## **ENVIRONMENT SETUP (React Native CLI)**

### **1.1 Choose Your OS Path**

The setup process differs slightly based on OS:

| OS | Recommended for | Notes |
| --- | --- | --- |
| macOS | iOS + Android development | Only way to build iOS apps |
| Windows | Android-only development | iOS build not supported locally |
| Linux | Android-only development | Stable and lightweight for dev |

### **1.2 Install Node.js (LTS)**

React Native CLI works best with Node LTS (not the latest experimental release).

#### **Step: Install using NVM (Node Version Manager)**

This avoids version conflicts and makes upgrades easy.

# Download Node.js®

# Download and install nvm:

curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.40.3/install.sh | bash

# in lieu of restarting the shell

\. "$HOME/.nvm/nvm.sh"

# Download and install Node.js:

nvm install 22

# Verify the Node.js version:

node -v # Should print "v22.18.0".

nvm current # Should print "v22.18.0".

# Verify npm version:

npm -v # Should print "10.9.3".

# Use Node LTS:

nvm use 22 #

### **1.3 Install Yarn**

Yarn is recommended for RN CLI dependency management.

npm install --global yarn

### **1.4 Install Java Development Kit (JDK)**

React Native Android builds require Java.

#### **Recommended: Java 17** (Java 8 still works but is aging)

# Linux

sudo apt install openjdk-17-jdk

# macOS (Homebrew)

brew install openjdk@17

# Windows

Download from: <https://adoptium.net/>

java -version

### **1.5 Install Android Studio**

1. Download: https://developer.android.com/studio
2. Install Android SDK 33 or 34 (matching RN docs version)
3. Install Android SDK Platform-Tools and Android SDK Build-Tools in SDK Manager
4. Enable USB debugging if you’ll run on a real device

### **1.6 Set Android Environment Variables**

Add these lines to your shell config:

# macOS / Linux

export ANDROID\_HOME=$HOME/Android/Sdk

export PATH=$ANDROID\_HOME/emulator:$ANDROID\_HOME/platform-tools:$PATH

Windows:

* Search "Environment Variables"
* Add:
  + ANDROID\_HOME → C:\Users\<YourName>\AppData\Local\Android\Sdk
  + Add to PATH:

%ANDROID\_HOME%\platform-tools

%ANDROID\_HOME%\emulator

1.7 (macOS only) Install Cocoapods for iOS

sudo gem install cocoapods

1.8 Install Watchman (macOS/Linux only)

# macOS

brew install watchman

# Linux

sudo apt install watchman

1.9 Verify Everything with React Native Doctor

npx react-native doctor

✅ At the end, you have:

* Node LTS installed & version-managed
* Yarn ready
* Java 17 for Android builds
* Android Studio with correct SDKs
* Cocoapods (macOS only)
* Watchman for faster reloads
* Environment variables set
* Verified setup with npx react-native doctor