracle databases operate in a variety of environments. As long as the database is compatible with the operating system, then the Insbridge system also will be compatible.
This is required to communicate with an Oracle database.	Oracle Client

NOTE: Performance may be impacted if using the default **optimizer_features_enable** setting on Oracle 12c. For optimal performance, Insbridge recommends setting the **optimizer_features_enable** parameter to 11.2.0.4. Please see the Installation Guide for the appropriate application server.

MS SQL Server

OS:	MS SQL Server operates in a variety of environments. As long as the database is compatible with the operating system, then the Insbridge system also will be compatible.
These settings are required for MS SQL Server.	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
	MS SQL Server Client

IBM DB2

OS:	IBM DB2 operates in a variety of environments. As long as the database is compatible with the operating system, then the Insbridge system also will be compatible.
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This is required to communicate with an IBM DB2 database.	IBM DB2 Client
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If you chose an Oracle or IBM DB2 database, please follow the hardware/software requirements recommended by the distributor.

RATEMANAGER 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 Requirements

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 Requirements

Require software for clients.

Microsoft:	Internet Explorer 11 ***
Adobe:	Adobe Acrobat Reader v9.0 or greater

*** Run in Compatibility mode

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

ORACLE SUPPORT

The Oracle Insurance Insbridge Enterprise Rating falls under the Oracle Life time Support. Oracle Lifetime Support helps drive your business success across your entire Oracle technology environment. From database to middleware to applications and hardware, you can now enjoy the benefits of the industry's most comprehensive support coverage.

Three levels of support are offered:

- **Premier Support** – Provides comprehensive maintenance and software upgrades for your Oracle Database, Oracle Fusion Middleware, and Oracle applications for five years from the general availability (GA) date.
- **Extended Support** – Puts you in control of your Database, Middleware, and Applications upgrade strategy by providing additional maintenance and upgrades for Oracle Database, Oracle Fusion Middleware, and Oracle Applications for an additional fee.
- **Sustaining Support** – Maximizes your investment protection by providing maintenance for as long as you use your Oracle software. Features include access to Oracle online support tools, upgrade rights, pre-existing fixes and assistance from technical support experts.

End of Support Schedule

The table shows at a glance, the projected end of support for the operating systems, application server platforms, and databases utilized by the Insbridge system. These dates are proposed from the manufacturer and are subject to change.

	Tier 1 Support	Tier 2 Support	Tier 3 Support
Operating Systems			
Microsoft Windows Server 2008, Standard (64 bit)	Jan 13, 2015	Jan 14, 2020	NA
Microsoft Windows Server 2008, Enterprise (64 bit)	Jan 13, 2015	Jan 14, 2020	NA
Microsoft Windows Server 2008 R2 S/P2, Standard (64 bit)	Jan 13, 2015	Jan 14, 2020	*
Microsoft Windows Server 2008 R2 S/P2, Enterprise (64 bit)	Jan 13, 2015	Jan 14, 2020	*
Microsoft Windows Server 2012, Standard (64 bit)	Jan 9, 2018	Jan 10, 2023	*

	Microsoft Windows Server 2012 R2, Standard (64 bit)	Jan 9, 2018	Jan 10, 2023	
Application Server				
	IIS 7.0	Jan 13, 2015	Jan 14, 2020	
	IIS 7.5	Jan 13, 2015	Jan 14, 2020	
	IIS 8.0	Jan 9, 2018	Jan 10, 2023	
	IIS 8.5	Jan 9, 2018	Jan 10, 2023	
	Oracle WebLogic 12c (release 12.1.3.0)	Dec 2017	Dec 2019	Indefinite
	Oracle WebLogic 12c (release 12.2.1.0)	Oct 2020	Oct 2023	
	IBM WebSphere 8.5 (version 8.5.5.0)	NA**		
	JBoss by Red Hat Enterprise Application Platform 7.0 EAP	May 2020	May 2023	May 2026
Database				
	MS SQL Server 2008 R2 Standard edition (version 10.0.4064)	July 8, 2014	July 9, 2019	April 13, 2010
	MS SQL Server 2008 R2 Enterprise edition	July 8, 2014	July 9, 2019	July 10, 2012
	MS SQL Server 2012 Standard edition (version 11.0.2100.60)	July 11, 2017	July 12, 2022	Jan 14, 2014
	MS SQL Server 2012 Enterprise edition	July 11, 2017	July 12, 2022	Jan 14, 2014
	MS SQL Server 2016 Enterprise edition	NA*	NA*	Jan 9, 2018
	Oracle 11g release 2 (release 11.2.0.3.0)	Dec 2015	Jan 2018	Indefinite
	Oracle 12c (release 12.1.0.1.0)	July 2018	July 2021	Indefinite
	IBM DB2 Enterprise Server Edition 11.1	NA**		
Browser				
	MS Internet Explorer 11.0 ***	*	*	*

*** Run in Compatibility mode

Notes and Sources

Oracle

Oracle has three tiers of support: Premier Support, Extended Support, and Sustaining Support. For more on Lifetime Support Policies, please see <http://www.oracle.com/us/support/lifetime-support/index.html>.

NOTE: May require a login to My Oracle Support.

Source:

Database <http://www.oracle.com/us/support/library/lifetime-support-technology-069183.pdf>

Middleware <http://www.oracle.com/us/support/library/lifetime-support-middleware-069163.pdf>

Microsoft

Microsoft has two tiers of support: Mainstream Support and Extended Support as well as Service Pack Support. Please note that Service Pack Support may not be offered for all products.

Tier 3 support is the current scheduled Service Pack Support End Date.

- * If a product has a service pack, support ends 24 months after the next service pack release or at the end of the products support lifecycle, whichever comes first.
- * Beginning January 12, 2016, only the most current version of Internet Explorer available for a supported operating system will receive technical support and security updates.

Source:

Windows Server <http://support2.microsoft.com/lifecycle/default.aspx?LN=en-us&c2=1163&x=11&y=10>
and <https://support.microsoft.com/en-us/gp/lifeselectindex#S>

MS SQL Server <http://support2.microsoft.com/lifecycle/?c2=1044>

IE <http://support2.microsoft.com/lifecycle/search/?sort=PN&alpha=internet+explorer>

IBM

IBM has one support date for application servers. The end of support date is the last date on which IBM will deliver standard support services for a given version/release of a product.

IBM has two tiers of support: Base and Extended. Base is the end of support date and Extended indicated the earliest date in which IBM would end support for DB2.

** IBM has not announced end of support for DB2 Version 11.1. **NOTE:** GA date is April 12, 2016

** IBM has not announced end of support for WebSphere release 8.x. **NOTE:** GA date for WebSphere 8.5.x is June 12, 2012

Source:

WebSphere http://www-01.ibm.com/software/support/lifecycle/index_w.html

DB2 <http://www-01.ibm.com/support/docview.wss?uid=swg21168270>

Red Hat

Red Hat provides support to purchased versions of JBoss only. Red Hat offers three tiers of support: Full Support, Maintenance Support and an Optional Extended Life Support. Free versions are referred to community support.

Source: https://access.redhat.com/support/policy/updates/jboss_notes