

Mainframe Immersion Setup Instructions

To participate in the class you will need a number of folders built and some software installed. This setup will walk you through the required steps.

Step 1) Verify Java is installed.

We need a Java Development Kit (JDK) version 1.8.x installed on your computer.

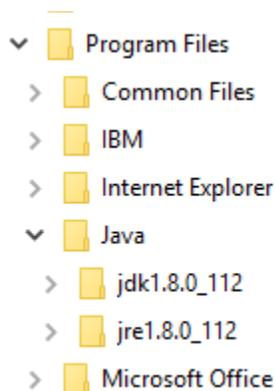
To verify Java is installed; open a Windows command prompt and enter **java -version**

```
C:\Users\Jonathan>java -version
java version "1.8.0_112"
Java(TM) SE Runtime Environment (build 1.8.0_112-b15)
Java HotSpot(TM) 64-Bit Server VM (build 25.112-b15, mixed mode)

C:\Users\Jonathan>
```

Notice I have Java 1.8.0_112 installed. You may have a different version, but you will need version 1.8.x installed.

Next we need to check for the JDK. Open the Windows File Manager and navigate to **C:\Program Files\Java**. (You may have Java in C:\Program Files (x86)). Here you should see a jdk 1.8.x folder.



Notice I also have a jre 1.8.x folder, it is the JDK folder we are looking for.

Step 2) Verify you have Mainframe access.

You will need access to the IBM Mainframe to participate in the class.

Login to the IRS Mainframe using your **TSO** id/password

```
Menu Utilities Compilers Options Status Help
-----
ISPF Primary Option Menu
Option ==> |

0 Settings      Terminal and user parameters      User ID . : JEARL
1 View         Display source data or listings   Time. . . : 21:42
2 Edit        Create or change source data      Terminal. : 3278
3 Utilities    Perform utility functions        Screen. . : 1
4 Foreground   Interactive language processing   Language. : ENGLISH
5 Batch       Submit job for language processing Appl ID . : ISR
6 Command     Enter TSO or Workstation commands TSO logon : DBSPROCB
7 Dialog Test Perform dialog testing          TSO prefix: JEARL
9 IBM Products IBM program development products System ID : S0W1
10 SCLM       SW Configuration Library Manager MVS acct. : ACCT#
11 Workplace  ISPF Object/Action Workplace     Release . : ISPF 7.2
M More       Additional IBM Products
S SDSF      Spool Display and Search Facility
P ProTech   ProTech and 3rd-party Applications
R README    View ProTech documentation

Enter X to Terminate using log/list defaults
F1=Help    F2=Split    F3=Exit    F7=Backward F8=Forward  F9=Swap
F10=Actions F12=Cancel
```

Once you are connected, you will need to verify you have access to the Unix System Services (USS) which is where the Java environment resides.

In the TSO screen enter **TSO OMVS** at a command prompt.

```
ISPF Pr
Option ==> tso omvs |

0 Settings      Terminal and user
1 View         Display source da
```

You will be connected with USS.

```
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(C) Copyright Software Development Group, University of Waterloo, 1989.

U.S. Government Users Restricted Rights -
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GSA ADP Schedule Contract with IBM Corp.

IBM is a registered trademark of the IBM Corp.

S0W1:/u/jearl $
```

Enter the command **pwd** at the => prompt, to see what directory you are currently in.

```
S0W1:/u/jearl $
S0W1:/u/jearl $ pwd
/u/jearl
S0W1:/u/jearl $
```

This is your **Unix (Linux) Home Directory**, this is where you will connect to when you deploy Java code to the Mainframe.

Please make note of this path, the example shown is: **/u/jearl**. Your path should be: **/u/<Your TSO Id>**.

Enter **exit** to leave TSO OMVS.

Step 3) Setup the class folders on your PC

To make this class a success, you will need to be organized. You will be writing code, downloading code from the Instructor, and managing Java jar files, along with other documents.

Using Windows File manager, build the following folders, please note **DO NOT** put spaces in the folder names, nor in the path to the folders.

The root folder should be named: **MainframeImmersion** I suggest putting the folder on the root of the C: drive (i.e. C:\MainframeImmersion). The other folders will be within the MainframeImmersion folder.

The rest of the folders look like this:

MainframeImmersion
 DataFiles
 Documents
 Downloads
 Workspace

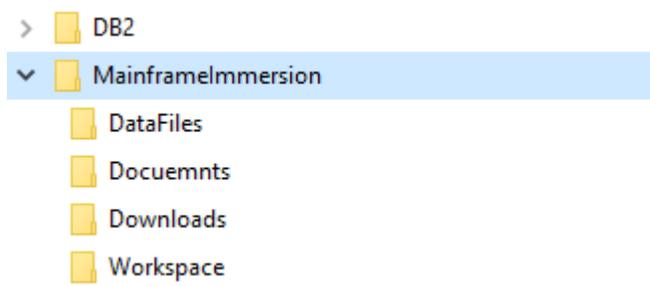
Here is what these folders will be used for:

DataFiles ← this will hold the data your code will be working with

Documents ← this will hold the documents the Instructor shares with you

Downloads ← this will hold the examples and code files from the Instructor

Workspace ← this will be your RDz workspace, it will hold your code



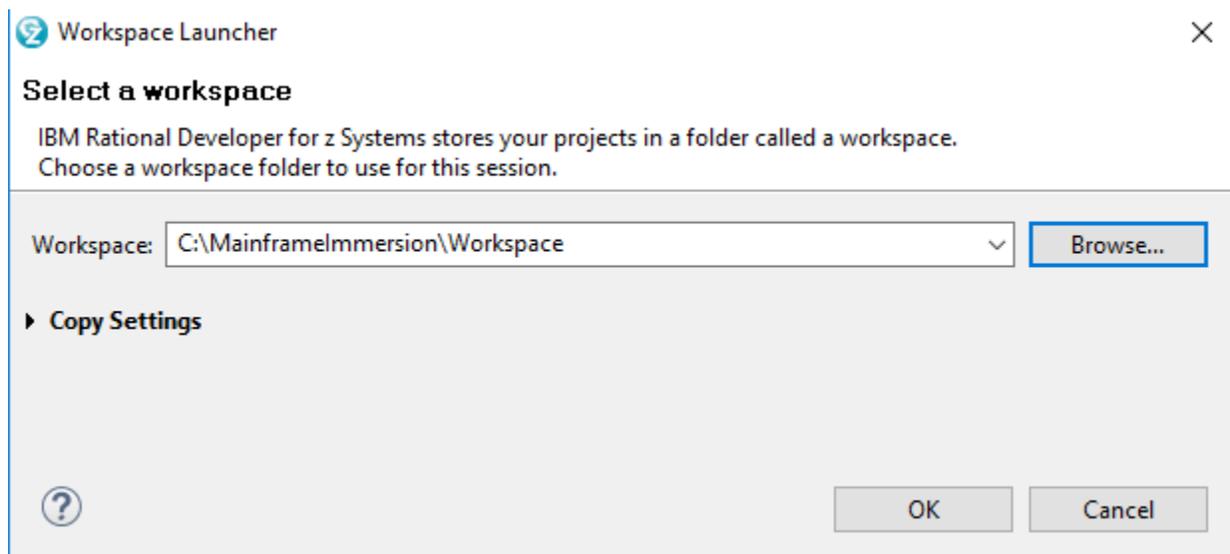
Step 4) Verify you have RDz installed

To work with Java on the Mainframe, you will be coding on your PC, and transferring (exporting) the Java code to the Mainframe. The IBM Rational Developer for z Systems (RDz) is the tool that allows you to manage this transfer. Please note the Mainframe is running Java 8, so the version of RDz is required to be 9.5 or later.

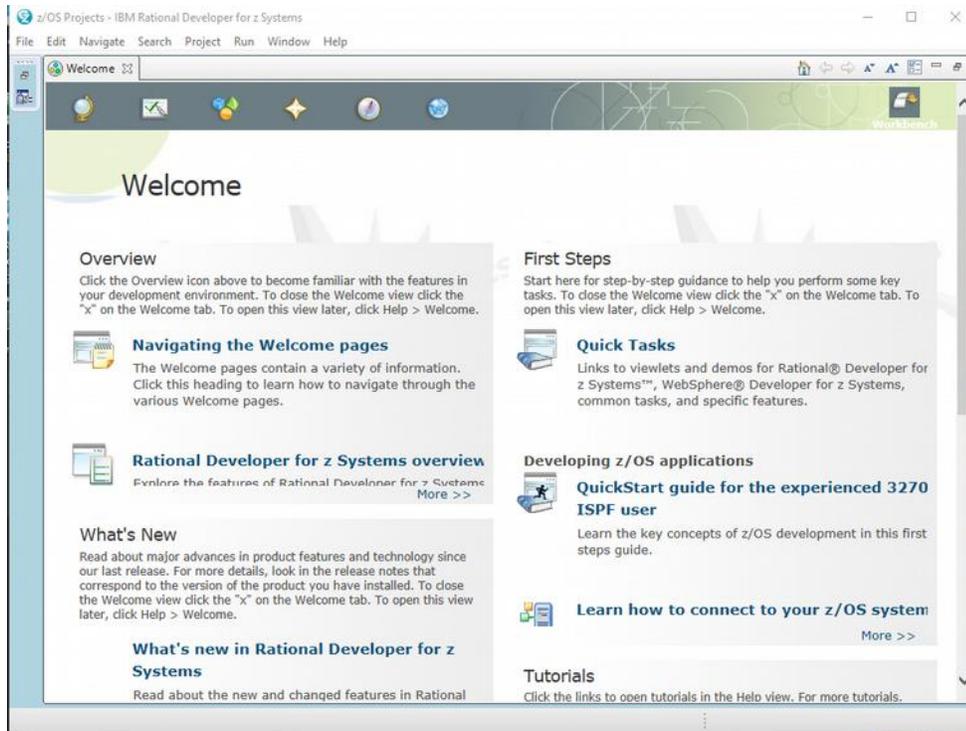
If RDz is not installed, please request it via the OL5081 process, you should search using the phrase: **DEV USER RATIONAL DEPLOYMENT (RATIONAL DEPLOYMENT)**. Then see the on-line instructions at

<https://program.ds.irsnet.gov/sites/RationalHQ/SitePages/Install%20Instructions.aspx> as you follow these instructions, you will need to select the **Developer for System z version 9.5.1** option at step 2.6 to get RDz installed.

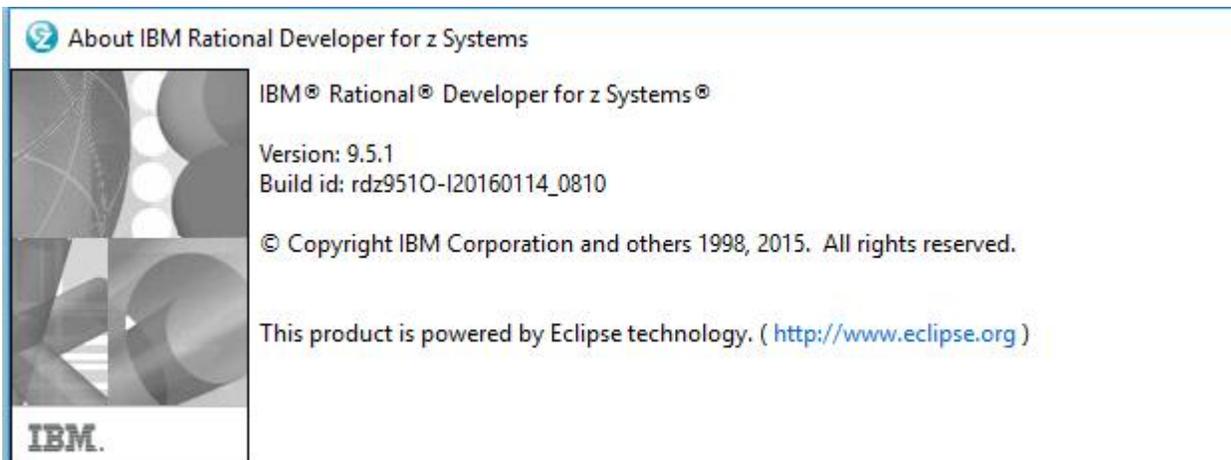
Please start RDz, and when it opens it will ask you which workspace you would like to use, please Browse to MainframeImmersion\Workspace.



RDz will start and display the Welcome page.



Please open the **Help** menu, and select **About IBM Rational Developer for z Systems** verify it shows Version 9.5.x.



Step 5) Verify RDz can connect to the Mainframe

You will be coding on your PC with RDz and exporting the code to run on the Mainframe. To connect RDz to the Mainframe, we will be using a RDz perspective (a perspective is a set of windows) .

Close the **Welcome tab** by clicking on the **X** on the tab.

Within RDz select the **Windows** menu, and click **Open Perspective**.

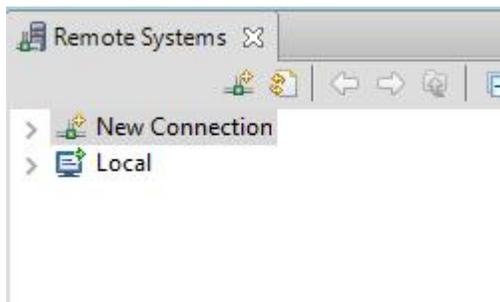
Select the **z/OS Projects** option (you may need to select Other... to find the z/OS Projects option).

Within the z/OS Projects perspective, you will see the **Remote Systems** view (a view is the name of a window in RDz).

The Remote Systems view will show two options:

New Connection

Local



The Local option will show your PC, and the New Connection will allow you to reach the Mainframe.

Open the New Connection option, and double click on the **z/OS...** option, this will open a connection dialog.

New Connection

Remote z/OS System Connection

Please enter a valid connection name.

Parent profile: DESKTOP-EUM74E7

Host name: LOCALHOST

Connection name:

Description:

Verify host name

[Configure proxy settings](#)

Enter **MJI2.MCC.IRS.GOV** for the Host name, leave the Connection name as the default (it will copy the host name), you may optionally add a description.

New Connection

Remote z/OS System Connection

Define connection information

Parent profile: DESKTOP-EUM74E7

Host name: MJ12.MCC.IRS.GOV

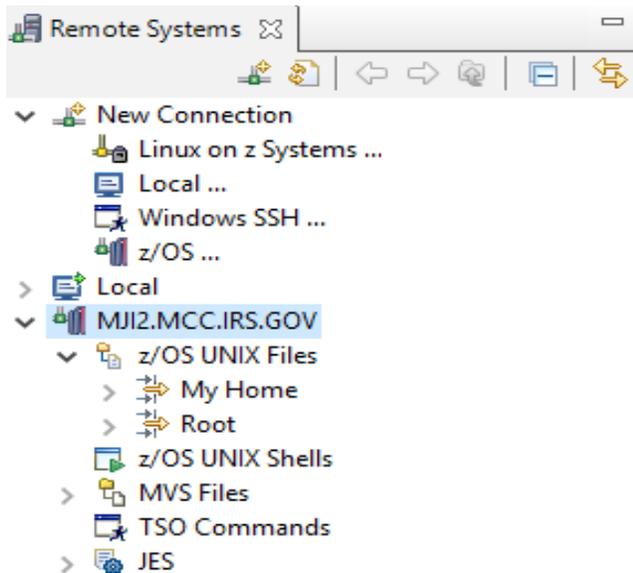
Connection name: MJ12.MCC.IRS.GOV

Description:

Verify host name

[Configure proxy settings](#)

Click finish. You will now have a connection to the Mainframe. Notice the z/OS UNIX Files section is expanded.

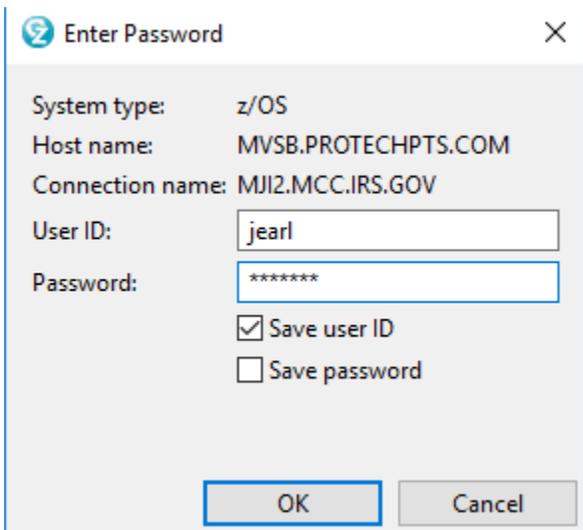


The z/OS UNIX Files section is your Home Directory you were in in Step 2 of these instructions. The Root section allows you to explore the full USS partition. You will use this option to locate the DB2 driver jar file you will use during the database programming section of Immersion.

You can use the Remote Systems view to copy from the Local (your PC) to the Mainframe, or to copy from the Mainframe to your PC. All of the copying will occur within the Remote System view, and not using Windows File Manager.

Open the z/OS UNIX Files section of the Mainframe connection. Double click on **My Home**, a popup window will appear asking you for your UserId and Password (note this example is not connecting to the IRS Mainframe).

Please note this is your **TSO id**, not your Windows SEID. You can optionally save your password so it will not ask again.

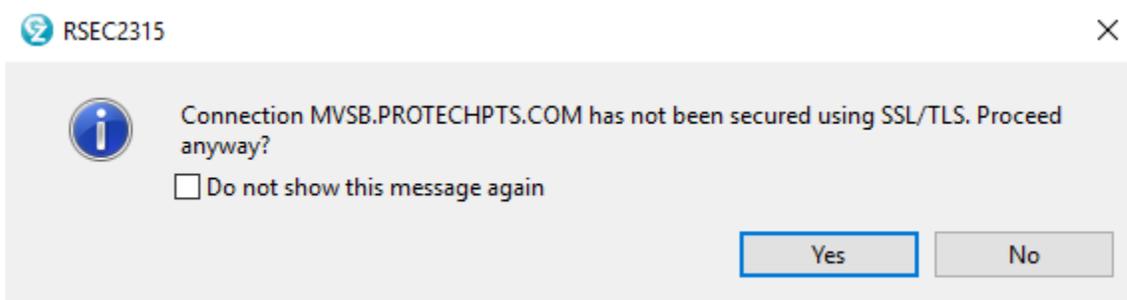


Enter Password

System type: z/OS
Host name: MVS.B.PROTECHPTS.COM
Connection name: MJI2.MCC.IRS.GOV
User ID: jearl
Password: *****
 Save user ID
 Save password

OK Cancel

Click OK. You will see another popup warning you about an unsecured connection, click OK.



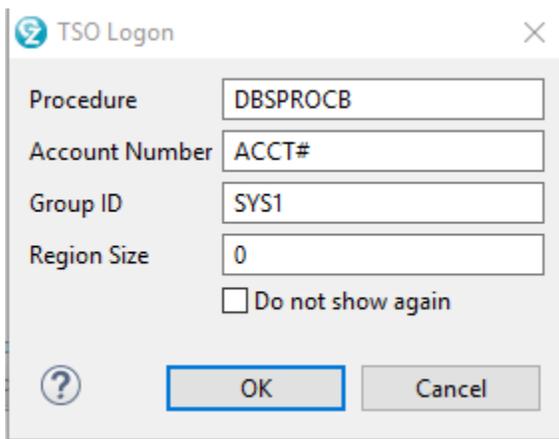
RSEC2315

Connection MVS.B.PROTECHPTS.COM has not been secured using SSL/TLS. Proceed anyway?

Do not show this message again

Yes No

You will now see a TSO Logon screen, click OK.



TSO Logon

Procedure: DBSPROCB
Account Number: ACCT#
Group ID: SYS1
Region Size: 0
 Do not show again

OK Cancel

You are now connected to the Mainframe.