

SE 421: Atlas Installation Guide

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Atlas is a platform to build program analysis tools using an attributed graph database. For the upcoming assignments we will be using Atlas. This document will walk you through to install Atlas.

1 Install Java

Atlas is built on top of Eclipse. In order to run Eclipse, you must install Java. For this course make sure you are using *Java 11*. If you don't have Java installed, install OpenJDK 11 [1].

Note: Atlas has been tested to work up to Java 11. We don't recommend using Java 7 and older as they do not work well with newer versions of Eclipse. Java 12 and newer are known to cause problems on Windows machines. While we have not received reports of Java version problems on Linux/Mac we cannot guarantee a smooth installation for versions other than Java 11.

2 Install Eclipse

Download and Install Eclipse. For this class we will recommend Eclipse 2019 for Java EE developers. The package can be downloaded from the Eclipse website [2] (refer figure 1). While Atlas does not require you to install Java EE version, in order to complete the class assignments you need Eclipse Plug-in Development Environment which comes pre-installed with Java EE variant. If you have an existing Eclipse installation, refer to Section 2.1 to install the Eclipse plugin development environment.

Note: Atlas requires at least Eclipse Oxygen (4.7) to work properly. Latest version is 4.15. Eclipse has a 3-month release cycle. It is generally a good idea to work with a release at least 3 months old as that provides Eclipse developers ample time to fix any issues. The link in this guide is for version 4.14, which is now 5 months old.

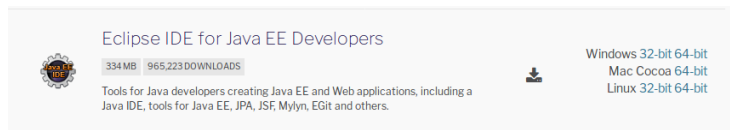


Figure 1: Install Eclipse for Java EE developers

2.1 Eclipse Plug-in Development Environment

Eclipse Plug-in Development Environment (henceforth referred as Eclipse PDE) is a set of tools to create, debug, and deploy Eclipse plug-ins. Atlas itself is an Eclipse plug-in. As part of this course, you will work with Eclipse plug-in(s). Thus, Eclipse PDE is a class requirement. Note that Atlas does not require Eclipse PDE, it will work just fine without it.

If you're not using Eclipse Java EE, then you must install Eclipse PDE separately. Following steps describe how to install Eclipse PDE.

1. Open Eclipse. Open the software installation window from the menu (Help → Install New Software)
2. Refer to figure 2. In the dialogue box *Work With* select the *Eclipse Project Updates* repository. Search for the PDE and install all the subitems under it.

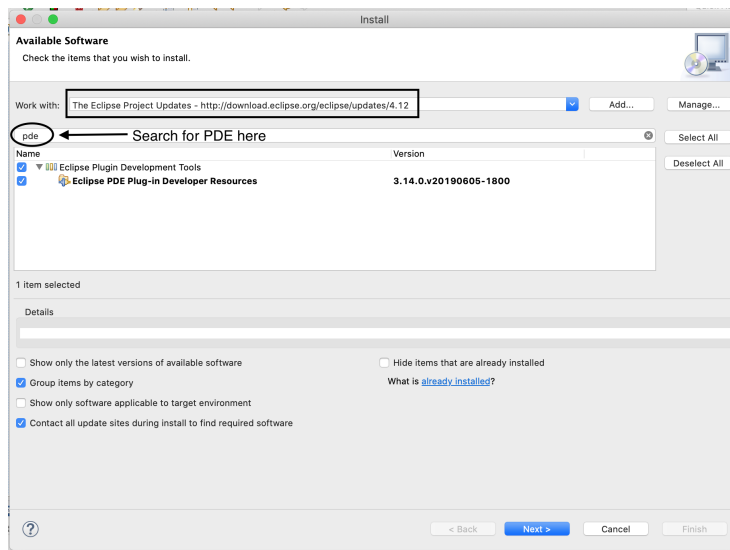


Figure 2: Eclipse Plug-in Development Environment

3 Acquire Atlas License

In order to use Atlas, you will need a license. The academic license for Atlas is freely available. Following steps describe the process to acquire the academic license

1. Go to <http://www.ensoftcorp.com/atlas/academic-license/>
2. Fill the form with your academic email id. Please choose “Other” for where you heard of Atlas and mention “KCSL Website” in the dialogue box. Enter your school information as directed.
3. Submit the form for a complimentary academic license.
4. You should receive your license key via email in a short while. It generally takes at least one business day for the license to arrive.

Refer to figure 3, if you face any difficulty.

How do you use Java or C?

I use

☒ Java
☐ C

Name *

First

Last

School Email *

Country *

United States

⌵

Username on your computer where Atlas will be used. *

I am a *

☒ Student
☐ Teaching Assistant

☐ Research Assistant
☐ Staff

☐ Faculty

Phone Number

Where did you hear about us?

☒ Class
☐ EclipseCon Europe
☐ EmbeddedWorld
☐ JavaOne
☐ YouTube
☐ Twitter
☐ Word of Mouth
☐ Other

Figure 3: Acquiring Academic License

4 Install Atlas

Once you receive your academic license, follow the steps below to install Atlas. You can install Atlas without a license but you will not be able to use it.

1. Open Eclipse. Open the software installation window from the menu (Help → Install New Software)
2. Refer to figure 4. In the dialogue box *Work With* enter `https://download.ensoftcorp.com/atlas/eclipse` and click *Add*. Enter the name “Atlas” in the pop-up window and click *Ok*.

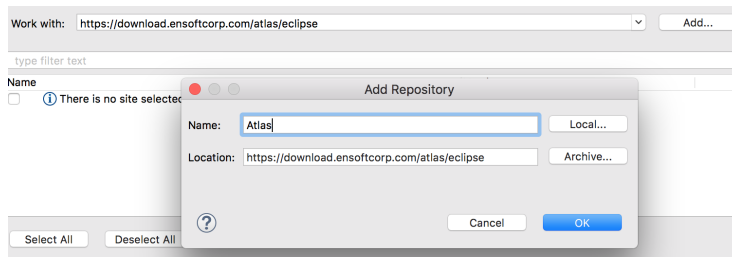


Figure 4: Add Atlas repository

3. Select *Atlas* and all the subitems checked in the figure 5. You should install the latest version of Atlas, which is 3.5.1.

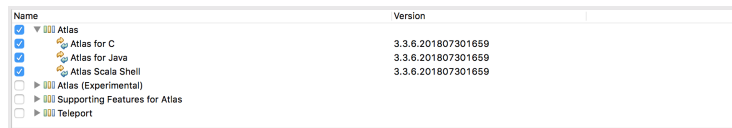


Figure 5: Installing Atlas

You may install the unchecked options in Figure 5 if you want to explore them on your own, although they are not needed for the class.

4. Restart Eclipse after the installation is finished. (You will be prompted to do so). After restarting Eclipse you should see “Atlas” in the menu as shown in figure 6. It indicates successful installation of Atlas.

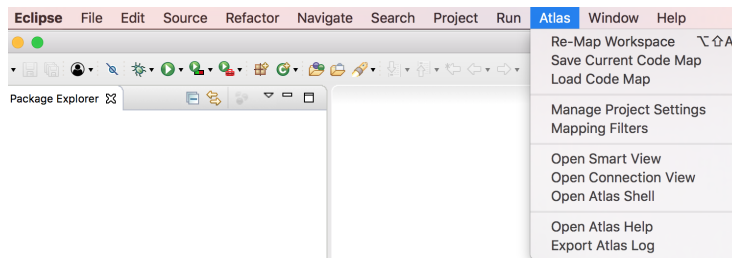


Figure 6: Atlas installed successfully!

5. Enter your license key in Atlas Preferences. Atlas Preferences Menu is accessed via *Eclipse* → *Preferences* → *Atlas* → *License*. For Linux/Windows users the preferences are located under *Window* → *Preferences* → *Atlas* → *License*. Refer to figure 7 for additional help. Make sure your system username is correctly detected by Eclipse and your email is the same as

used to acquire the Atlas license. Your Atlas installation is complete and ready to use.

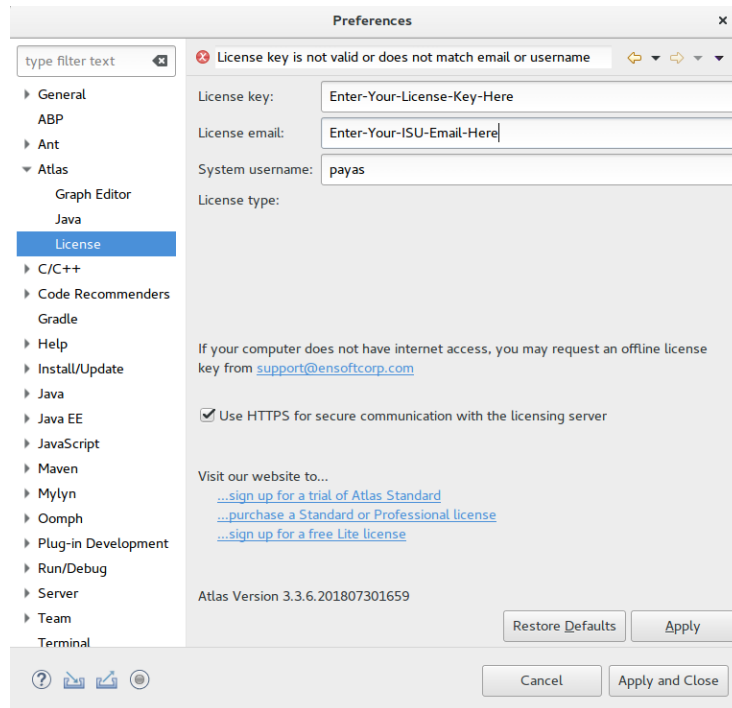


Figure 7: Enter your license key

References

- [1] <https://adoptopenjdk.net/>
- [2] <https://www.eclipse.org/downloads/packages/release/2019-12/r/eclipse-ide-enterprise-java-developers>