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Oracle Insurance

Insbridge Rating and Underwriting

Implementation Guide

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CONTENTS

PREFACE

Welcome to the *Oracle Insurance Insbridge Rating and Underwriting Implementation Guide.* The Insbridge Rating and Underwriting (IBRU) system is a web-based application with a database backend that can be configured to utilize many different and complex configurations. This guide will assist with the planning and implementation of your IBRU system.

AUDIENCE

This guide is intended for system administrators, installers, database administrators and others tasked with installing and configuring the IBRU system and associated databases.

RELATED DOCUMENTS

For more information, refer to the following Oracle resources:

- The Oracle Insurance Insbridge Rating and Underwriting Operating Environments for Hardware and Software.

- You can view this guide on-line at this address:

  http://www.oracle.com/technetwork/documentation/insurance-097481.html

SYSTEM REQUIREMENTS

For minimum operating system and hardware requirements, please see the Oracle Insurance Insbridge Rating and Underwriting Operating Environments for Hardware and Software guide.

Manual History

New editions incorporate any updates issued since the previous edition.

Edition	Publication Number	Product Version	Publication Date	Comment
1st Edition	P01-781-01	V 3.13	December 2009	Initial Release
2nd Edition	P01-781-02	R 4.0	April 2010	Update Release
3rd Edition	P01-781-03	R 4.0.1	August 2010	Update Release
4th Edition	P01-781-04	R 4.1	December 2010	Update Release
5th Edition	P01-781-05	R 4.5	May 2011	Update Release

PLANNING YOUR IBRU SYSTEM

Prior to installation, you should have an idea of the type of setup you want to create. If you do not have everything completely planned out, you can still proceed. Environments and machines can be removed or added later on. The Oracle Insurance Insbridge Rating and Underwriting system (IBRU) is expandable and can accommodate a few different configurations.

CLIENT CONFIGURATION SIZING QUESTIONS

The following questions may help you define the usage and demands that will be placed on the Insbridge system. 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 environments, 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 type of database do you want to utilize for rating? SQL, Oracle or DB2?

3. What will the change control environment architecture look like? I.e. will there be DEV, QA, UAT, PROD environments?

4. What application platform do you want to utilize for rating? Windows, WebLogic, WebSphere or JBoss?

5. What is the business process that you need to follow? Who will be creating programs? Who will be testing?

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.*

Definitions

Some commonly used terms when installing or using the Oracle Insurance Insbridge Rating and Underwriting system:

- **IBRU** – Insbridge Rating and Underwriting System. This is the entire system.

- **IBFA** – Insbridge Framework Administrator. IBFA is an administrative tool used to configure Insbridge applications and setup RateManager database connections. IBFA will be located on a Windows Server machine. IBFA/SR-WIN is an Insbridge Framework Administrator/SoftRater for Windows.

- **IBSS** – Insbridge SoftRater Server. IBSS is the administrative tool for the SoftRater engine. The SoftRater engine is a multi-platform component within IBRU that executes the rules, rating and underwriting instructions as defined by the user in RateManager. IBSS is usually located on a Java machine. IBSS/SR-JAVA is an Insbridge SoftRater Server/SoftRater for Java.

- **SoftRater Node** – A SoftRater node is either an IBFA (without RateManager) or IBSS instance on a physical environment.

- **SoftRater Native** – SoftRater Native is a remote instance of SoftRater that can execute rules and rating logic in environments where access via the SoftRater web-services is not desired or possible.

- **RM** – RateManager. RateManager is a component within IBRU that enables users to manage the product definition and modification process, including rating and underwriting logic.

- **SR** – SoftRater. 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 further defined by the operating system where it has been loaded.

- **SR-WIN** – SoftRater for Windows. This is also another name for IBFA.

- **SR-JAVA** – SoftRater for Java. This is also another name for IBSS.

- **SRP** – SoftRater Packages. A package that holds all the RateManager logic for a specific program and version.

- **VFS** – Virtual File Servers. Virtual file server management allows you to access environments that are located on other machines in different locations where packages can be downloaded.

- **Package Location** – A pointer to a location where SoftRater Packages (SRP's) are stored.

- **Physical Environment** – A physical environment is generally referred to as a physical machine.

- **Authoring Environment** – The physical machine where RateManager is installed.

- **Rating Environment** – The physical machine(s) where SoftRater is installed. This is typically the same as a SoftRater node.

- **Logical Environment** – An environment created for a subscriber in IBFA. It defines package location, engine location and database location in addition to several other supporting data items. This environment is used for rating and/or SRP management. Each database connection will have a logical environment.

CONFIGURATIONS

There is more than one possible combination of RateManager, IBFA/SoftRater for Windows and/or IBSS/SoftRater for Java that can be implemented. There is also more than one possible database to utilize; Oracle 11g, Oracle 10g, Oracle XE, MS SQL Server and/or IBM DB2. This flexibility will allow you to create as many environments as you need to the configuration that best fits your business.

Configuration Segments

The IBRU system can be divided into three configuration segments.
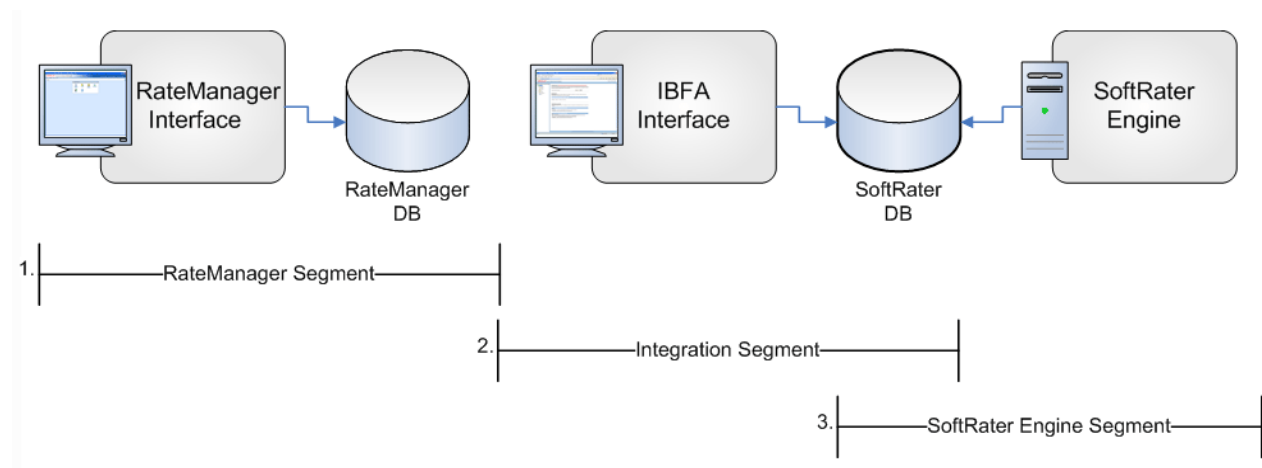
Segment 1 is the **RateManager Segment**. This segment is where the authoring environment, RateManager, is located. RateManager users are the internal users of the system; product managers, actuaries, and business analysts, rate loaders, etc. This does not include agents or consumers.

Segment 2 is the **Integration Segment**. This segment is where the IBFA Interface resides. IBFA is a component within the IBRU System that enables administrators to configure RateManager and SoftRater. The IBFA interface overlaps slightly with the run-time engines, SoftRater. This segment may contain one or more SoftRater engines.

Segment 3 is the **SoftRater Engine Segment**. This segment is where the run-time engines, SoftRater, are located. The SoftRater configuration should be determined by simultaneous traffic, both from online transactions as well as batch rating cycles. This segment may also contain one or more SoftRater engines.

RateManager Configuration

The RateManager segment has a very straightforward configuration consisting of two machines:

- Server 1 holds the applications

- Server 2 holds the database

This is a very common configuration for IBRU customers.
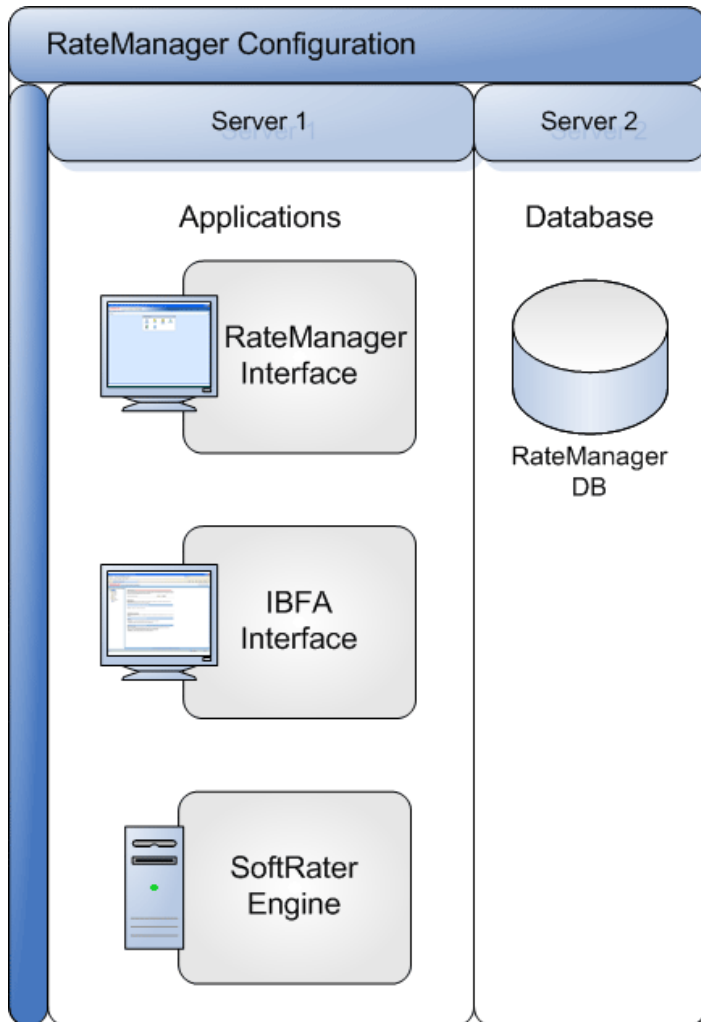
Integration Configuration Options

IBFA is used to migrate content as an SRP from RateManager to the SoftRater database. There are numerous configurations that can be used to accommodate content deployment.

IBFA must reside on the same server as RateManager.
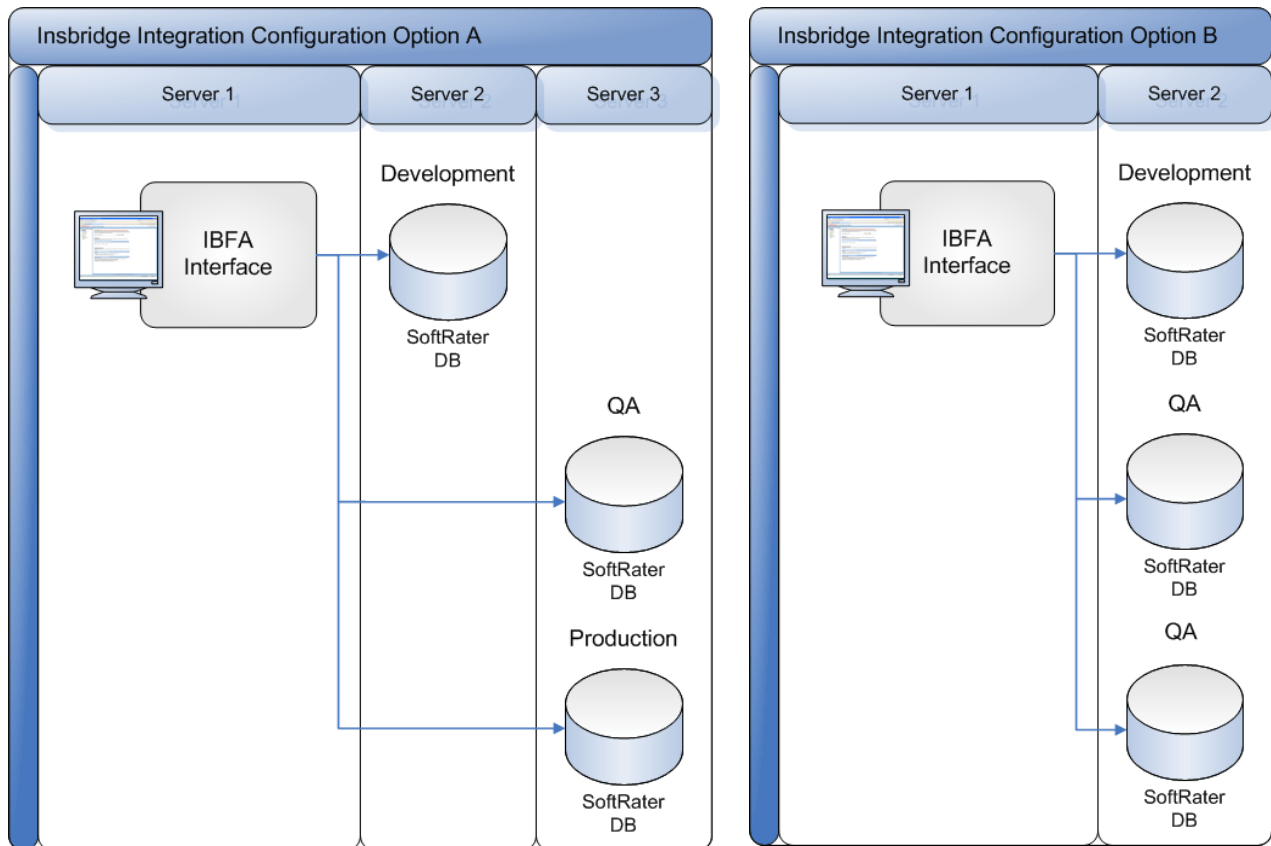
In **Option A**, three servers are used:

- Server 1 holds the IBFA instance. This is the server where RateManager also would be located.

- Server 2 holds the Development database

- Server 3 holds the QA and Production databases

  Placing QA and Production together will allow for true QA standards.

In **Option B**, two servers are used:

- Server 1 holds the IBFA instance. This is the server where RateManager also would be located.

- Server 2 holds all the databases
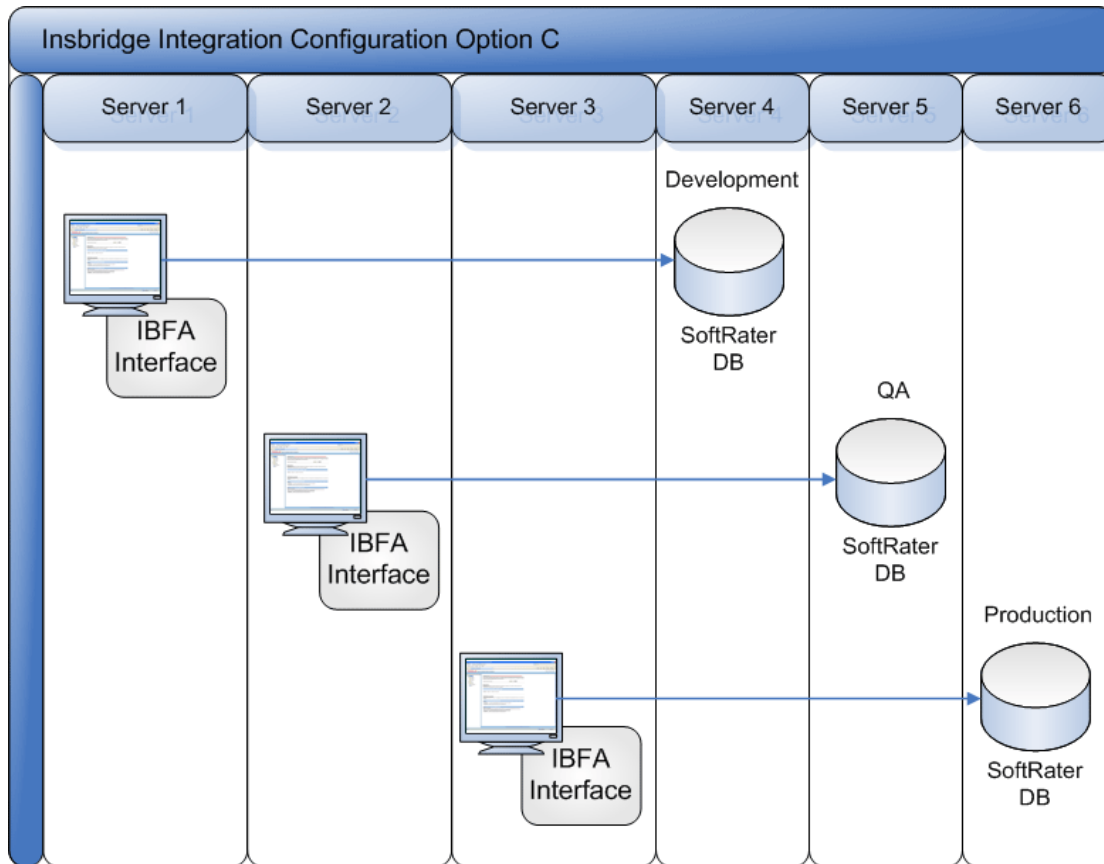
In **Option C**, six servers are used:

- Server 1 holds an IBFA instance. This is the server where RateManager also would be located.

- Server 2 holds an IBFA/IBSS for Windows instance

- Server 3 holds an IBFA/IBSS for Windows instance

- Server 4 holds the Development database

- Server 5 holds the QA database

- Server 6 holds the Production database

Servers 2 and 3 would be mirror images of each other to allow for true QA standards.

Servers 5 and 6 would be mirror images of each other to allow for true QA standards.
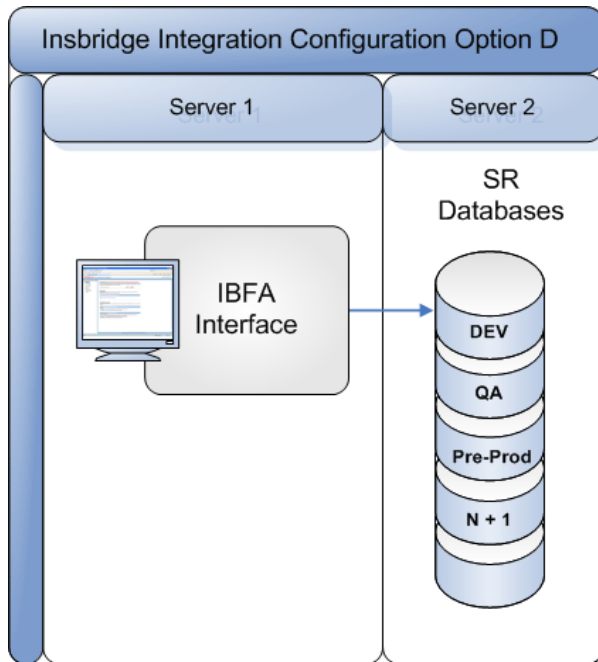
In **Option D**, two servers are used:

- Server 1 holds the IBFA instance. This is the server where RateManager also would be located.

- Server 2 holds all the databases. One database can be used to house all SoftRater database schema instances.

SoftRater Configuration Options

The SoftRater engine can be implements in a number of configurations to meet various business performance needs.

The SoftRater engine can be duplicated numerous times to form an engine farm. The SoftRater database also can be duplicated numerous times to enable *x* number of engines to be running.

When multiple SoftRater database instances are configured, the exact data content must be loaded to all database instances.
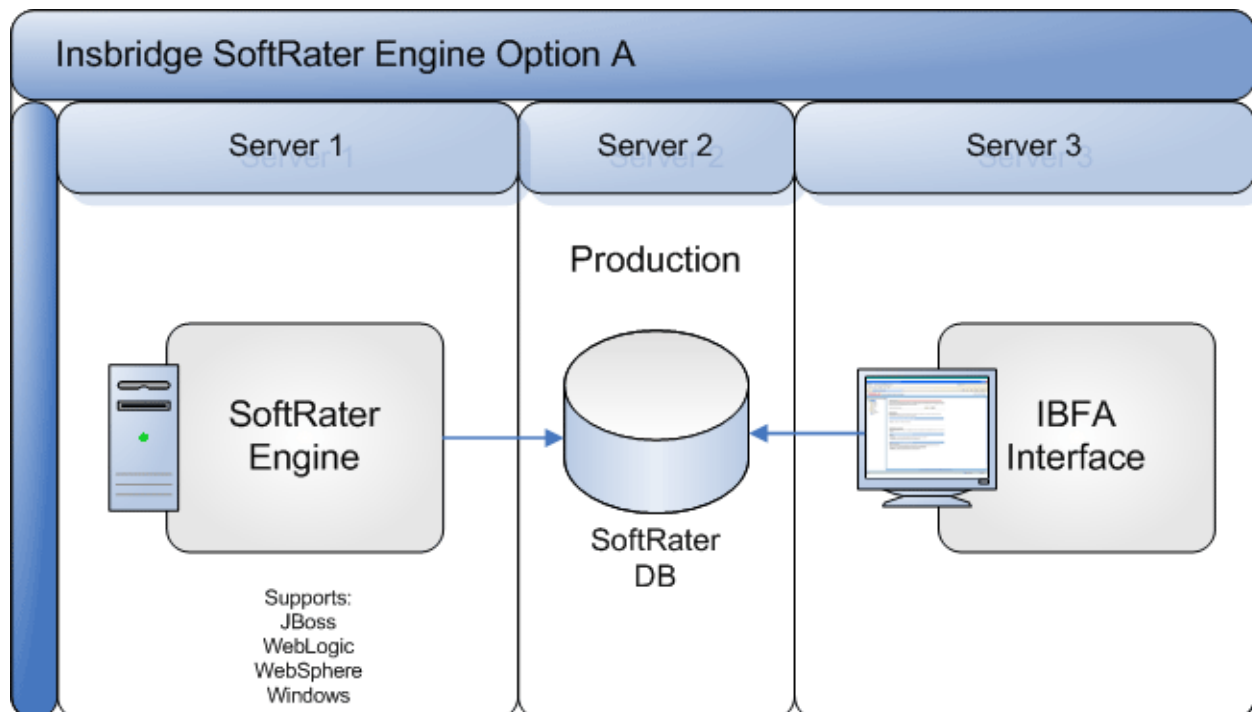
In **Option A**, three servers are used:

- Server 1 holds the SoftRater Engine

- Server 2 holds the Production database

- Server 3 holds the IBFA instance. This is the server where RateManager also would be located.

In Option B, the SoftRater engine is running multiple instances and accessing a single SoftRater database. 1 to N instances of the SoftRater engine can be deployed in a farm configuration for load balancing.

This configuration also can be leverages in Development and QA environments, not just Production.
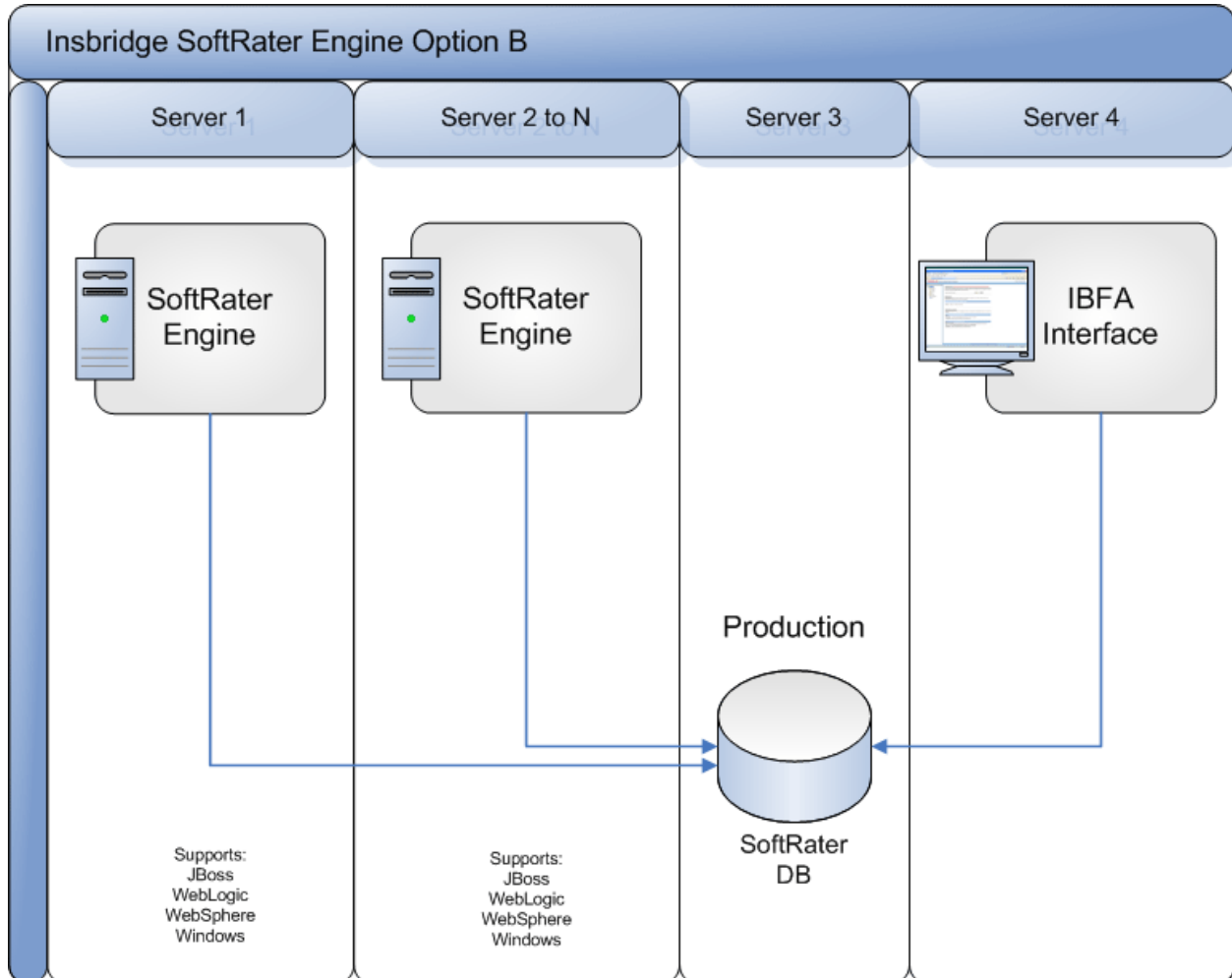
In **Option B**, four servers are used:

- Server 1 holds the SoftRater Engine

- Server 2 also holds a SoftRater Engine

- Server 3 holds the Production database that each SoftRater Engine accesses.

- Server 4 holds the IBFA instance. This is the server where RateManager also would be located.

In Option C, the SoftRater engine is running multiple instances and accessing a single SoftRater database. 1 to N instances of the SoftRater engine and 1 to N instance of the SoftRater database can be deployed in a farm type configuration for load balancing.

The SoftRater database instance content must be identical in this configuration.

The SoftRater engine can run multiple environments at one time.
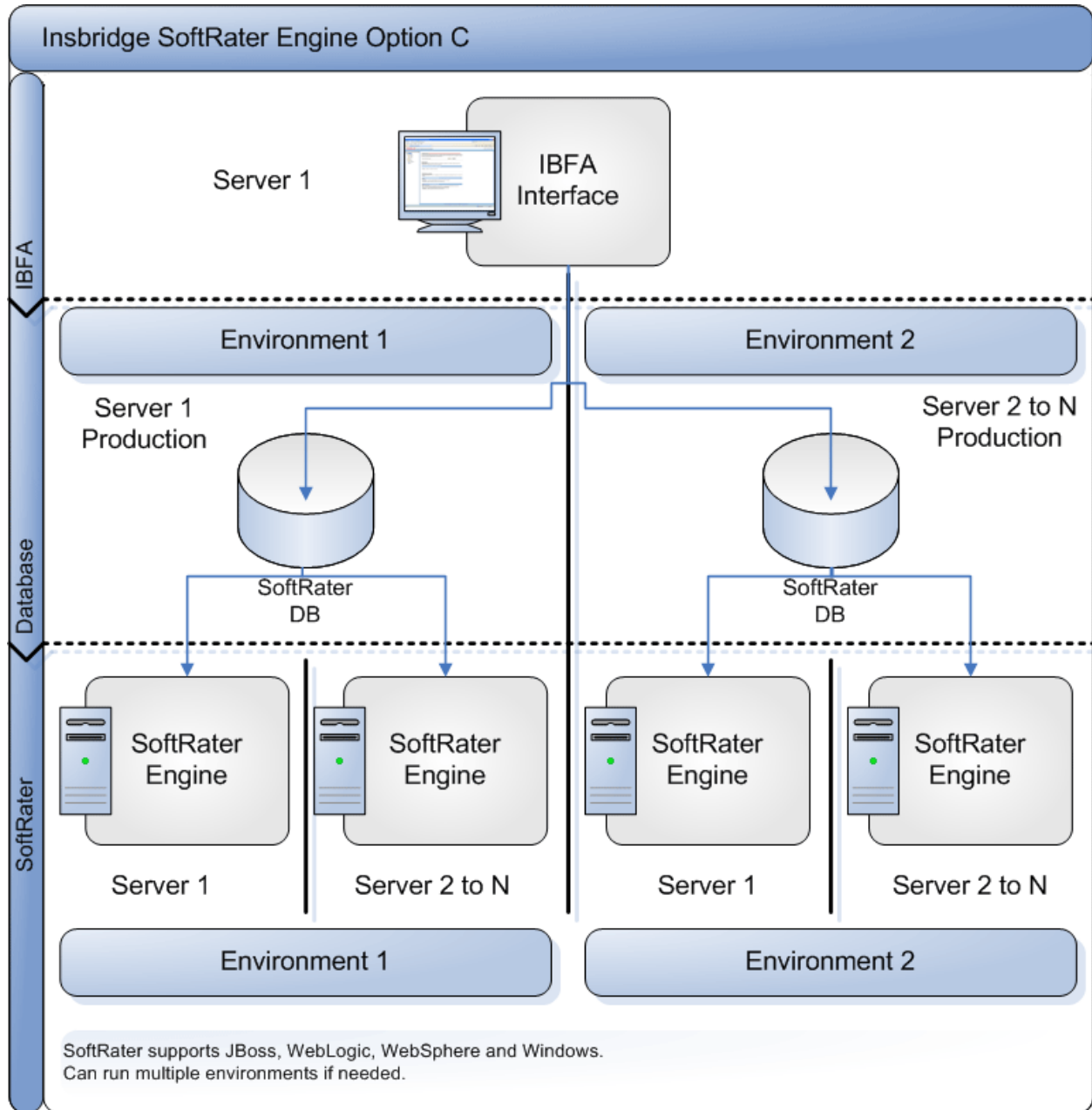
In **Option C**, there are a total of seven servers:

- There is one server at the IBFA level:

- – Server 1 holds an IBFA instance. This is the server where RateManager also would be located.

- There are two servers at the Database level:

  - – Server 1 holds the Production database for Environment 1

  - – Server 2 to N holds the Production database(s) for Environment 2

- There are four servers at the SoftRater level:

  - – Server 1 holds a SoftRater Engine for Environment 1

  - – Server 2 to N holds SoftRater engine(s) for Environment 1

  - – Server 1 holds a SoftRater Engine for Environment 2

  - – Server 2 to N holds SoftRater engine(s) for Environment 2

ENVIRONMENTS

There are different types of environments in the IBRU system.

Authoring Environment

The authoring environment is the physical machine where RateManager is installed. This machine must be a Windows Server machine and must utilize a SQL Server database.

Although it is possible to have more than one authoring environment, it is best practice to have only one authoring environment.

Rating Environments

The rating environments are comprised of the physical machines where SoftRater is installed. There are typically multiple rating environments set up for deployment; Quality Assurance (QA), Production, etc.

Logical Environments

A logical environment is an environment created for a subscriber in IBFA or IBSS. This environment is used for rating and/or SoftRater package (SRP) management. The logical environment defines package location, engine location and database location in addition to several other supporting data items.

When you create logical environments, you enter the package storage locations. These are the system folders where SoftRater packages (SRP) are stored. When an SRP is created, the file is stored in the folder location configured in the environment that the package was created for.

When a program is ready to go from development to the QA environment, the SRP will be placed in the folder location that was designated for the logical environment selected. An SRP can be copied from one logical environment to another from the SRP listing screen in IBFA. SRPs can also be copied from a different physical machine (that has IBFA installed) by creating a Virtual File Server.

In a Java environment, the rating environment IBFA will handle the copying and loading. No Virtual File Server will be created. IBFA does the package management and migration. This can only be performed by IBFA. Java environments are for rating only.

You can create as many logical environments as you want to manage. Common logical environments include one for the RateManager (authoring) environment and multiple SoftRater (rating) environments.

IBRU Environments

Development	QA	Production

Authoring Environment

Rating Environment

Environments – Physical, Authoring, Rating and Logical

Logical Environments:

RM – to handle testing/rating.

QA_SR – This environment contains the full packages to be consumed by QA

Logical Environments:

SR – to identify the location of the local SRPs and the QA IBSR DB.

Logical Environments:

SR – to identify the location of the local SRPs and the Production IBSR DB.

PURPOSE of this Authoring Environment

This environment is for the creation of rating programs.

This environment also holds the security information.

PURPOSE of this Rating Environment

This environment is for the testing of packages (SRPs) and for real-time production rating.

The rating environment can cross over multiple physical environment and can consist of multiple logical environments

Databases

SQL Server

IB_CLIENT security

RM This IBRM DB holds Rating Rules

Oracle or SQL Server

SR This IBSR DB holds the SRPs for QA

Oracle or SQL Server

SR This IBSR DB holds the SRPs for Production

SoftRater Native Environments

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.

A SoftRater Native environment is the rating environment that the local instance, for example an agent's laptop, will use. It is the local engine that will execute the rating, rules and underwriting instructions defined within RateManager. Multiple SoftRater environments can be loaded on the local instance. Only one default environment will be allowed. The default environment is the environment that will be used to rate unless another environment is specified in the request XML.

An Oracle XE database is required for a SoftRater Native environment. Oracle XE has a 4GB limit and allows for only 1 instance.

Physical Environments

One of the main considerations for a configuration is how the physical environments will be utilized. 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 create rating programs. Another physical environment called QA could be where users only test programs. There is no limit to the number of physical environments you can have.

It is best proactive to have three physical environments be setup; one for development, one for testing or quality assurance (QA) and one for production.

- **Development** – this environment holds RM and an IBFA instance on the same Windows Server machine and will utilize a SQL Server database. This environment is used for the creation of rating and underwriting logic. Once development is complete, SRPs will be copied into a QA environment.

- **QA** – this environment can contain either an IBFA instance or an IBSS instance, depending upon the database and machine to be used. If a Windows machine is used, an IBFA instance will be installed. If a Java machine is used, an IBSS instance will be installed. This environment is most often used for the testing of SRPs prior to being placed into Production. Once testing is complete, SRPs will be copied to production.

- **Production** – this environment can contain either an IBFA instance or an IBSS instance, depending upon the database and machine to be used. If a Windows machine is used, an IBFA instance will be installed. If a Java machine is used, an IBSS instance will be installed. This environment is most often used for rating.

WINDOWS ONLY ENVIRONMENT

This example has three physical environments each with its own application machine and database machine. It is possible to put all SQL Server databases on one database machine or divide over two machines. If you select to use one or two SQL Server database machines, clear and precise naming of the associated databases is recommended.

RateManager and IBFA must run on a Windows Server machine. No other operating system will be required. RateManager will be installed on the Development machine only.

NOTE: *While it is possible to have RateManager, IBFA and the database server all on the same machine, it is not recommended due to performance and security issues. This option will not be discussed in this document.*

THE SETUP

1. All three instances of IBFA will need to be configured the same.

2. In the **Development** environment:
   a. RateManager and IBFA/SR-WIN would be located on the same Windows machine.
   b. OBI Publisher is installed for reports to be created.
   c. On the IBFA/SR-WIN for this environment, three database connections would be created (RM, Security and Controller) and two logical environments would be created.
   d. Two databases would be attached to a separate SQL Server machine.

3. In the **QA** environment:
   a. IBFA/SR-WIN would be located on a Windows machine.
   b. OBI Publisher is installed for reports to be created.
   c. On the IBFA/SR-WIN for this environment, one logical environment and one virtual file server would be created.
   d. One database would be attached to a separate SQL Server machine.

4. In the **Production** environment:
   a. IBFA/SR-WIN would be located on a Windows machine.
   b. OBI Publisher is installed for reports to be created.
   c. On the IBFA/SR-WIN for this environment, one logical environment and one virtual file server would be created.
   d. One database would be attached to a separate SQL Server machine.

You can add another environment if necessary. For example, if you wanted to create a training environment or a second level of testing, you could add these environments in where you wanted.

There are other combinations of application servers and databases that you can use. Please contact your Insbridge representative for more information on the configuration that you would like to have.

NOTE: *The names used in the logical environments are for example only. You should name your environments according to your company's standards.*

Example

IBRU Installation/Setup – Windows/SQL Server

Development	QA	Production
Rating and Rules Authoring	Test Rating	Production Rating

Development

INSTALL:
IBFA
RM
OBI Publisher

CREATE SUBSCRIBER
Must be the same in all environments

ADD DB Connections:
Controller
Security
RM

CREATE:
Logical Environments:
RM – to handle testing/rating.
QA_SR – This environment contains the full packages to be consumed by QA

PURPOSE of this Physical Environment

This environment is for the creation of rating programs.

This environment also holds the security information.

QA

INSTALL:
IBFA
OBI Publisher

CREATE SUBSCRIBER
Must be the same in all environments

CREATE:
Logical Environments:
SR – to identify the location of the local SRPs and the QA IBSR DB.

CREATE:
VFS:
To the QA_SR environment on the Development machine

PURPOSE of this Physical Environment

This environment is for the testing of packages (SRPs).

Production

INSTALL:
IBFA
OBI Publisher

CREATE SUBSCRIBER
Must be the same in all environments

CREATE:
Logical Environments:
SR – to identify the location of the local SRPs and the Production IBSR DB.

CREATE:
VFS:
To the SR environment on the QA machine

PURPOSE of this Physical Environment

This environment is for (real-time) production rating. When users send rate requests through the system, this is the environment that will do the rating.

Environments – Physical and Logical

SQL Server

Restore to SQL Server

IB_CLIENT security

RM This IBRM DB holds Rating & Rules

Restore to SQL Server

SR This IBSR DB holds SRPs for the test environment

Restore to SQL Server

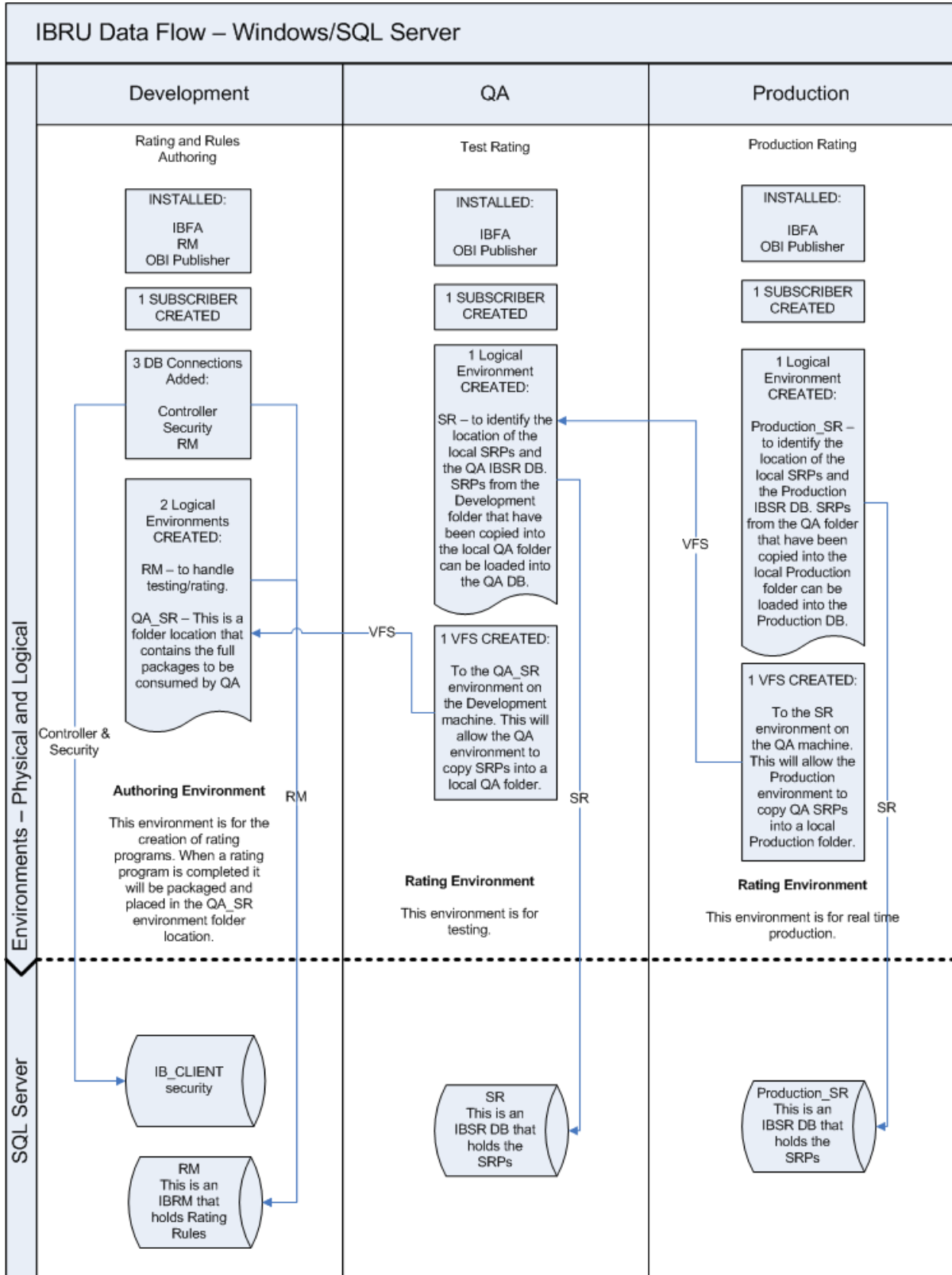Production_SR This IBSR DB holds SRPs for the production environment

PACKAGE MANAGEMENT

The way SRPs move in a Windows only environment is from Development to QA to Production. Each environment will have an IBFA to manage SRPs.

1. All three application machines would use the same subscriber ID. The subscriber ID must be uniform across all environments in order for each environment to consume the previous environments SRPs.

2. In the **Development** environment:
   a. A client database, a security database and a RateManager database connection would be created. The client and security databases will allow users to login. The RateManager database will hold the rating and rules logic used in SRPs.
   b. A RateManager logical environment and a QA_SR logical environment would be created. The RateManager logical environment will allow for local rating to be performed in this environment. The QA_SR logical environment will be used as a holding site for SoftRater (full) SRPs. SRPs that are ready to be copied over to the QA environment for testing will be stored here.

3. In the **QA** environment:
   a. One logical environment would be created here to identify the location of the RateManager (local) SRPs and the QA IBSR DB.
   b. One virtual file server would be created to copy the SRPs from the Development folder on to the local QA folder. These SRPs would be loaded into the QA DB.

4. In the **Production** environment:
   a. One logical environment would be created here to identify the location of the RateManager (local) SRPs and the Production IBSR DB.
   b. One virtual file server would be created to copy the SRPs from the QA folder on to the local Production folder. These SRPs would be loaded into the Production DB.
   c. This environment would be used for real time production rating.

NOTE: *The names used in the logical environments are for example only. You should name your environments according to your company's standards.*

Example

IBRU Data Flow – Windows/SQL Server

A WINDOWS/JAVA/ORACLE ENVIRONMENT

The Windows/Java environment utilizing an Oracle database example will displayed by machine and contains 3 application servers and 2 database servers. There are still three environments; development, QA and Production. The Oracle database server will contain two separate databases. Clear and precise naming of the associated databases is recommended.

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, you will need to download a Java version of SoftRater from E-Delivery. The Java version of SoftRater will need to be loaded onto the machine with the compatible application server platform.

The Oracle database can be setup after the subscriber has been created and the lines of business have been selected. You will need this information to complete the Oracle database setup.

THE SETUP

1. The **Development** environment:
    a. Contains one Windows Server app server and one separate SQL Server database.
    b. RateManager and IBFA/SR-WIN would be located on the same Windows machine. RateManager and IBFA must run on a Windows Server machine.
    c. OBI Publisher is installed for reports to be created.
    d. The subscriber ID would be created here.
    e. On the IBFA/SR-WIN for this environment, three database connections would be created and three logical environments would be created.
    f. The Oracle client would be run on the Windows machine.
    g. Two databases would be attached to the SQL Server machine.

2. The **QA** environment:
    a. Contains one JAVA application server with WebLogic, WebSphere or JBoss installed and running. There is one separate Oracle database server that will be shared between QA and Production.
    b. IBSS/SR-JAVA would be loaded on the JAVA machine.
    c. On the IBSS/SR-JAVA for this environment, one logical environment would be created.
    d. One QA database would be created on the Oracle machine.

3. The **Production** environment:
    a. Contains one JAVA application server with WebLogic, WebSphere or JBoss installed and running. There is one separate Oracle database server that will be shared between QA and Production.
    b. IBSS/SR-JAVA would be loaded on the JAVA machine.
    c. On the IBSS/SR-JAVA for this environment, one logical environment would be created.
    d. One PRODUCTION database would be created on the Oracle machine.

4. The **Oracle** Server:
    a. Requires that the Oracle DBA run the DDLs.
    b. Requires that the Oracle DBA create a DT table for each line of business in each of the two database created. The subscriber ID and line of business number will be required.

Example

IBRU Installation/Setup – Windows/JAVA Incorporating an Oracle DB

Development Windows	SQL	Oracle	QA Java	Production Java
Rating and Rules Authoring	Required SQL DB	DB for SRPs	Test Rating	Production Rating

Development Windows

INSTALL:
IBFA
RM
OBI Publisher

RUN:
Oracle client

CREATE SUBSCRIBER

ADD
DB Connections:
Controller
Security
RM

CREATE:
Logical Environments:
RM – to handle testing/rating.
QA_SR – This environment contains the full packages to be loaded to the QA DB.
Production SR – This environment contains the full packages to be loaded to the Production DB.

PURPOSE For setting up this Physical Environment
This environment is for the creation of rating programs and management of the SRPs..

SQL

RESTORE:
IB_CLIENT security

RESTORE:
RM Rating/Rules

PURPOSE For setting up this Physical Environment
SQL Server is required for RM and IB_CLIENT. The SQL Server should be on a separate machine. These DBs will connect to the Development environment or the environment that contains RateManager.

Oracle

RUN:
DDLs

CREATE:
DT table for each LOB:

CREATE:
SR - the IBSR DB for QA

CREATE:
Production - the IBSR DB for Production

PURPOSE For setting up this Physical Environment
The Oracle DB will hold the SRPs for the QA and Production environment.

QA Java

INSTALL:
IBSS

CREATE:
Logical Environments:
SR – to identify IBSR DB and location.

PURPOSE For setting up this Physical Environment
This environment is for the testing of packages (SRPs).

Production Java

INSTALL:
IBSS

CREATE:
Logical Environments:
Production – to identify the IBSR DB and location.

PURPOSE For setting up this Physical Environment
This environment is for (real-time) production rating. When users send rate requests through the system, this is the environment that will do the rating.

This is a basic Windows/Java utilizing an Oracle database setup. It is possible to create more than three environments or use fewer than three. There are many combinations of platforms, databases and environments that can be used. Please contact your Insbridge representative for more information on the configuration that you would like to have.
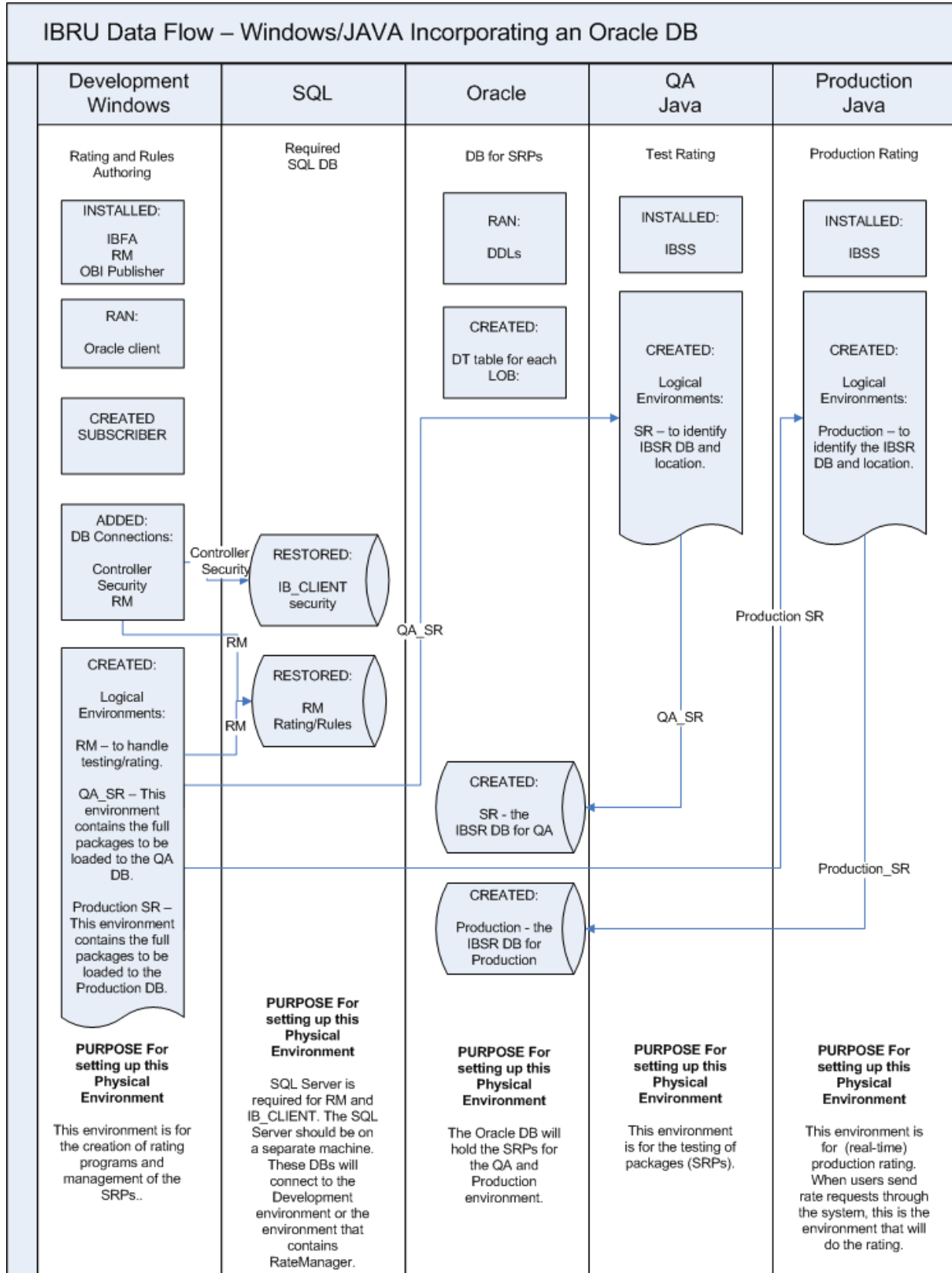
PACKAGE MANAGEMENT

The way SRPs move in a Windows/Java environment utilizing an Oracle database is from Development to QA to Production. IBFA will manage the migration of the packages. Only the development environment will have an IBFA to manage SRPs. The Rating and Production environments will require an IBSS/SR-JAVA. IBSS will allow for a logical environment to be created. Only the development environment will be able to move SRPs from one environment to the next (IBFA).

1. Only the development machine will hold the subscriber ID or Company ID.

2. In the **Development** environment:
    a. A client database, a security database and a RateManager database connection would be created. The client and security databases will allow users to login. The RateManager database will hold the rating and rules logic used in SRPs.
    b. A RateManager logical environment would need to be created. The RateManager logical environment will allow for local rating to be performed in this environment. When an SRP is created in the RateManager logical environment, the IBFA in the development environment will copy and load into the QA_SR logical environment.
    c. A QA_SR logical environment would need to be created. The QA_SR logical environment will be used to hold the SRPs that are ready for testing. When testing is complete, the IBFA in the development environment will copy and load into the Production_SR logical environment.
    d. A Production_SR would need to be created to hold the SRPs that need to go into production.

3. In the **QA** environment:
    a. One logical environment would be created here to identify the location of the QA IBSR DB.
    b. This environment would be used for testing.

4. In the **Production** environment:
    a. One logical environment would be created here to identify the Production IBSR DB.
    b. This environment would be used for real time production rating.

NOTE: *The names used in the logical environments are for example only. You should name your environments according to your company's standards.*

NOTE: *For the examples in this guide, the QA and Production environments will be setup alike to allow for true QA standards.*

EXAMPLE

IBRU Data Flow – Windows/JAVA Incorporating an Oracle DB

WINDOWS/ORACLE ENVIRONMENT

The Windows environment utilizing an Oracle database example will displayed by machine and contains 3 application servers and 2 database servers. There are still three environments; development, QA and Production. The Oracle database server will contain two separate databases. Clear and precise naming of the associated databases is recommended.

RateManager and IBFA must run on a Windows Server machine. No other operating system will be required. RateManager will be loaded in one environment only.

THE SETUP

1. All three application machines would create the same subscriber ID. The subscriber ID must be uniform across all environments.

2. In the **Development** environment:
    a. RateManager and IBFA/SR-WIN would be located on the same Windows machine.
    b. OBI Publisher is installed for reports to be created.
    c. On the IBFA/SR-WIN for this environment, three database connections would be created and two logical environments would be created.
    d. Two databases would be attached to a separate SQL Server machine.

3. In the **QA** environment:
    a. IBFA/SR-WIN would be located on a Windows machine.
    b. OBI Publisher is installed for reports to be created.
    c. The Oracle client would be run.
    d. On the IBFA/SR-WIN for this environment, one logical environment and one virtual file server would be created.
    e. One database would be attached to a separate Oracle DB.

4. In the **Production** environment:
    a. IBFA/SR-WIN would be located on a Windows machine.
    b. OBI Publisher is installed for reports to be created.
    c. The Oracle client would be run.
    d. On the IBFA/SR-WIN for this environment, one logical environment and one virtual file server would be created.
    e. One database would be attached to a separate Oracle DB.

5. The **Oracle** Server:
    a. Requires that the Oracle DBA run the DDLs.
    b. Requires that the Oracle DBA create a DT table for each line of business in each of the two database created. The subscriber ID and line of business number will be required.

This is a basic Windows setup with the addition of an Oracle database. You can add another environment if necessary. For example, if you wanted to create a training environment or a second level of testing, you could add these environments in where you wanted.

Example

IBRU Installation/Setup – Windows Incorporating an Oracle DB

Development Windows	SQL	QA Windows	Oracle	Production Windows
Rating and Rules Authoring	Required SQL DB	Test Rating	DB for SRPs	Production Rating

Development Windows

INSTALL:
IBFA
RM
OBI Publisher

CREATE SUBSCRIBER
Must be the same in all environments

ADD DB Connections:
Controller
Security
RM

CREATE:
Logical Environments:
RM – to handle testing/rating.
QA_SR – This environment contains the full packages to be consumed by QA

SQL

RESTORE:
IB_CLIENT security

RESTORE:
RM Rating/Rules

QA Windows

INSTALL:
IBFA
OBI Publisher

RUN:
Oracle Client

CREATE SUBSCRIBER
Must be the same in all environments

CREATE:
Logical Environments:
SR – to identify the location of the local SRPs and the QA IBSR DB.

CREATE:
VFS:
To the QA_SR environment on the Development machine

Oracle

RUN:
DDLs

CREATE:
DT table for each LOB:

CREATE:
SR - the IBSR DB for QA

CREATE:
Production - the IBSR DB for Production

Production Windows

INSTALL:
IBFA
OBI Publisher

RUN:
Oracle Client

CREATE SUBSCRIBER
Must be the same in all environments

CREATE:
Logical Environments:
SR – to identify the location of the local SRPs and the Production IBSR DB.

CREATE:
VFS:
To the SR environment on the QA machine

PURPOSE For setting up this Physical Environment (Development)
This environment is for the testing of packages (SRPs).

PURPOSE For setting up this Physical Environment (SQL)
SQL Server is required for RM and IB_CLIENT. The SQL Server should be on a separate machine. These DBs will connect to the Development environment or the environment that contains RateManager.

PURPOSE For setting up this Physical Environment (QA)
This environment is for (real-time) production rating. When users send rate requests through the system, this is the environment that will do the rating.

PURPOSE For setting up this Physical Environment (Oracle)
The Oracle DB will hold the SRPs for the QA and Production environment.

PURPOSE For setting up this Physical Environment (Production)
This environment is for the creation of rating programs and management of the SRPs..
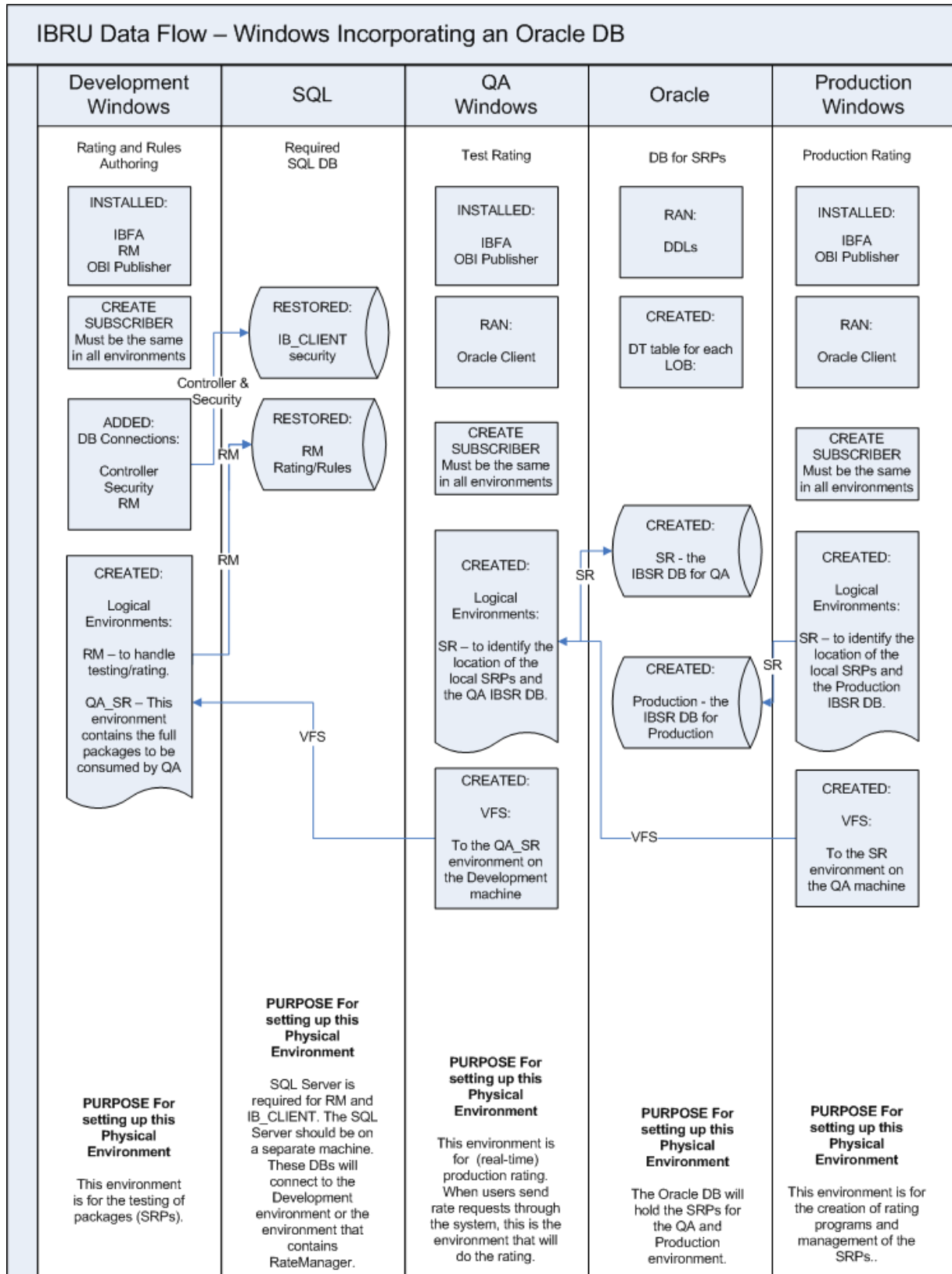
PACKAGE MANAGEMENT

The way SRPs move in a Windows environment utilizing an Oracle database is from Development to QA to Production. Each environment will have an IBFA to manage SRPs. Make sure to run the Oracle client on each machine to allow for the SRPs to be written to the Oracle database.

1. All three application machines would use the same subscriber ID. The subscriber ID must be uniform across all environments in order for each environment to consume the previous environments SRPs.

2. In the **Development** environment:
    a. A client database, a security database and a RateManager database connection would be created. The client and security databases will allow users to login. The RateManager database will hold the rating and rules logic used in SRPs.
    b. A RateManager logical environment and a QA_SR logical environment would be created. The RateManager logical environment will allow for local rating to be performed in this environment. The QA_SR logical environment will be used as a holding site for SoftRater (full) SRPs. SRPs that are ready to be copied over to the QA environment for testing will be stored here.

3. In the **QA** environment:
    a. One logical environment would be created here to identify the location of the RateManager (local) SRPs and the QA IBSR DB.
    b. One virtual file server would be created to copy the SRPs from the Development folder on to the local QA folder. These SRPs would be loaded into the QA DB.

4. In the **Production** environment:
    a. One logical environment would be created here to identify the location of the RateManager (local) SRPs and the Production IBSR DB.
    b. One virtual file server would be created to copy the SRPs from the QA folder on to the local Production folder. These SRPs would be loaded into the Production DB.
    c. This environment would be used for real time production rating.

NOTE: *The names used in the logical environments are for example only. You should name your environments according to your company's standards.*

NOTE: *For the examples in this guide, the QA and Production environments will be setup alike to allow for true QA standards.*

Example

IBRU Data Flow – Windows Incorporating an Oracle DB

WINDOWS/JAVA/SQL SERVER ENVIRONMENT

A Windows/Java environment utilizing SQL Server is another straight forward setup. This example has three physical environments each with its own application machine and database machine. It is possible to put all SQL Server databases on one database machine or divide over two machines. If you select to use one or two SQL Server database machines, clear and precise naming of the associated databases is recommended.

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, you will need to download a Java version of SoftRater from E-Delivery. The Java version of SoftRater will need to be loaded onto the machine with the compatible application server platform.

THE SETUP

1. The **Development** environment:
   a. Contains one Windows Server app server and one separate SQL Server database.
   b. RateManager and IBFA/SR-WIN would be located on the same Windows machine. RateManager and IBFA must run on a Windows Server machine.
   c. OBI Publisher is installed for reports to be created.
   d. The subscriber ID would be created here.
   e. On the IBFA/SR-WIN for this environment, three database connections would be created and three logical environments would be created.
   f. Two databases would be attached to the SQL Server machine.

2. The **QA** environment:
   a. Contains one JAVA application server with WebLogic, WebSphere or JBoss installed and running and one separate SQL Server database.
   b. IBSS/SR-JAVA would be loaded on the JAVA machine.
   c. On the IBSS/SR-JAVA for this environment, one logical environment would be created.
   d. One QA database would be attached to the SQL Server machine.

3. The **Production** environment:
   a. Contains one JAVA application server with WebLogic, WebSphere or JBoss installed and running and one separate SQL Server database.
   b. IBSS/SR-JAVA would be loaded on the JAVA machine.
   c. On the IBSS/SR-JAVA for this environment, one logical environment would be created.
   d. One PRODUCTION database would be attached to the SQL Server machine.

This is a basic Windows/Java utilizing a SQL Server database setup. It is possible to create more than three environments or use fewer than three. There are many combinations of platforms, databases and environments that can be used. Please contact your Insbridge representative for more information on the configuration that you would like to have.

Example

IBRU Installation/Setup – Windows/JAVA Incorporating a SQL Server DB
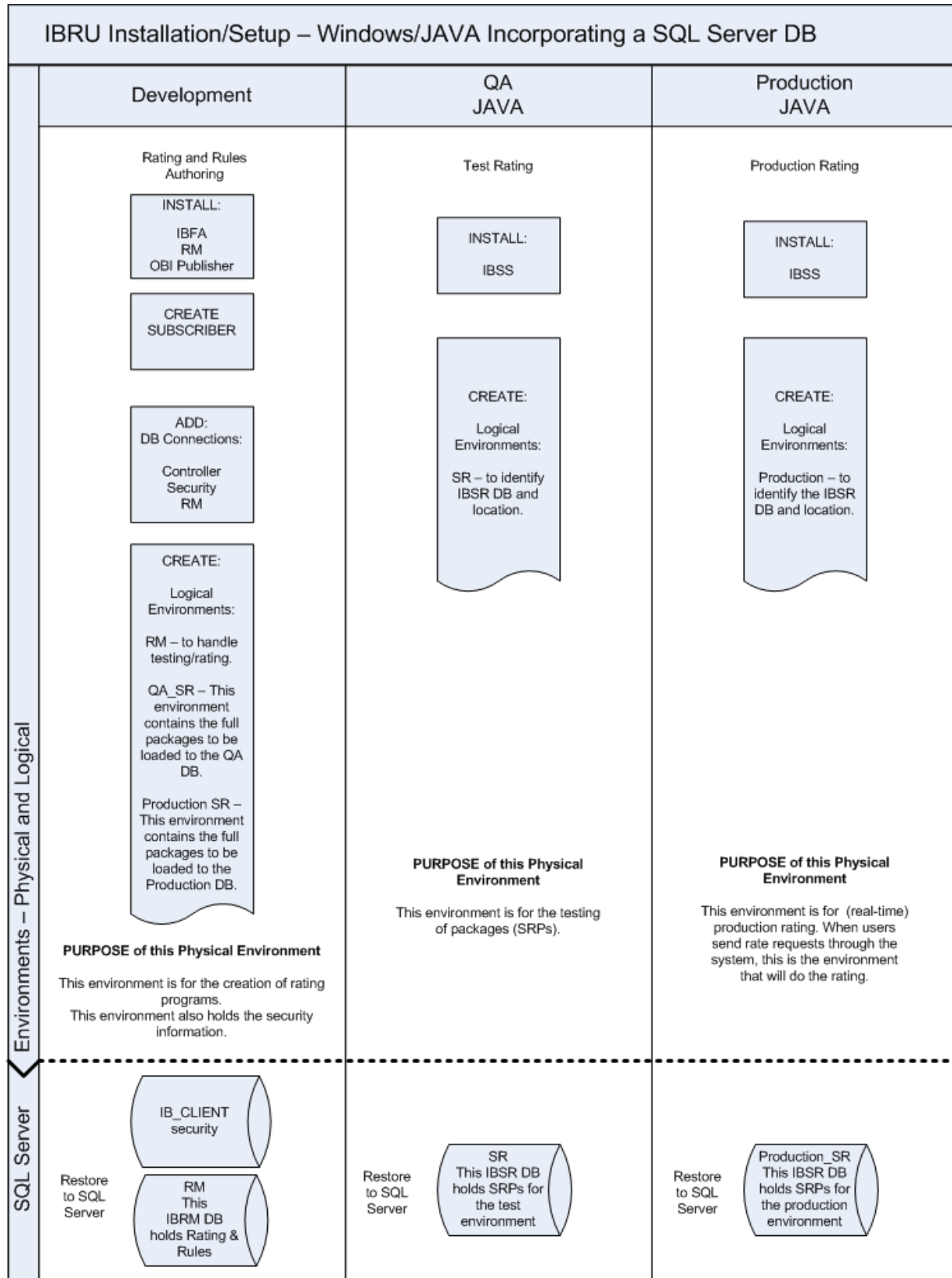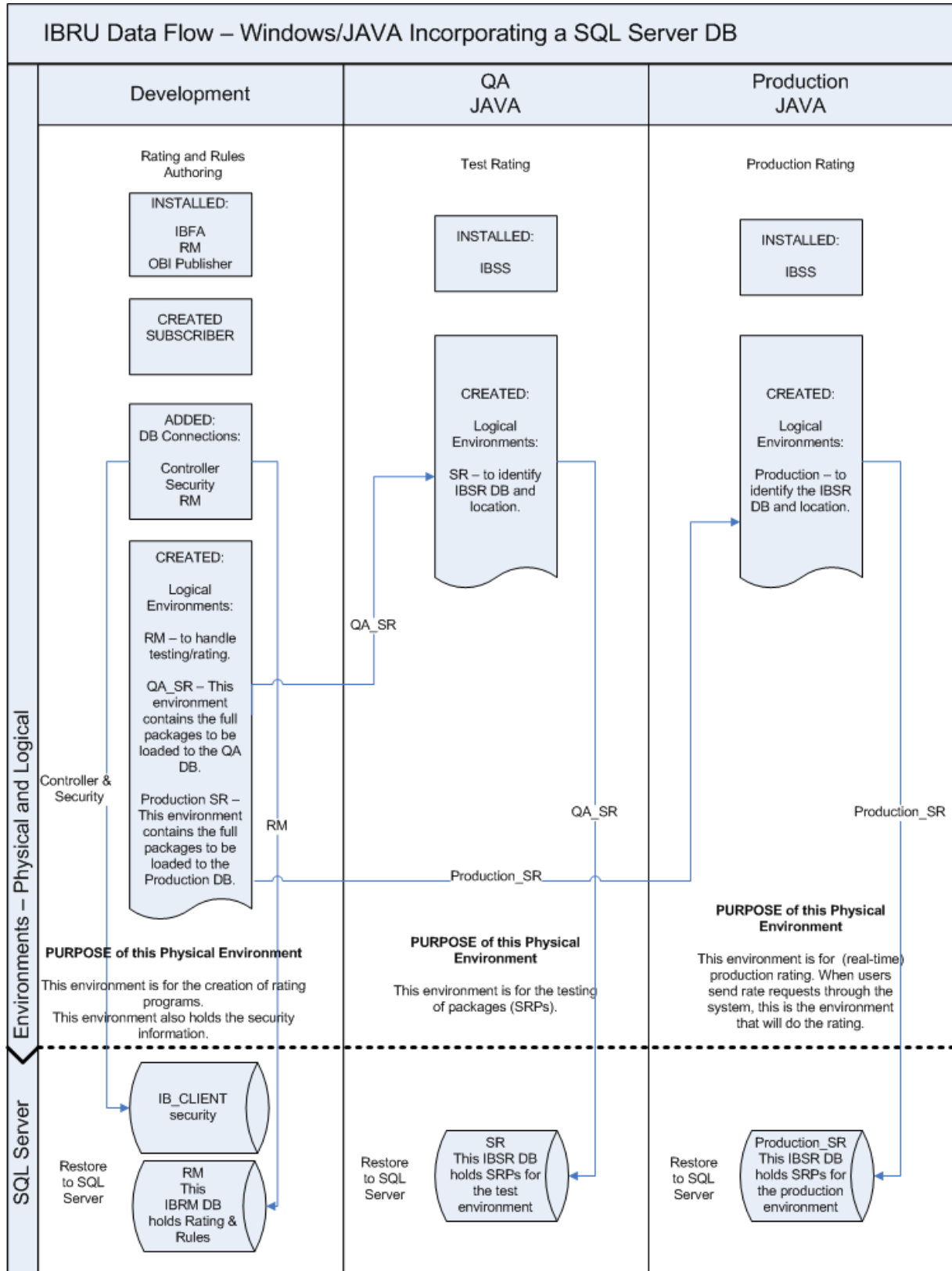
PACKAGE MANAGEMENT

The way SRPs move in a Windows/Java environment utilizing a SQL Server database is from Development to QA to Production. Only the development environment will have an IBFA to manage SRPs. The QA and Production environments will require an IBSS/SR-JAVA. IBSS will allow for a logical environment to be created, but not for a Virtual File Server to be created or to copy and load packages. Only the development environment will be able to move SRPs from one environment to the next.
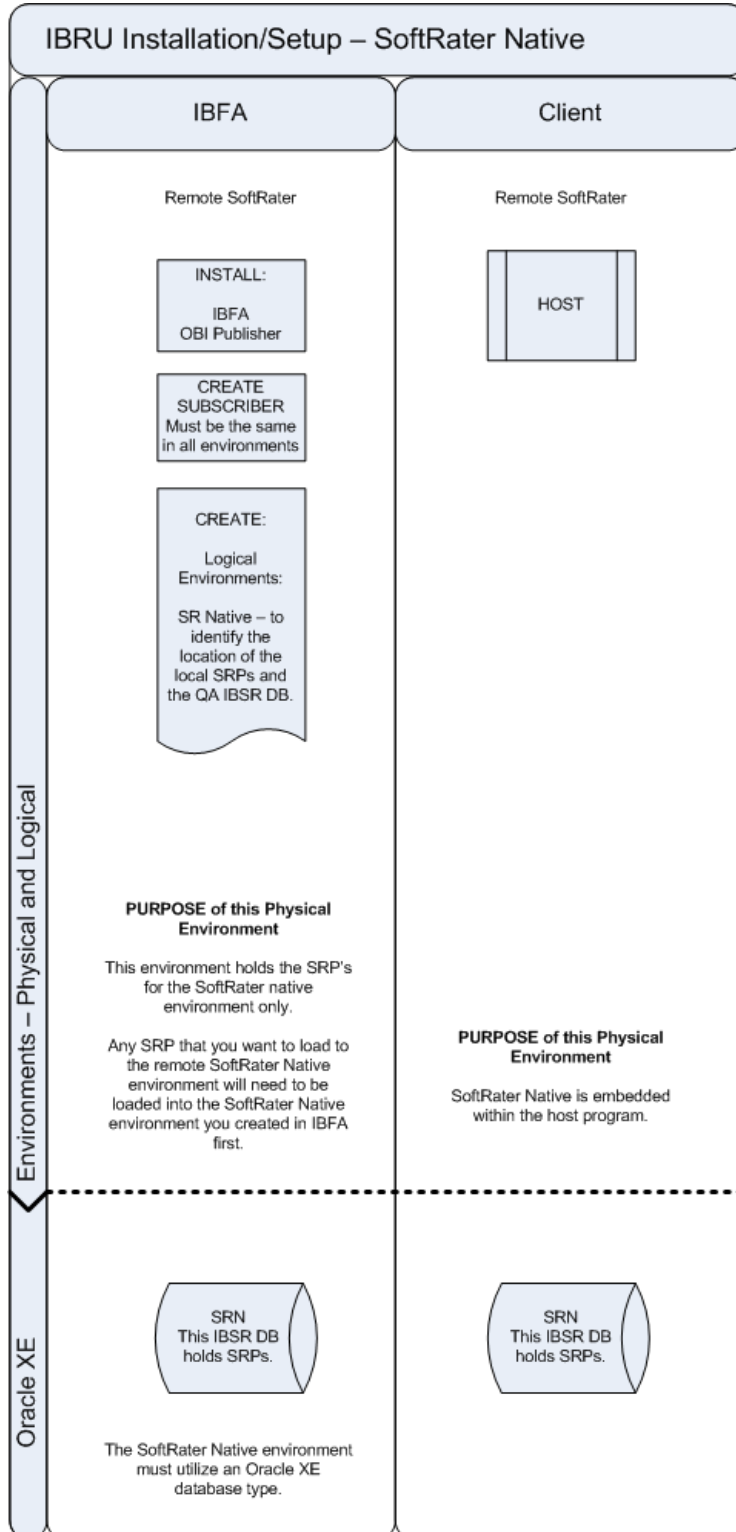
1. Only the development machine will hold the subscriber ID. IBSS/SR-JAVA does not allow for the creation of subscriber IDs.

2. In the **Development** environment:
    a. A client database, a security database and a RateManager database connection would be created. The client and security databases will allow users to login. The RateManager database will hold the rating and rules logic used in SRPs.
    b. A RateManager logical environment would need to be created. The RateManager logical environment will allow for local rating to be performed in this environment. When an SRP is created in the RateManager logical environment, the IBFA in the development environment will copy and load into the QA_SR logical environment.
    c. A QA_SR logical environment would need to be created. The QA_SR logical environment will be used to hold the SRPs that are ready for testing. When testing is complete, the IBFA in the development environment will copy and load into the Production_SR logical environment.
    d. A Production_SR would need to be created to hold the SRPs that need to go into production.

3. In the **QA** environment:
    a. One logical environment would be created here to identify the location of the QA IBSR DB.
    b. This environment would be used for testing.

4. In the **Production** environment:
    a. One logical environment would be created here to identify the Production IBSR DB.
    b. This environment would be used for real time production rating.

NOTE: *The names used in the logical environments are for example only. You should name your environments according to your company's standards.*

EXAMPLE

IBRU Data Flow – Windows/JAVA Incorporating a SQL Server DB
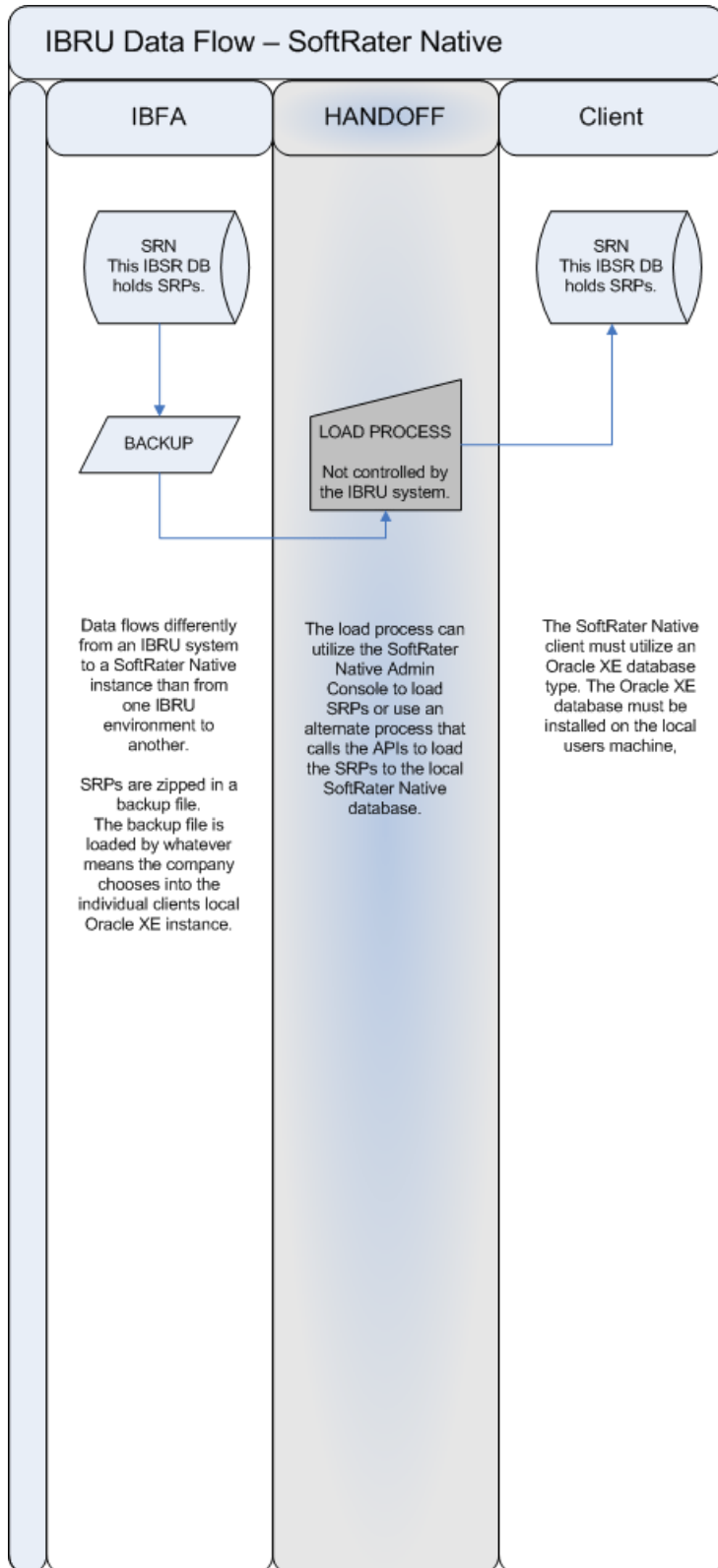
SOFTRATER NATIVE ENVIRONMENT

A SoftRater Native environment is the rating environment that the local instance, for example an agent's laptop, will use. It is the local engine that will execute the rating, rules and underwriting instructions defined within RateManager. Multiple SoftRater environments can be loaded on the local instance. Only one default environment will be allowed. The default environment is the environment that will be used to rate unless another environment is specified in the request XML.

THE SETUP

A SoftRater Native setup would occur in the **Production** environment only:

1. In IBFA:
    a. An IBFA/SR-WIN instance would be on a Windows machine.
    b. OBI Publisher is installed for reports to be created.
    c. The subscriber ID would be created here.
    d. On the IBFA/SR-WIN for this environment, a logical environment for SoftRater Native would be created.
    e. SoftRater native would utilize the database that would be attached to the SQL Server machine.

2. At the Client:
    a. SoftRater Native would be embedded within the host program.
    b. AN Oracel XE database would be installed to receive the backup file from IBFA.

PACKAGE MANAGEMENT

IBRU Data Flow – SoftRater Native

| IBFA | HANDOFF | Client |

SRN
This IBSR DB
holds SRPs.

SRN
This IBSR DB
holds SRPs.

BACKUP

LOAD PROCESS

Not controlled by
the IBRU system.

Data flows differently
from an IBRU system
to a SoftRater Native
instance than from
one IBRU
environment to
another.

SRPs are zipped in a
backup file.
The backup file is
loaded by whatever
means the company
chooses into the
individual clients local
Oracle XE instance.

The load process can
utilize the SoftRater
Native Admin
Console to load
SRPs or use an
alternate process that
calls the APIs to load
the SRPs to the local
SoftRater Native
database.

The SoftRater Native
client must utilize an
Oracle XE database
type. The Oracle XE
database must be
installed on the local
users machine,

The way SRPs move in a SoftRater Native environment is manually. This is the only part of the IBRU system where users have to manually load packages from IBFA. This is because SoftRater Native is a remote instance.

Only the **Production** environment will be loading packages into SoftRater Remote.

1. A SoftRater Native environment must be created in the IBFA.

2. SRPs are zipped in to a Backup file.

3. The backup file is loaded by whatever means the company chooses into the individual client's local Oracle XE instance.

The handoff from IBFA to SoftRater Native is a manual process and can be handled using the SoftRater Native Admin Console or any alternate process that call the APIs to load the SRPs to the local SoftRater Native database.

CONTACTING SUPPORT

If you need assistance with an Oracle Insurance Insbridge Rating and Underwriting System product, please log a Service Request using My Oracle Support at https://support.oracle.com/.

Address any additional inquiries to:

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
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