

# Shell sharing between Data Studio, Rational Data Architect, Rational Software Architect, and Rational Application Developer

## A technical overview

Skill Level: Intermediate

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Many people think that each IBM® software product requires its own copy of Eclipse, but that is not always the case. It is possible to share the same Eclipse installation between different IBM software development products, such as Data Studio, RDA, RSA, and RAD.

## Introduction

The concept of *shell sharing* between Eclipse-based products means that you can share the core Eclipse components so that they are not duplicated between each Eclipse-based product. Shell sharing eliminates the need to install several Eclipse platforms for each product, thus saving disk space and eliminating duplication of components. This article explains the process of sharing these same Eclipse shells between many different IBM products, such as Rational Data Architect (RDA), Rational Software Architect (RSA), Rational Application Developer (RAD), and Data Studio.

Many IBM Rational software products and Data Studio tools are in fact designed to do the shell share amongst themselves where they can share a single common framework. This is not always the rule, but a simple check during the installation process can save you disk space, allowing you to either use an existing Eclipse installation or to use an Eclipse installation from other IBM software products. A simple analogy of the shell share compared to the Windows® platform would be the C:\Windows directory where common components are used by all other programs installed in C:\Program Files folder.

## Some key terms

### **IBM Installation Manager**

IBM Installation Manager (IIM) is an Eclipse-base software delivery platform that will install, apply upgrades, and manage different software products. As an analogy, you can compare IIM with any standard software installation program, such as Windows MSI packages or the InstallShield programs. IIM creates a package for each software product, and the key to shell sharing is to extend or use the same package while installing a new product. IIM also manages the licenses for products that you install with it.

### **Package group**

IIM allows you to define a package group when you install a software product from IBM. When you install two different software products in two different package groups, they do not share the same resources. A user can purposefully choose to install products in different package group for many reasons, even though those products have the ability to share the resources.

## Shell share concepts

When multiple IBM products are installed within the same package group, the products share their set of common and compatible features. Since these features are shared between the products, updating them through the IIM for one product updates them for all the products. Therefore, updates are allowed or restricted by the dependency requirements set out by each product. An indication of shell sharing is that when running one of the products, the user interface and features contributed by the other products are also visible.

Any number of eligible products can be installed to a package group. When a product is installed, its function is shared with all of the other products in the package group. If you install a development product (like Data Studio Developer) and an architect product (like RDA) into one package group, when you start either of the products, you have both the development and data architect functionality

available to you in your user interface. If you add a product with modeling tools (like RSA), all of the products in the package group will have the development, modeling, and architect functionality available.

## Products and shell sharing

Shell sharing is possible between the same major and minor releases of the Eclipse platform. For example, you cannot shell share products using Eclipse 3.2 and 3.3. This is detected by the IIM and it forces you to choose a different package group if shell sharing is not possible between those two products.

When different IBM products shell share with each other, each product independently updates all of its own features through the IIM. One of the side-effect of the shell share is that you only see the user interface and features contributed by the product launched, and not those of any of the other products. For example, if you install IBM Data Studio Developer and shell share it with RDA, you will only see the welcome screen of Data Studio Developer even though RDA is also installed.

**Table 1. Eclipse 3.2-based product that can shell share**

<b>Product name</b>
<b>Data Studio, V1.x</b>
<b>Rational Application Developer for WebSphere® Software, V7.0.0.x</b>
<b>Rational Software Modeler, V7.0.0.x</b>
<b>Rational Systems Developer, V7.0.0.x</b>
<b>Rational Software Architect, V7.0.0.x</b>
<b>Rational Asset Manager, V7.0.0.x</b>
<b>Rational Data Architect, V7.0.0.x</b>
<b>Rational Functional Tester, V7.0.0.x</b>
<b>Rational Functional Tester, V7.0.1.x</b>
<b>Rational Performance Tester, V7.0.0.2 through 7.0.0.x</b>
<b>Rational Performance Tester, V7.0.1.x</b>
<b>Rational Developer for System z, V7.0.0.x</b>
<b>WebSphere Integration Developer, V6.1.0.x</b>
<b>WebSphere Message Broker, V6.1.0.x</b>
<b>WebSphere Business Modeler, V6.1.0.x</b>
<b>WebSphere Developer Studio Client Standard, V7.0.0.x</b>
<b>WebSphere Developer Studio Client Advanced, V7.0.0.x</b>

**Table 2. Eclipse 3.2-based product extensions that are installed by the IIM and can share the same package group as an Eclipse 3.2 based product**

<b>Product name</b>
Rational Business Developer Extension, V7.0.0.x
Rational Modeling Extension for Microsoft® .NET, V7.0.0.x
Rational Performance Tester Extension, V7.0.0.x
WebSphere Host Access Transformation Services (HATS), V7.0.0.x

**Table 3. Eclipse 3.2 RCP-based products that cannot shell share**

<b>Product name</b>
Rational Manual Tester, V7.0.0.x
Rational Manual Tester, V7.0.1.x

**Table 4. Eclipse 3.3-based products that can coexist but not shell share with Eclipse 3.2-based products**

<b>Product name</b>
Rational Software Modeler, V7.0.5.x
Rational Systems Developer, V7.0.5.x
Rational Developer for System i, V7.1.0.x

**Table 5. Eclipse 3.3-based product extensions that are installed by the IIM and can share the same package group as an Eclipse 3.3-based product**

<b>Product Name</b>
Rational Modeling Extension for Microsoft .NET, V7.0.5.x

**Table 6. Data Studio, RDA, RAD and RSA Dependency**

Data Studio	RDA	RAD	RSA
1.1.2	V7 FP5	V7 FP6	V7 FP6
1.2	V7 FP5	V7 FP7	V7 FP7

## Example: Shell sharing between IBM Data Studio and RDA

**Get an IBM ID to download software**  
 You will need an IBM ID to download, try, buy, or get free license software from IBM. [Create](#) an ID. Save this ID and password for future use, as you will need this every time to download software from IBM.

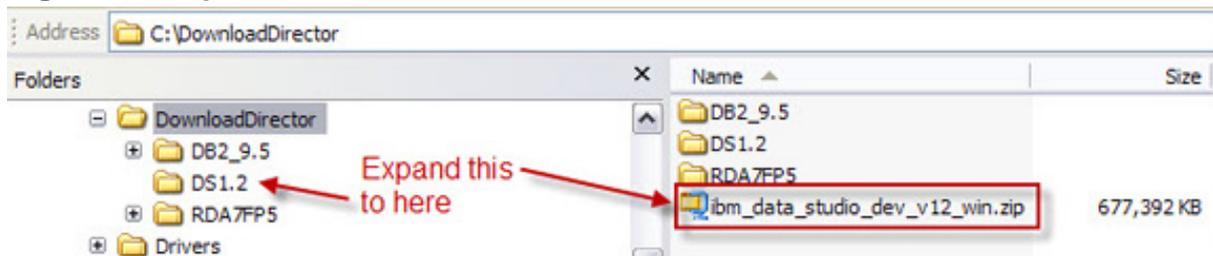
### Software download

- [IBM Data Studio Download](#)
- [IBM RDA Download](#)

## Install IBM Data Studio

It is assumed that you have downloaded the IBM Installation Manager and Data Studio package referenced above. Unzip the file **ibm\_data\_studio\_dev\_v12\_win.zip** and you will see directory structure shown in Figure 1.

**Figure 1. Prepare for installation**

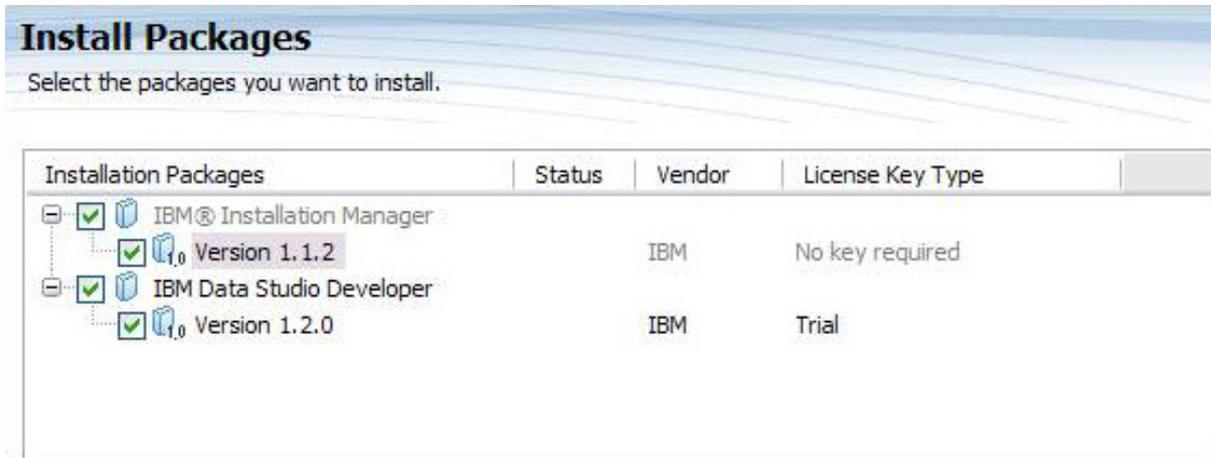


Navigate to the DS1.2 folder where you expanded the contents of the **ibm\_data\_studio\_dev\_v12\_win.zip**, and double-click **setup.exe** to launch the setup process, and click **Install** to start the installation process.

**Figure 2. Start the installation process**



**Figure 3. Select packages**

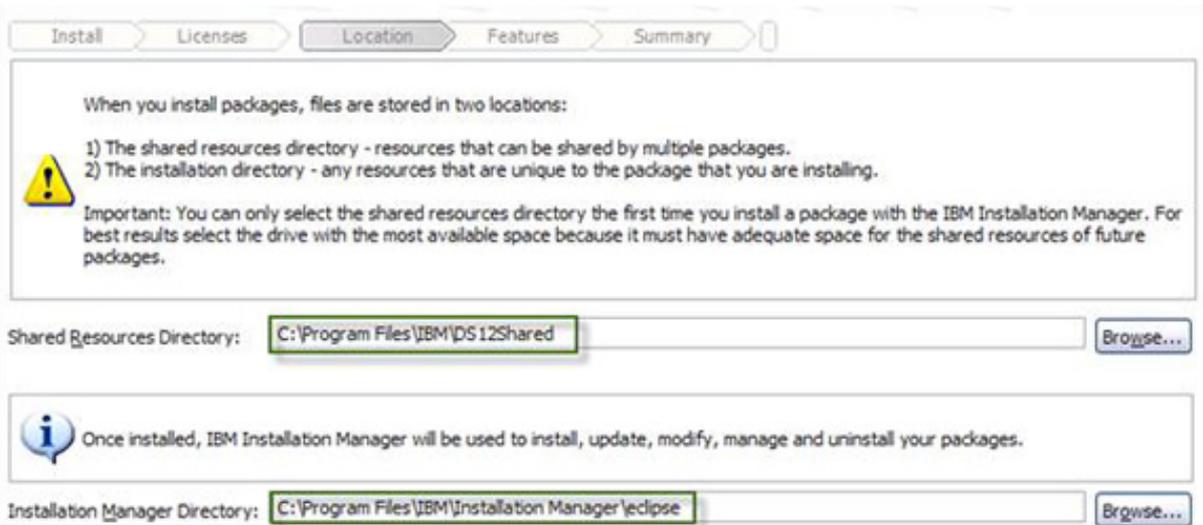


Select the IBM Installation Manager and Data Studio Developer, and click **Next**.

Click the radio button accepting the license, and click **Next**.

On the next screen, accept the default locations of the Eclipse and Data Studio shared components, as shown in Figure 4:

**Figure 4. Select location for shared components**



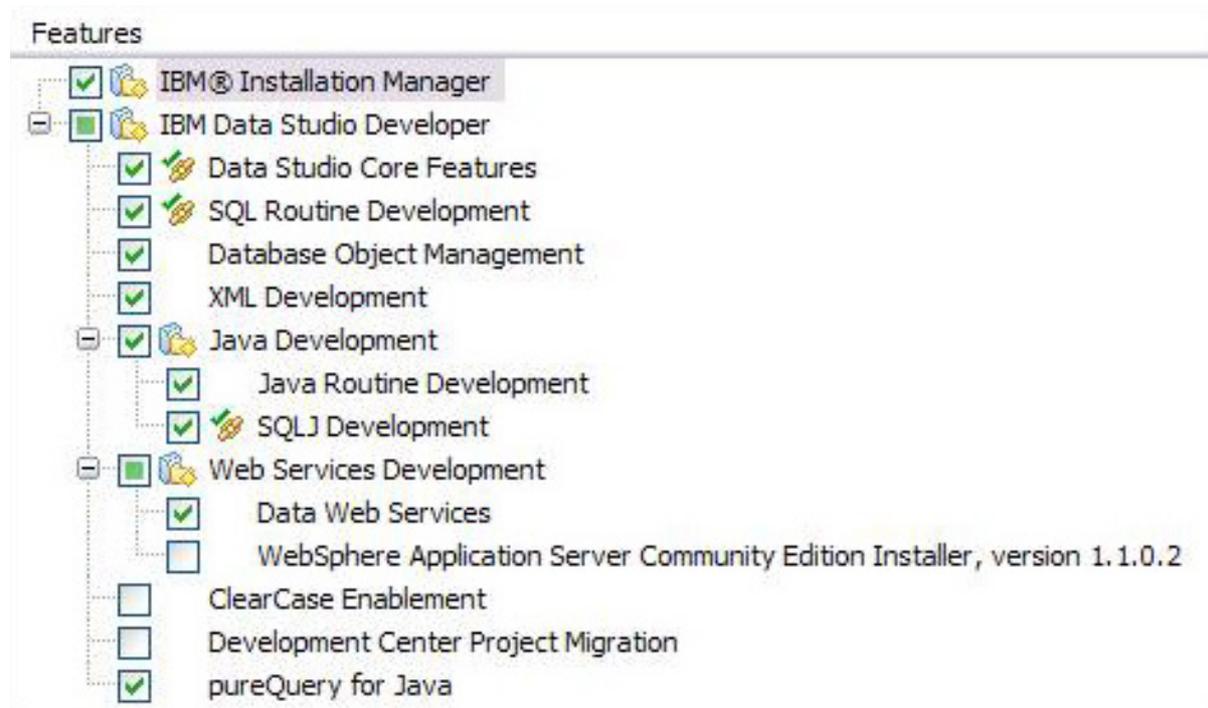
On the next screen, accept the default location for the Data Studio, as shown in Figure 5:

**Figure 5. Select package group**



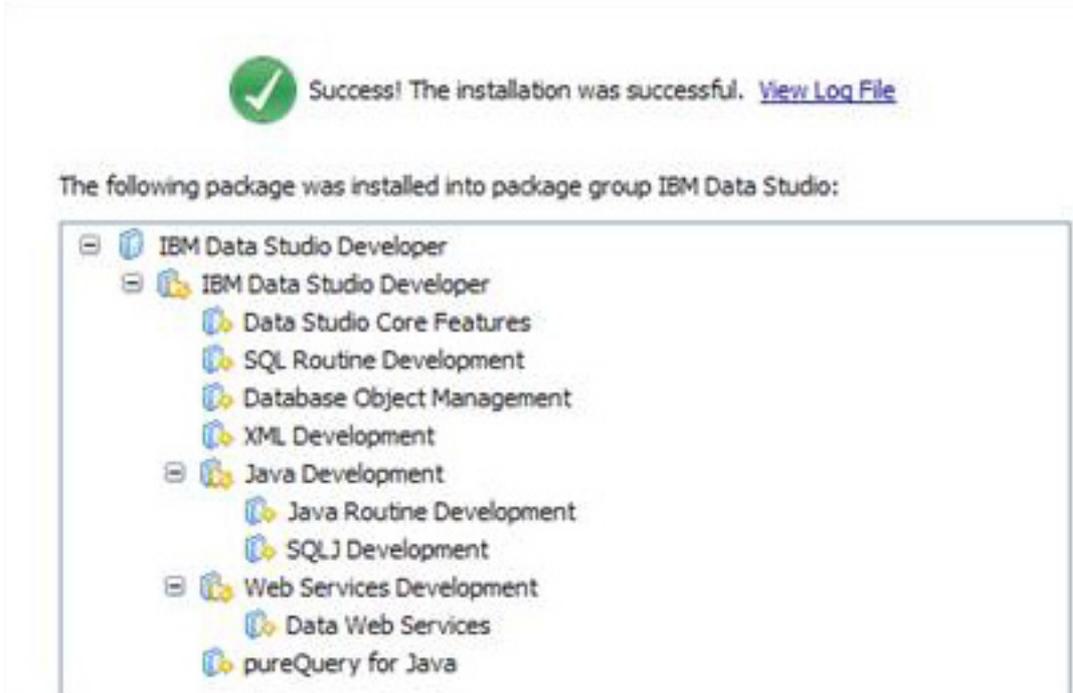
Click **Next** three times and you will see the following screen showing all of the selected components for the installation:

**Figure 6. Verify selected components**



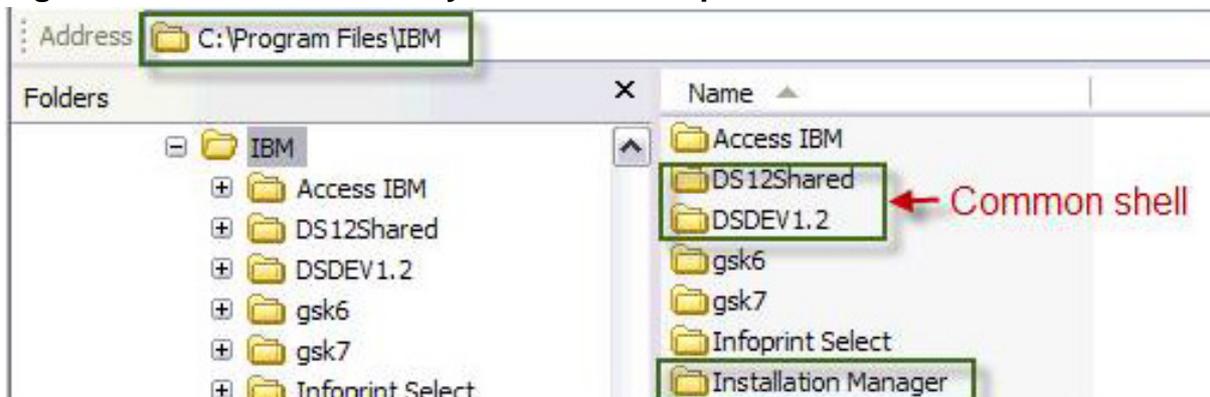
Click **Next** and **Install** on the following screen to install the IBM Installation Manager and Data Studio package. The installation will take few minutes and at the end you should see a screen similar to Figure 7:

**Figure 7. Successful installation**



Go to the Windows Explorer and navigate to the Program Files, and you will see three new folders created by the above process.

**Figure 8. Installation directory in Windows Explorer**



If you installed a different product than Data Studio, like RDA for example, the default name of the location of the common shell would be different. RDA, RSA, and RAD use different default folder names.

**Figure 9. Default folder names for RDA, RAD, and RSA, and so on**



When you install RDA in the following section, you will use the existing Data Studio shell instead of creating a new shell SDP70. This is called common shell sharing. Remember to refer to tables 1-5 to see if you can do shell sharing between the different versions of RDA, RSA, RAD, and Data Studio.

### Apply the Data Studio license

You should get your licenses from your IBM passport advantage Web site. Download the `com.ibm.datastudio.developer.pek_1.2.jar` and `RDAlc.jar` license files for Data Studio Developer and Rational Data Architect. Then, launch the IBM Installation Manager, as shown in Figure 10:

**Figure 10. Apply the Data Studio license**



Click **Manage License**.

**Figure 11. Manage license**



Click the radio button **Import product Activation kit**, and then click **Next**.

Click **Browse** and locate the license file `com.ibm.datastudio.developer.pek_1.2.jar` that you downloaded in the previous step.

Click **Next**, and accept the license by selecting the radio button.

Click **Finish**, and you have applied the license.

**Figure 12. Import license file**



**Figure 13. Browse license file**



After applying the license, click **Manage License** to confirm whether the license was applied successfully or not. You should see screen similar to Figure 14:

**Figure 14. Check license status**



**Node locked issue**

If you see a license type of Node Locked instead of Permanent, it is very likely that your system date is incorrect. IBM Software licenses are date driven and you will see your license type as Node Locked if your system date is incorrect. In such cases, correct your system date on your physical or virtual machine and you will see the Permanent instead of the Node Locked license type.

**Install IBM RDA**

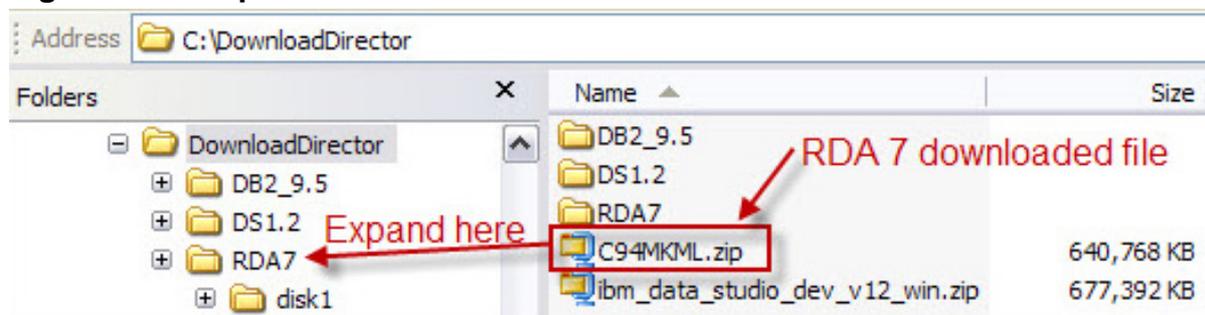
After installing Data Studio, you want to install RDA and do the shell sharing between these two products so that you do not have unnecessary duplicate components. The key here is that you already have the IBM Installation Manager installed and you only need the correct RDA package to install.

If you already have RDA installed, chances are that it is using a different shell: SDP70 and SDP70Shared. You could have shell shared Data Studio Developer with an existing RDA package group.

Assuming that you do not have RDA installed, download [RDA](#). You will see in the following steps how to apply upgrades to the trial software and do the shell share between two software products.

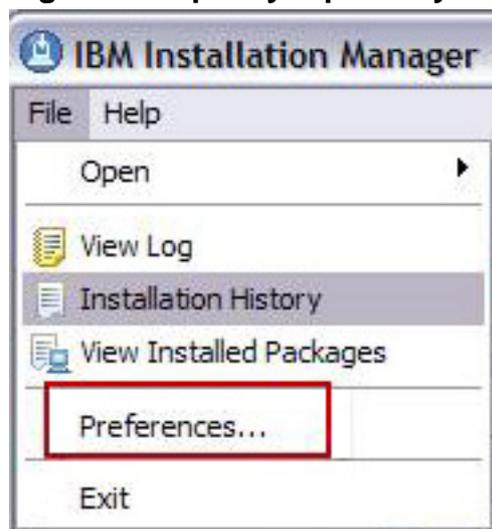
Unzip the files, and you should see following file structures:

**Figure 15. Unzip the RDA installation file**



Launch IBM Installation Manager, and navigate to **File > Preferences**.

**Figure 16. Specify repository**

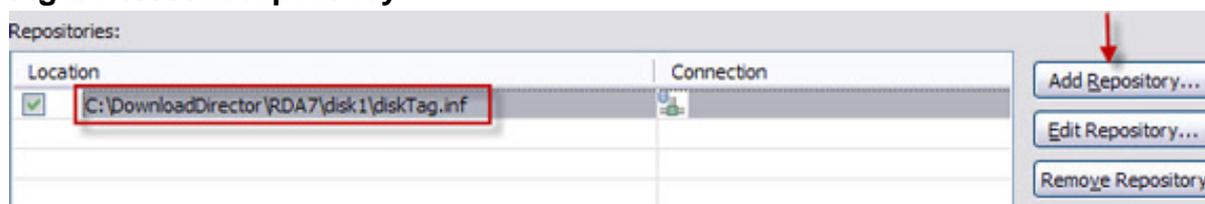


Specify the location of the RDA package on the next screen.

Click **Add Repository**, and then click **Browse** on the next screen to locate the directory name where you unzipped the RDA package in the previous step.

Choose **diskTag.inf**, and click **Open**.

**Figure 17. Add repository**



Click **OK**, and then click **Install software packages**, as shown in Figure 18:

**Figure 18. Install software packages**

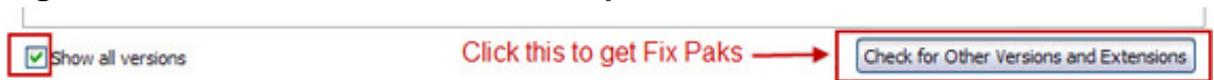


**Figure 19. Select RDA version**

Installation Packages	Status	Vendor	License Key Type
<ul style="list-style-type: none"> <li> <input checked="" type="checkbox"/> IBM Rational Data Architect                             <ul style="list-style-type: none"> <li> <input checked="" type="checkbox"/> Version 7.0.0                                 </li> </ul> </li> </ul>		IBM	Trial

Click **Check for other versions and extensions**. You should be connected to the Internet to get the information for other versions and upgrades available from the IBM site.

**Figure 20. Check other versions and expansions**



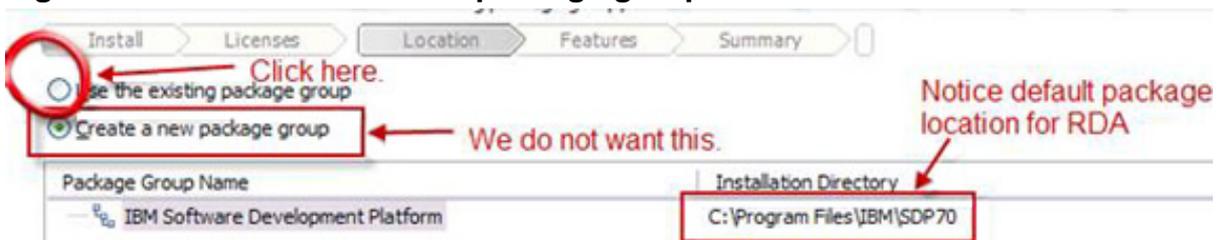
Click the check box to select V7FP5 of RDA.

**Figure 21. Choose the latest FixPak to apply**

Installation Packages	Status	Vendor	License Key Type
<ul style="list-style-type: none"> <li> <input checked="" type="checkbox"/> IBM Rational Data Architect                             <ul style="list-style-type: none"> <li><input type="checkbox"/> Version 7.0.0</li> <li><input type="checkbox"/> Version 7.0.0.1</li> <li><input type="checkbox"/> Version 7.0.0.2</li> <li><input type="checkbox"/> Version 7.0.0.3</li> <li><input type="checkbox"/> Version 7.0.0.4</li> <li> <input checked="" type="checkbox"/> Version 7.0.0.5                                 </li> </ul> </li> </ul>		IBM	Trial

Click **Next**, and accept the license agreement by clicking the radio button and clicking **Next**. You will see the following screen, and instead of creating a new package group, select an existing package group that you already created for the Data Studio installation.

**Figure 22. Do not select a new package group**



You do not want to create a new package because you want to share an existing one, so click the radio button for **Use the existing package group**, and it will

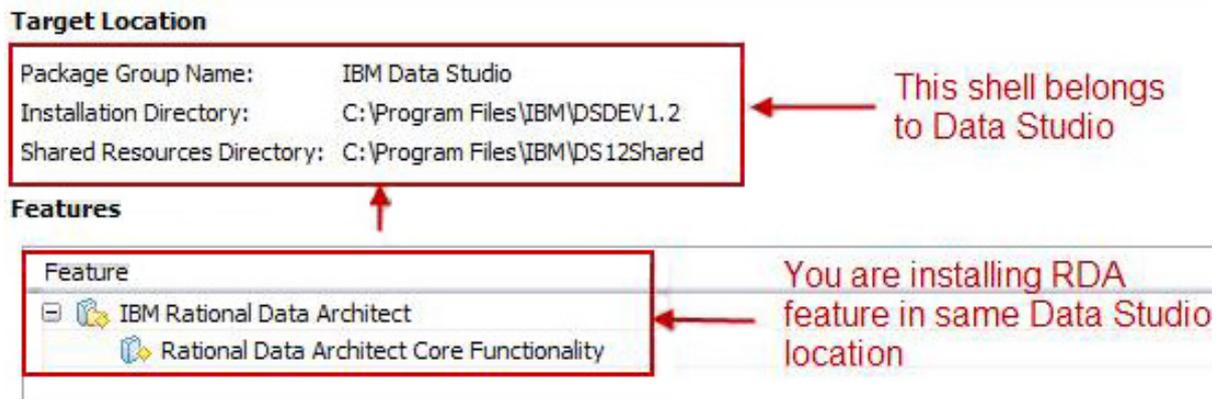
automatically select a previous package of the Data Studio. Click **Next**.

**Figure 23. Choose an existing package group**



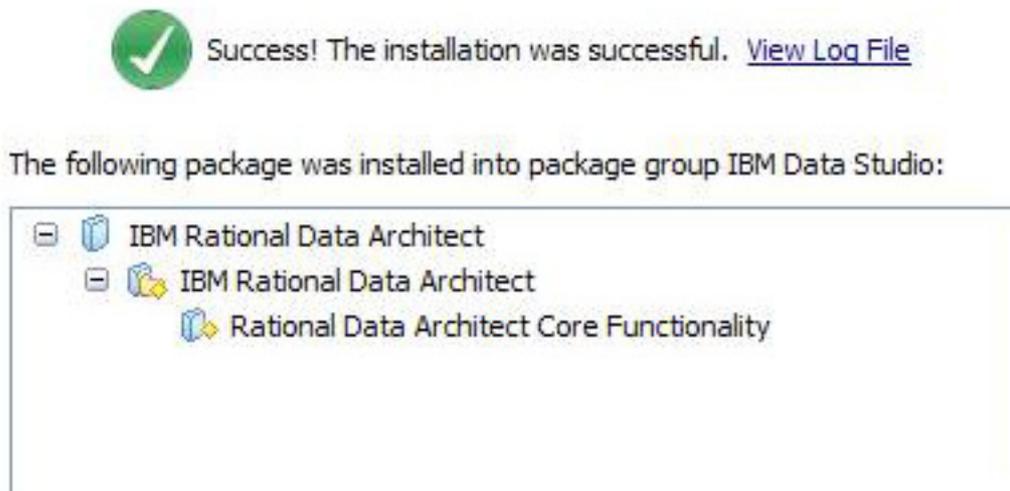
On the next screen, you can choose components that you want to include with RDA. In this example, keep the default options, and click **Next** followed by **Install**, on the next screen. It will take few minutes to install RDA on top of Data Studio.

**Figure 24. Verify target location**



After the RDA installation completes, you should see a screen similar to Figure 25:

**Figure 25. RDA installation successful**



## Apply RDA license

Now, you need to apply the license RDALic.jar to RDA in the same way you did for the Data Studio.

Click the **Manage Licenses** icon in IBM Installation Manager.

Click **Version 7.0.0.5** for RDA.

**Figure 26. Select RDA version to apply license**

Installed Packages	Vendor	License Type	Expiration Date
<ul style="list-style-type: none"> <li>IBM Data Studio Developer                             <ul style="list-style-type: none"> <li>Version 1.2.0</li> </ul> </li> <li>IBM Rational Data Architect                             <ul style="list-style-type: none"> <li><b>Version 7.0.0.5</b> ← Click here</li> </ul> </li> </ul>	IBM	Permanent	
	IBM	<b>Trial</b>	Sep 24, 2008

Click the radio button for **Import product activation kit**, and click **Next**.

Click **Browse** on the next screen, and locate the **RDALic.jar** file.

**Figure 27. Select RDA license file**

**Repository:**

C:\Vikram\PDQPOT\licences\RDALic.jar RDALic.jar Browse... Search

**Details:**

Click **Next**, and after accepting the license, click **Finish**.

After applying the license, click the **Manage License** icon to make sure that the licenses were applied successfully.

**Figure 28. Verify licenses**

Installed Packages	Vendor	License Type	Expiration Date
<ul style="list-style-type: none"> <li>IBM Data Studio Developer                             <ul style="list-style-type: none"> <li>Version 1.2.0</li> </ul> </li> <li>IBM Rational Data Architect                             <ul style="list-style-type: none"> <li>Version 7.0.0.5</li> </ul> </li> </ul>	IBM	Permanent	
	IBM	Permanent	

Now, you have RDA as a part of Data Studio and you can demonstrate that RDA fits in the design phase of the overall vision of the IBM Data Studio -- a complete data life cycle management.

**Figure 29. Verify in Windows Explorer**



When you navigate to the Windows Explorer, you will only see one common shell,

DS12Shared and DSDEV1.2, because you installed RDA V7FP5 in the same location.

## Exercise: Now do shell sharing for DSA, RAD, and RSA

With this exercise, you have learned how to do shell sharing between Data Studio Developer and RDA. You can now download other popular IBM Software products to do shell sharing between them using this approach.

# Resources

## Learn

- [Shell sharing](#): Find cross-product shared environments information about Rational Software.
- [developerWorks Information Management zone](#): Learn more about DB2. Find technical documentation, how-to articles, education, downloads, product information, and more.
- Stay current with [developerWorks technical events and webcasts](#).

## Get products and technologies

- [IBM Data Studio Developer 1.2](#): Download the trial version of Data Studio Developer.
- [IBM Data Studio Administrator](#): Download the trial version of Data Studio Administrator.
- [IBM Rational Data Architect](#): Download the trial version of RDA.
- [IBM Rational Application Developer](#): Get the free license RAD download.
- [IBM Rational Software Architect](#): Download the trial version of RSA.
- Build your next development project with [IBM trial software](#), available for download directly from developerWorks.

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Burt Vialpando's professional IT experience dates to 1984, and he has worked for IBM since 1998 working on database migration related projects. He currently is in a technical presales Oracle-to-DB2 migration role and has conducted nearly 80 Proof of Technology sessions to more than 1,200 DBAs. An author of, and contributor to, many books, articles, papers, PoTs, and other assets, Burt holds many DB2, Oracle, and other IT certifications, and has multiple IBM patent filings.