RADS

Preparing Development Environment

https://github.com/radservice/rad-community/fork

Last Revised on Oct 2021

Prerequisites

- Basic application development management know-hows. (i.e. svn/versioning, Maven project etc)

Content

1. Introduction
2. Prepare development tools
3. Checking out source code
4. Prepare dependency libraries
5. Building from source

Chapter I

Introduction

Introduction

- In this module, we will be learning about the followings:
  - Prepare development tools
  - Checking out source code
  - Prepare dependency libraries
  - Building from source

Alternatively, you may also refer to https://docs.rads.purwana.net/RADS+Open+Source

Chapter 2

Preparing Development Tools

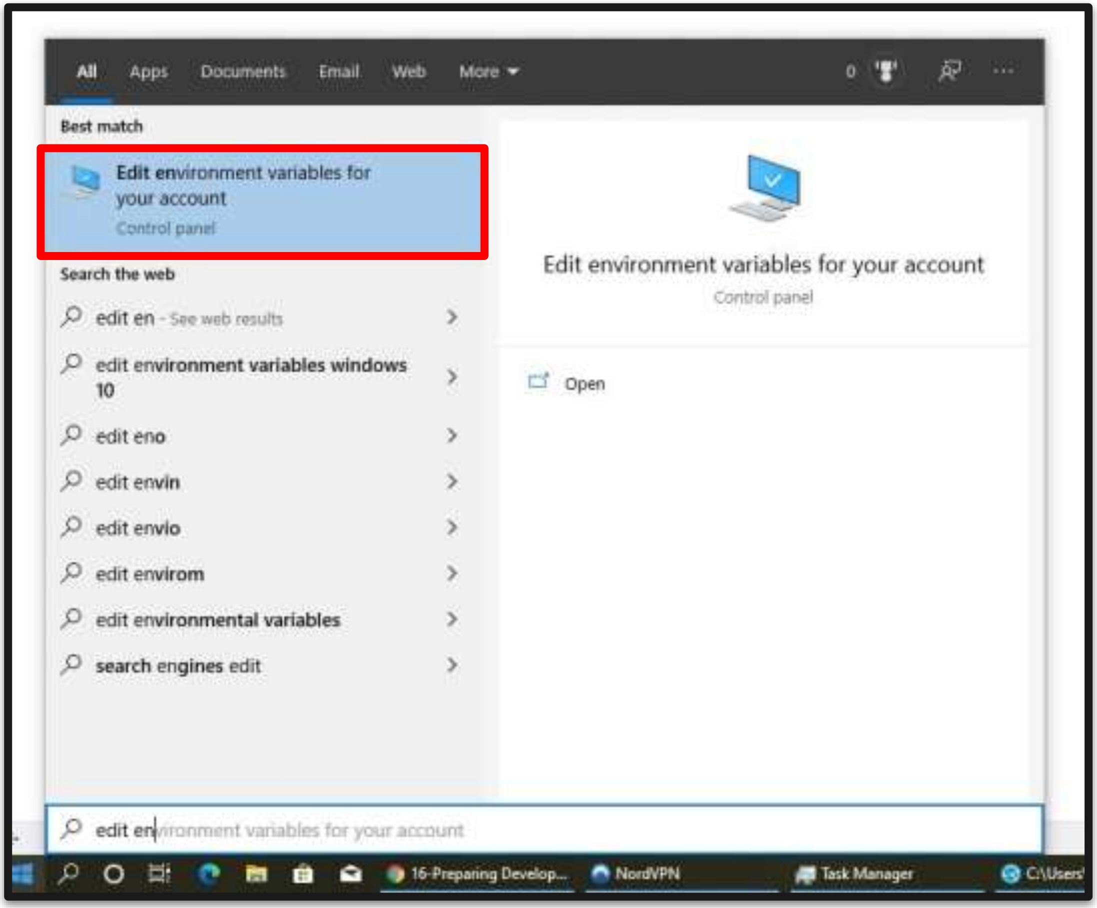
Tools

- Download the following tools or get it in your Developer Training Materials and install.
  - Install JDK 8. Please make sure "JAVA_HOME" is set.
  - Install MySQL 5 or above.
  - Install Apache Maven 3.6.1 or above.
    (e.g. apache-maven-3.6.3-bin.zip)
    Please make sure "mvn" command is able to be executed from the command line.
  - Optional - Install Subversion Client or Github Client.
  - Optional - IDE such as Netbeans.

Setting Up JDK and Apache Maven

- For Windows

1. Open Window System Properties dialog. Search for Edit Environment Variables for your account



Best match

Edit environment variables for your account
Control panel

Search the web

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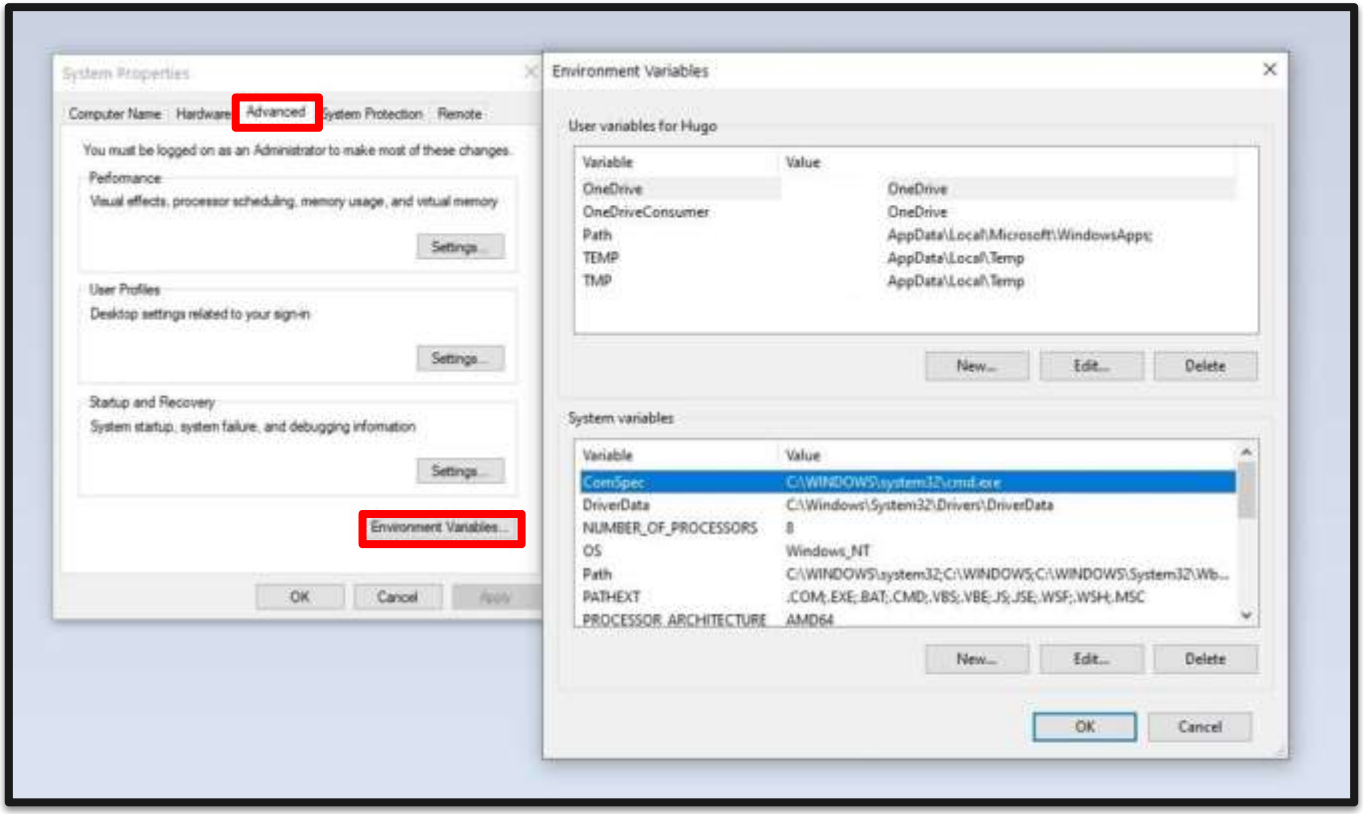
Edit environment variables for your account
Control panel

edit environment variables for your account

Setting Up JDK and Apache Maven

- For Windows
  2. Selecting the "Advanced" tab, and the "Environment Variables" button.



System Properties

You must be logged on as an Administrator to make most of these changes.

Performance

Visual effects, processor scheduling, memory usage, and virtual memory

User Profiles

Desktop settings related to your sign-in

Startup and Recovery

System startup, system failure, and debugging information

Environment Variables

User variables for Hugo

Variable	Value
OneDrive	OneDrive
OneDriveConsumer	OneDrive
Path	AppData\Local\Microsoft\WindowsApps;
TEMP	AppData\Local\Temp
TMP	AppData\Local\Temp

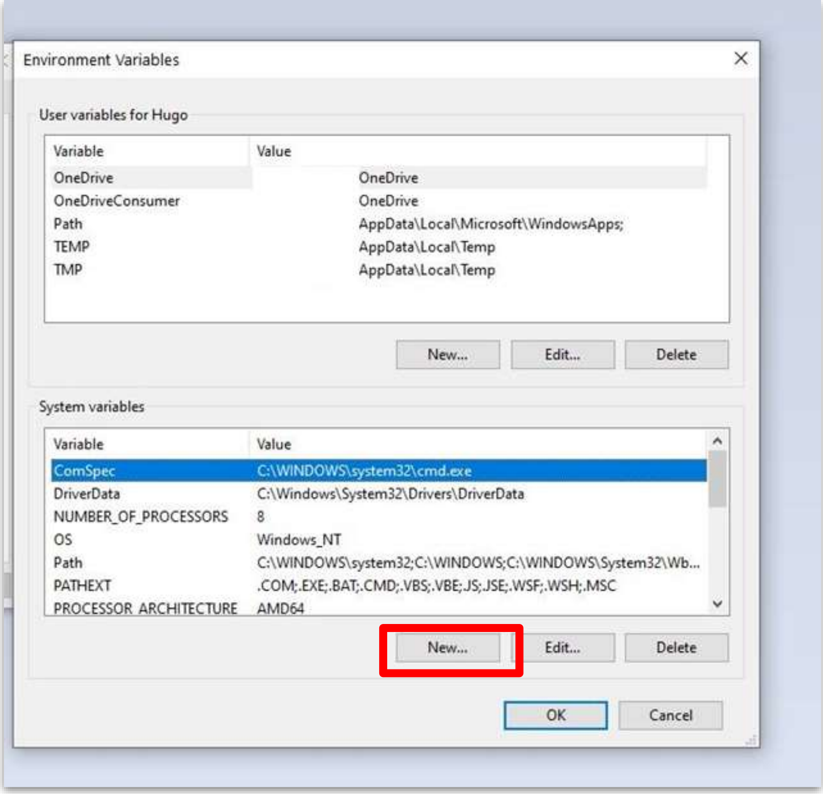
System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wb...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

Setting Up JDK and Apache Maven

- For Windows

3. Add new System Variable named “**JAVA_HOME**”, and set its value to JDK installation directory. E.g. “C:\Program Files\Java\jdk1.8”



Environment Variables

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Path	AppData\Local\Microsoft\WindowsApps;
TEMP	AppData\Local\Temp
TMP	AppData\Local\Temp

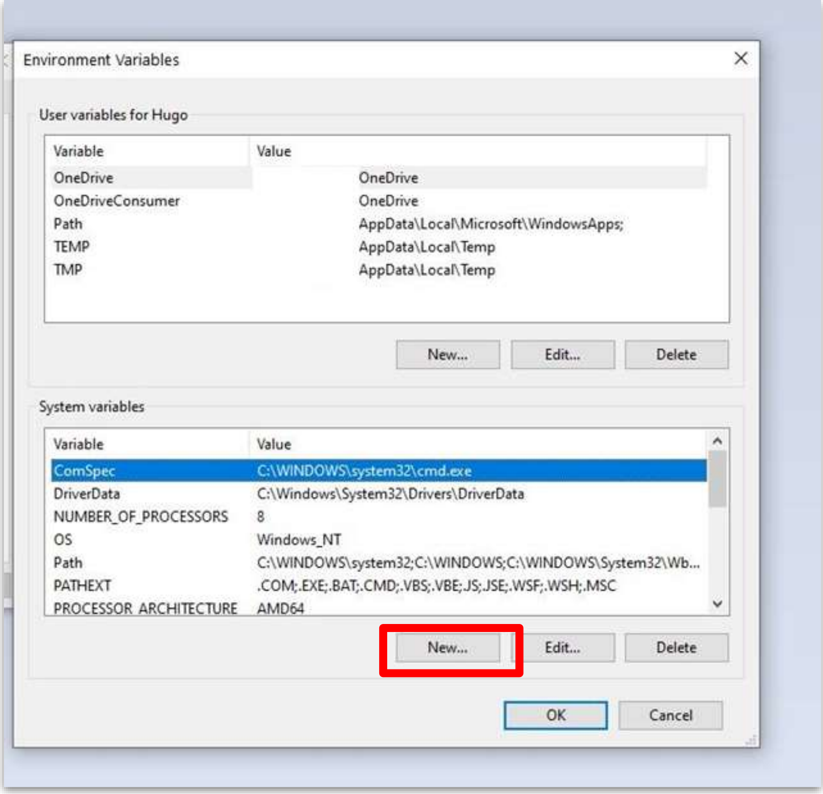
System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wb...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

Setting Up JDK and Apache Maven

- For Windows

4. Add new System Variable named “**M2_HOME**”, and set its value to Apache Maven installation directory. E.g. “C:\Program Files\apache-maven-3.6.3”



Environment Variables

User variables for Hugo

Variable	Value
OneDrive	OneDrive
OneDriveConsumer	OneDrive
Path	AppData\Local\Microsoft\WindowsApps;
TEMP	AppData\Local\Temp
TMP	AppData\Local\Temp

System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wb...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

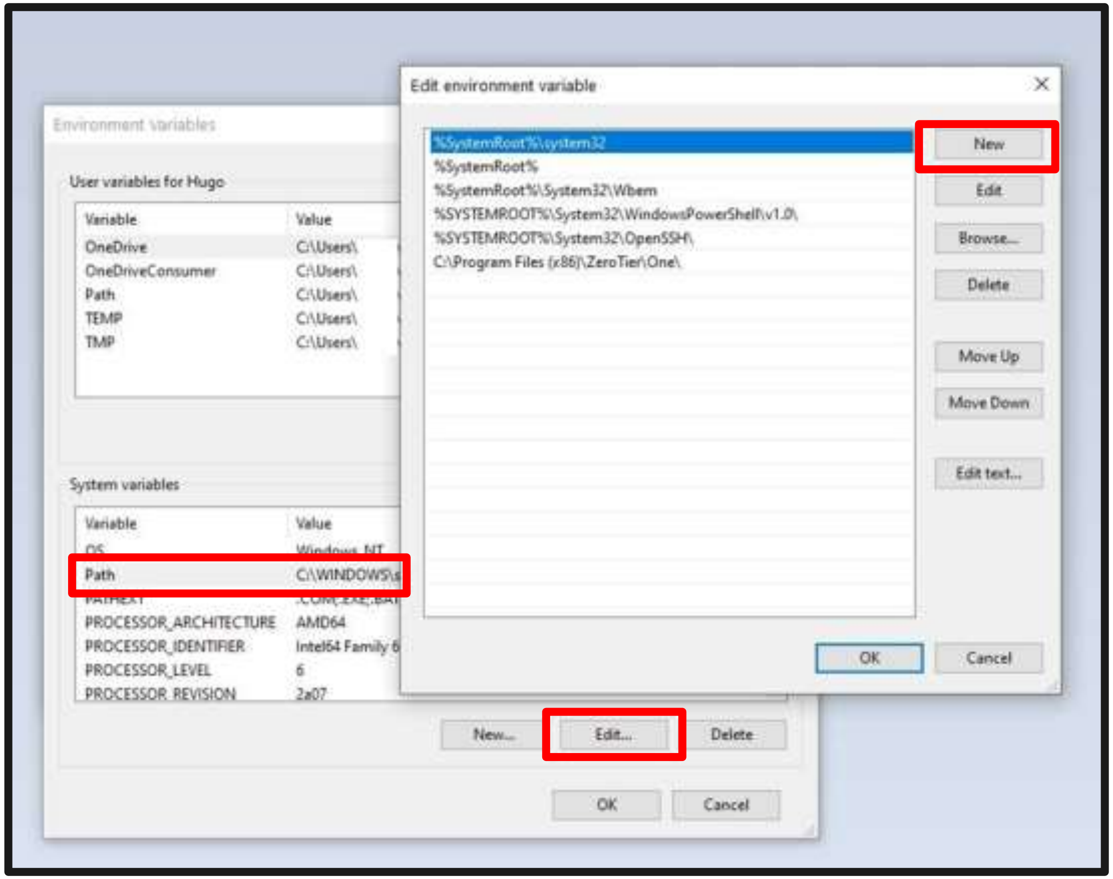
Setting Up JDK and Apache Maven

- For Windows

5. Edit “Path” system variable.

6. Add
   - %JAVA_HOME%\bin
   - %M2_HOME%\bin

7. Open Command Prompt and run “mvn –version” to verify.



User variables for Hugo

Variable	Value
OneDrive	C:\Users\
OneDriveConsumer	C:\Users\
Path	C:\Users\
TEMP	C:\Users\
TMP	C:\Users\

System variables

Variable	Value
OS	Windows_NT
Path	C:\WINDOWS\s
PATHEXT	.COM;.EXE;.BAT
PROCESSOR_ARCHITECTURE	AMD64
PROCESSOR_IDENTIFIER	Intel64 Family 6
PROCESSOR_LEVEL	6
PROCESSOR_REVISION	2a07

%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files (x86)\ZeroTier\One\

Setting Up JDK and Apache Maven

- For Linux
  1. Open Command Terminal.
  2. Set environment variable “JAVA_HOME” to the location of your JDK.
     E.g. “export JAVA_HOME=/usr/java/jdk1.8”
  3. Set environment variable “M2_HOME” to the location of your Apache Maven.
     E.g. “export M2_HOME=/usr/apache-maven-3.6.1”
  4. Run “export PATH=$PATH:$JAVA_HOME/bin: $M2_HOME/bin” to add both into environment variable named “PATH”.
  5. Run “mvn –version” to verify.

Chapter Review

- Install and set up required development tools.

Chapter 3

Checking Out Source Code

Getting And Building Joget Source Code

- Checkout the source from public mirror at GitHub at

  https://github.com/radservice/rad-community/tree/master

- Checkout using Subversion Client

  svn co https://github.com/radservice/rad-community/branches/master

- Clone using Github Client

  git clone https://github.com/radservice/rad-community.git --branch master

Chapter 4

Preparing Dependency Libraries

Install Third Party Libraries

- Unzip the “16-install-libraries.zip” or obtain it from https://docs.rads.purwana.net/RADS+Open+Source
- In the extracted folder, run "install_linux.sh" for Linux and Mac or "install_win.bat" for Windows.

Sample output

```
C:\RADS\install-libraries\install-libraries>install_win.bat
C:\RADS\install-libraries\install-libraries>./apache-ant-1.7.1/bin/ant.bat  -f  lib/setup-maven_win.xml
Buildfile: lib\setup-maven_win.xml

setup-maven:
     [exec] [INFO] Scanning for projects...
     [exec] [INFO]
 [exec] [INFO]
     [exec] [INFO] --- maven-install-plugin:2.4:install-file (default-cli) @ standalone-pom ---
     [exec] [INFO] Installing E:\Doc\Downloads\install-libraries\install-libraries\lib\sqljdbc-4.0.jar to
C:\Users\user\.m2\repository\com\microsoft\sqljdbc\4.0\sqljdbc-4.0.jar
     [exec] [INFO] ------------------------------------------------------------------------
     [exec] [INFO] BUILD SUCCESS
     [exec] [INFO] ------------------------------------------------------------------------
     [exec] [INFO] Total time: 1.035 s
     [exec] [INFO] Finished at: 2016-02-01T15:18:06+08:00
     [exec] [INFO] Final Memory: 6M/243M
     [exec] [INFO] ------------------------------------------------------------------------
     [exec] [INFO] Scanning for projects...
     [exec] [INFO]
     [exec] [INFO] Using the builder
org.apache.maven.lifecycle.internal.builder.singlethreaded.SingleThreadedBuilder with a thread count of 1
     [exec] [INFO]
     [exec] [INFO] ------------------------------------------------------------------------
     [exec] [INFO] Building Maven Stub Project (No POM) 1
     [exec] [INFO] ------------------------------------------------------------------------     [exec] [INFO] ---
maven-install-plugin:2.4:install-file (default-cli) @ standalone-pom ---
     [exec] [INFO] Installing C:\RADS\install-libraries\install-libraries\lib\ojdbc6-12.1.0.2.jar to
C:\Users\user\.m2\repository\com\oracle\ojdbc6\12.1.0.2\ojdbc6-12.1.0.2.jar
     [exec] [INFO] ------------------------------------------------------------------------
     [exec] [INFO] BUILD SUCCESS
```

Chapter 5

Building From Source

Preparing Test Database

- Before you can build the project, you will need to configure the Datasource profile to a active RADS database for the test cases to run.
- You may reuse your existing RADS's database for this purpose.
- Locate your home folder and create a “rads” folder.
  (To find out your current user folder on Windows, execute echo %HOMEPATH%)
- Copy the “rads” folder's app_datasource.properties and app_datasource-default.properties files from your existing RADS installation folder into the new “rads” folder.

Building From Source

- Navigate to /rad-app from your command prompt/terminal and execute the following:-
  mvn clean install
- A full build cycle may take up to 10 minutes to complete depending on your machine’s performance and the Internet connectivity.

Module Review

1. Introduction
2. Prepare Development Tools
3. Checking Out Source Code
4. Prepare Dependency Libraries
5. Building from Source

Recommended Further Learning

- Extend the usability of RADS by building a plugin.

Stay Connected with RADS

- rads.purwana.net
- https://github.com/radservice/rad-community