Configure Java environment on Windows

After installing Java Development Kit on Windows, you may still need to do some configuration to get Java ready for compiling and executing Java programs. The following instruction will guide you through the process of setting up JDK for software development.

JDK is typically installed under C:\Program Files directory. For Java 6 Update 10, its installation folder will be C:\Program Files\Java\jdk1.6.0_10. Perform the following steps to make Java tools accessible.

Click Start > Control Panel > System icon to open System Properties dialog box.

Click Advanced > Environment Variables.
Click New button in System variables panel and create JAVA_HOME and CLASSPATH variables with values as shown:
While at it, you may also want to set up and configure for Apache Ant, a tool widely used in building and executing Java applications. You may need to move and/or rename Ant's installation folder.

![New System Variable](image1.png)

Edit the **Path** variable to make the Java compiler and associated tools available by appending to its existing value the string ";%JAVA_HOME%\bin;%ANT_HOME%\bin;".

![Edit System Variable](image2.png)

You can verify the availability of Java compiler by executing the following command in the command window:

```
>javac -version
javac 1.6.0_10
```

**Setting up the path for windows 95/98/ME:**

Assuming you have installed Java in `C:\Program Files\java\jdk` directory:

- Edit the `C:\autoexec.bat` file and add the following line at the end:

  ```
  'SET PATH=\%PATH%;C:\Program Files\java\jdk\bin'
  ```

**Setting up the path for Linux, UNIX, Solaris, FreeBSD:**

Environment variable PATH should be set to point to where the Java binaries have been installed. Refer to your shell documentation if you have trouble doing this.

Example, if you use *bash* as your shell, then you would add the following line to the end of your `.bashrc` file:

```
PATH=/path/to/java:$PATH
```

*Note: Setting up other application environment
Setup Apache Ant and ANT_HOME*
Setup Apache Maven and MAVEN_HOME
Setup Subversion (version control) using Tortoise SVN
Setup Git (version control) using Git Extentions


Configure Proxies through the Java Control Panel

1. In the Java Control Panel, under the General tab, click on Network Settings.
2. Select the Use Browser Settings checkbox.
3. Click OK to save your changes.

4. Close all browser windows. Restart the browser and try to load the applet.
5. If the applet still does not load and you see the same connection error, try to configure your web browser's proxy settings.

Common Error if Proxy is not set

A common error that is seen if the proxy settings are not correct:
While application is starting, a dialog like this appears including "ClassNotFoundException"

General Exception

Name: JavaAppplication

ClassNotFoundException: JavaAppplication.class

Where is the Java Control Panel on Windows?

Find the Java Control Panel - Java 7 Update 40 (7u40) and later versions

Starting with Java 7 Update 40, you can find the Java Control Panel through the Windows Start menu.
1. Launch the Windows Start menu
2. Click on Programs
3. Find the Java program listing
4. Click Configure Java to launch the Java Control Panel

Find the Java Control Panel - Versions below 7u40

Windows 8
Use search to find the Control Panel

1. Press Windows logo key + W to open the Search charm to search settings
   OR
   Drag the Mouse pointer to the bottom-right corner of the screen, then click on the Search icon.
2. In the search box enter Java Control Panel
3. Click on Java icon to open the Java Control Panel.

Windows 7, Vista

1. Click on the Start button and then click on the Control Panel option.
2. In the Control Panel Search enter Java Control Panel.
3. Click on the Java icon to open the Java Control Panel.

Windows XP

1. Click on the Start button and then click on the Control Panel option.
2. Double click on the Java icon to open the Java Control Panel.
Alternate method of launching Java Control Panel

- Click Windows Start button.
- In the Start Search box, type:
  Windows 32-bit OS: c:\Program Files\Java\jre7\bin\javacpl.exe
  Windows 64-bit OS: c:\Program Files (x86)\Java\jre7\bin\javacpl.exe

Where is the Java Control Panel on my Mac?

Find the Java Control Panel on Mac

Launch the Java Control Panel on Mac OS X (10.7.3 and above)

1. Click on Apple icon on upper left of screen.
2. Go to System Preferences
3. Click on the Java icon to access the Java Control Panel.

Java Control Panel

The Control Panel allows you to find information about Java version and configure various settings to help you efficiently run Java on your Mac.

General

- About Java: View information about the Java version
- Network Settings: By default, Java will use the network settings in your web browser. You can set preferences including proxy servers in this setting.
- Temporary Internet Files: Files used in Java applications are stored in a special folder, called a cache, for quick execution later. You can view and configure cache files, settings, including file location, as well as delete cache from this setting.

Update

Allows you to check for and get the latest available Java version and configure whether you want to automatically update. For more information visit How do I update Java for my Mac?

Java

Java Runtime Environment Settings: View and manage Java Runtime versions and setting for Java applications and applets.

Security

You can set the security level from within the Java Control Panel so that you are notified before any untrusted Java applications will be run, or the application will automatically be blocked. For detailed information visit Security levels in Java Control Panel.
Advanced

- **Debugging**: Allows you to enable tracing, logging and show applet lifecycle exceptions.
- **Java console**: Allows you to show hide or disable the Java console
- **Shortcut Creation**: Allows you to allow apps or the user to create or disable shortcut creation.
- **JNLP File/MIME Associations**: Allows, disables or prompts user for file associations.
- **Application Installation**: You can enable or disable app installations in this setting.
- **Security**: Allows you to configure various settings related to security such as grant permissions to content, alert users about site certificates, enable trusted publishers and blacklist revocation checks, use specific SSL and TLS versions, as well as configure mixed code security verification settings.
- **Miscellaneous**: You can configure whether to place a Java icon in the system tray under this setting.

How do I enable Java in my web browser?

**Applies to Platform(s):** Macintosh OS X, Windows 2000, Windows 2003, Windows 7, Windows XP

**Browsers for Windows**

**Internet Explorer**
1. Click **Tools** and then **Internet Options**
2. Select the **Security** tab, and select the **Custom Level** button
3. Scroll down to **Scripting of Java applets**
4. Make sure the **Enable** radio button is checked
5. Click **OK** to save your preference

**Chrome**
1. Enter **about:plugins** in the search field.
2. In the Plug-ins list, look for **Java** and check whether Java is enabled (if the Disable link appears, Java is already enabled)
3. Click on the **Enable** link (if available)
4. (Optional) Check the **Always allowed** box to stop additional Chrome warnings when running Java content

**Browsers for Windows and Mac OS X**

**Firefox**
1. Open the Firefox browser or restart it, if it is already running
2. From the Firefox menu, select **Tools**, then click the **Add-ons** option
3. In the Add-ons Manager window, select **Plugins**
4. Click **Java (TM) Platform** plugin (Windows) or **Java Applet Plug-in** (Mac OS X) to select it
5. Check that the option selected is **Ask to Activate** or **Always Activate** or on older Firefox versions, click on the **Enable** button (if the button says **Disable**, Java is already enabled)

**Safari**
1. Click on Safari and select **Preferences**
2. Choose the **Security** option
3. Select **Allow Plug-ins**, then click on **Manage Website Settings**
4. Click on the Java item, select an option (Ask, Allow or Allow Always) from the pulldown list **When visiting other websites**
5. Click **Done**, then close the Safari Preferences window
Opera 4.x and Up

1. Opera for Windows does not use Java, but an embedded version already inside the Opera Web browser.
2. Opera for other platforms may support Java. Please consult your Opera platform documentation.
3. For further information, please review the following Opera Support article: Support for Java software in Opera

How do I control when an untrusted applet or application runs in my web browser?

Java 7u10 introduced the ability to manage when and how untrusted Java applications (i.e. an application that is digitally signed by an unknown publisher, or a certificate that has not been issued by a trusted Certificate Authority) will run if they are included on a web page. Setting the security level within the Java Control Panel will determine whether

1. You are prompted before an untrusted java application is run (MEDIUM or HIGH) or
2. Untrusted Java applications will be blocked so they cannot run (VERY HIGH).

Starting with Java 7 Update 51, applets that do not conform with the latest security practices can still be authorized to run by including the sites that host them to the Exception Site List.

Starting with Java 8 Update 20, the Medium security level has been removed from the Java Control Panel. Only High and Very High levels are available.

The exception site list provides users with the option of allowing the same applets that would have been allowed by selecting the Medium option but on a site-by-site basis therefore minimizing the risk of using more permissive settings.
About
View version information about Java Control Panel.

Network Settings
Network settings are used when making Internet connections. By default, Java will use the network settings in your web browser. Only advanced users should modify these settings.

Temporary Internet Files
Files you use in Java applications are stored in a special folder for quick execution later. Only advanced users should delete files or modify these settings.

Java in the browser is enabled. See the Security tab.

The Java Update mechanism ensures you have the most updated version of the Java platform. The options below let you control how updates are obtained and applied.

Notify Me: Before downloading

Check for Updates Automatically

Java Update will check for updates at least once a week on Sunday at 12:00 AM. If an update is recommended, an icon will appear in the system taskbar notification area. Move the cursor over the icon to see the status of the update. You will be notified before the update is downloaded.

Typically, you will be notified of the update within a month of its release. However, if an update is considered critical, you will be notified within a week of its release.

Java Update was last run at 12:15 PM on 28/12/14.
Edit site settings
Security levels in the Java Control Panel

Very High
This is the most restrictive security level setting. All the applications that are signed with a valid certificate and include the Permissions attribute in the manifest for the main JAR file are allowed to run with security prompts. All other applications are blocked.

High
This is the minimum recommended (and default) security level setting. Applications that are signed with a valid or expired certificate and include the Permissions attribute in the manifest for the main JAR file are allowed to run with security prompts. Applications are also allowed to run with security prompts when the revocation status of the certificate cannot be checked. All other applications are blocked.

Medium (removed from Java 8 Update 20 and later versions)
Only unsigned applications that request all permissions are blocked. All other applications are allowed to run with security prompts. Selecting the Medium security level is not recommended and will make your computer more vulnerable should you run a malicious application.