

Titanium Compatibility Matrix

This page will be redirected to [\\$paramURL](#) in 10 seconds.

Overview

This document describes the system environments that are currently compatible with Titanium. Only components explicitly listed are supported. Thus, no support is provided for any that have been omitted, or that fall outside of the min/max version ranges shown.

Table of Contents

Pre-release Versions

Be aware that any components notated as *Pre-release* are not yet officially supported.

Minimum System Requirements

Memory

Product	Host Operating System	RAM
Titanium Studio	All	1GB (contiguous)
Latest Android SDK	OS X	1.5GB (contiguous)
Latest Android SDK	Windows	1GB (contiguous)
Latest Android SDK	Ubuntu	1.5GB (contiguous)

As a general rule, 2 to 3GB RAM is usually adequate to run the whole Titanium environment.

Operating System


Titanium is only supported when run on the following Operating Systems:

Operating System	Min Version	Max Version
Apple Mac OS X	10.6.X (Snow Leopard)	10.7 (Lion)
Windows XP (all editions, except Starter Edition)	Service Pack 3	Latest
Windows 7	All	Latest
Ubuntu Linux	10.04 LTS (Lucid Lynx)	11.10 (Oneiric Ocelot)

 Windows Vista, NT, 98 and 95 are not supported.

Java Development Kit

In order to work with Titanium, it is necessary to install Oracle's Java Development Kit (JDK). This is because it is a prerequisite for Android development, and its subcomponent, the Java Runtime Environment (JRE), is required to run Titanium Studio.

 Be aware that no other flavors of JDK, such as OpenJDK, currently work with Titanium; only Oracle's will suffice.

Titanium supports the following versions of JDK for each respective Operating System:



Operating System	Min JDK Version	Max JDK Version	Package Arch Version	Download Location	Notes
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OSX	6 (aka 1.6) rev 10	6 latest revision	32bit and 64bit	Pre-installed	
Windows	6 (aka 1.6) rev 10	6 latest revision	32bit only (x86 / i586)	Official Website	
Ubuntu	6 (aka 1.6) rev 10	6 latest revision	32bit and 64bit	Canonical Archive Repository	Repository is configured by default but must be enabled. If using 64bit JDK, the <code>ia32-libs</code> package is required

Obtain Oracle JDK from the download locations shown above.

See [Installing Oracle JDK](#) for detailed instructions.

Titanium Studio

Titanium Studio is a Java application, and so needs to have the Oracle Java Runtime Environment (JRE) installed. As JRE is a component of Oracle's Java Development Kit (JDK), and JDK is a prerequisite for Android development, we recommend that JDK be installed on all systems working with Titanium. Refer to the [Java Development Kit](#) section of this document.

It is advisable to use the latest stable version of Titanium Studio, which can be downloaded from your account, once you have [registered](#).

See [2. Getting Started with Titanium Studio](#) for detailed instructions.

Mobile Development

Titanium can provide a development environment for third-party mobile platforms where a Software Development Kit (SDK) has been made available by the platform vendor. With this in mind, development with the following combinations of Operating Systems and SDKs are possible:

Operating System	Android Development	iOS Development	Notes
Apple Mac OS X	✓	✓	Due to Apple's license agreement, iOS applications may only be developed on Apple hardware
Windows	✓	✗	
Ubuntu	✓	✗	

Android

Android SDK Manager

Titanium requires the Android SDK to be installed in order to allow you to develop Android applications. Unless you intend to write applications exclusively for Apple products, you should install this component.



Remember that Oracle JDK is a prerequisite for Android development, and so should be installed first. See [Installing Oracle JDK](#) for instructions.



The *Android SDK Manager* installer may be obtained from the [Official Website](#)

See [Installing and Updating Android SDK](#) for detailed instructions.

Prerequisite Android Packages

The following packages, and the respective versions shown, must be installed to be able to develop for Android:

Package	Version
Android SDK Tools	Rev 16
Android SDK Platform-tools	Rev 10



Take caution before upgrading these packages, as changes to the way they work has broken the Titanium toolchain a number of times in the past. Although these problems are often beyond our control, we always do our utmost to fix them as soon as we are made aware of them.

With this in mind, it's important to only upgrade these packages *between* major projects, so that you have time to fix any problems that may result. Always consult the Android Tools [Release Notes](#) and [Known Issues](#) first, and refer to our [Installation Troubleshooting](#) guide

to check whether there are any further actions that need to be taken to make the Titanium and the Android SDK compatible.

Prerequisite Android SDK / API

Each Titanium Mobile SDK version compiles applications using a specific Android API, and thus the relevant Android SDK must be installed, as follows:

Titanium Mobile SDK Version	Required SDK / API Package
1.8.X	SDK Platform Android 2.2-updatex, API 8, rev y
1.8.0.1	SDK Platform Android 2.2-updatex, API 8, rev y
1.7.X	SDK Platform Android 2.1-updatex, API 7, rev y
1.6.X	SDK Platform Android 1.6, API 4, rev x
1.5.X	SDK Platform Android 1.6, API 4, rev x
1.4.X	SDK Platform Android 1.6, API 4, rev x

Android SDK / Target Android Platform

In order to test applications on a virtual device running a specific Android version (the target), the appropriate Android SDK must be installed. Each Titanium Mobile SDK supports a specific range of Android versions, as shown in the following table.

Titanium Mobile SDK Version	Min Android/SDK Version	Max Android/SDK Version
1.8.X	2.2 (API 7)	3.X.X (API 11)
1.8.0.1	2.2 (API 7)	3.X.X (API 11)
1.7.4 - 1.7.5	2.1 (API 7)	3.X.X (API 11)
1.7.2 - 1.7.3	2.1 (API 7)	3.0.X (API 11)
1.7.0 - 1.7.1	2.1 (API 7)	2.3.X (API 10) [partial support for 3.0]
1.6.X	1.6 (API 4)	2.3.X (API 10)
1.5.X	1.6 (API 4)	2.2.X (API 8)
1.4.X	1.6 (API 4)	2.2.X (API 8)



Due to [this Android bug](#), webViews created on a virtual device running Android 2.3.X cause applications to behave erratically and crash. Thus, if developing on an emulator, it is recommended to use one of the other supported versions (Android 2.2, for instance). In contrast, applications that include webViews run as expected on (physical) devices installed with Android 2.3.2+. Note that Google has pronounced 2.3.1 obsolete and, as such, it is not supported.



Titanium Studio will notify you of any official Titanium SDK releases missing from your system, and allow you to install them simply by clicking a banner. After restarting Studio, they can be selected by opening the `tiapp.xml` file in the root of the project with the TiApp Editor.

Android SDKs can be installed using the **Android SDK Manager** tool. The default Android SDK can then be configured using Titanium Studio's *Preferences*, and then selected per-project using the *Run Configurations*.

Bear in mind that you must have suitable filesystem permissions in order to successfully complete either of these types of installation.



Most mobile device manufacturers have been licensed to use Google's enhanced API, which provides additional support for Maps and other functionality. If this is the case for your target devices, you will need to install the relevant Google packages, listed as *Google APIs by Google Inc., Android API x...* by the **Android SDK Manager** tool. On Titanium Studio's *Preferences* screen, choose the SDKs with the naming format "APIs x.x" to use the enhanced APIs, or those without the "APIs" prefix otherwise.

Titanium SDK Minimum Memory

The Java Virtual Machine (JVM) that Titanium uses for Titanium Studio and Android development requires exclusive access to a certain amount of system memory in order to function. This is known as "heap memory", and Java insists that it is created in a contiguous, uninterrupted, block of address space.





You can find out about Java's contiguous heap memory needs, and why it is not a Titanium-specific concern, in the StackOverflow thread, [Understanding max JVM heap size - 32bit vs 64bit](#). Note that 32bit Windows XP systems are particularly susceptible to these issues.

Thus, the minimum contiguous memory requirement for each Titanium SDK release is as follows:

Titanium Mobile SDK Version	Min Contiguous Memory
1.8.X	1GB (Windows) / 1.5GB (Other)
1.7.X	1GB (Windows) / 1.5GB (Other)
1.6.X	1GB
1.5.X	1GB
1.4.X	512

iOS

Xcode

To develop for iOS, Titanium requires Apple's Xcode suite of tools.

Each Titanium Mobile SDK supports a specific range of Xcode versions, shown in the table below.

Titanium Mobile SDK Version	Min Xcode Version	Max Xcode Version	Notes
1.8.X	4.2	4.2	
1.8.0.1	4.2	4.2	
1.7.X	3.2.6	4.2	Deploying for iOS5 requires 4.2
1.7.0 - 1.7.3	3.2.6	4.1	
1.6.1+	3.2.0	4.1	
1.6.0	3.2.0	3.2.X	
1.5.X	3.2.0	3.2.X	

iOS SDK / Target iOS Platform

In order to test applications for a specific iOS version (the target), the appropriate iOS SDK must be installed. Each Titanium Mobile SDK supports a specific range of iOS versions, as shown in the table below.

Titanium Mobile SDK Version	Min iOS/SDK Version	Max iOS/SDK Version
1.8.X	4.0.X	5.0.X
1.8.0.1	4.0.X	5.0.X
1.7.4	3.1.2	5.0.X
1.7.X	3.1.2	4.3.X
1.6.1+	3.1.0	4.3
1.6.0	3.1.0	4.2
1.5.X	3.1.0	4.1


Desktop Development

Target OS Platform

Titanium may be used to develop applications for various desktop Operating Systems. Each Titanium Desktop SDK supports a specific range of target systems, shown in the following table.

Titanium Desktop SDK Version	OS X	Windows	Ubuntu
1.1.0	10.5	XP SP3, Vista, 7	9.10 - 10.04



 Applications created using Titanium Desktop support Intel processors only.

Other Useful Software

Git

Git is the optional, but **highly recommended**, way of obtaining and staying up-to-date with the latest Titanium projects located in our [Github repository](#).

Obtain the version that pertains to your particular Operating System from the link provided:



Operating System	Package Name	Package Version	Download Location
OSX	git	Latest	Official Website
Windows	msysgit	Latest	Official Website
Ubuntu	git	Latest	Default Repositories

See [Installing Git](#) for detailed instructions.

Python

Unless you intend to either use Titanium from the command line or compile the SDK from source using SCons, then [Python](#) is an **optional** component.

Titanium supports the following versions of Python for each respective Operating System:



Operating System	Package Version	Package Architecture Version	Download Location
OSX	2.X.X (currently, 2.7.X)	32bit and 64bit	Installed on OS by default
Windows	2.X.X (currently, 2.7.X)	32bit only	Official Python Website
Ubuntu	2.X.X (currently, 2.7.X)	32bit and 64bit	Default Repositories

Download the installer from the applicable download location above.

See [Installing Python](#) for detailed instructions.

Python setuptools

Python's `setuptools` can be installed from the following locations:



Operating System	Package Version	Package Architecture Version	Download Location
OSX	Latest version compatible with installed Python version	32bit and 64bit	Installed on OS by default
Windows	Latest version compatible with installed Python version	32bit only	Official setuptools Website
Ubuntu	Latest version compatible with installed Python version	32bit and 64bit	Default Repositories

See [Installing Python setuptools](#) for detailed instructions.

SCons

SCons (Software Construction tool) is a build tool, similar to the classic `make` utility, that is used to compile source code such as `titanium_mobile`. Hence, unless you intend to build Titanium SDKs from source, this package is not mandatory for working with Titanium.



Remember that Python is a prerequisite for SCons, and so should be installed first. See [Installing Python](#) for instructions.

Obtain the SCons version listed below for your Operating System:



Operating System	Package Version	Download Location
OSX	Latest Stable	Official Website
Windows	Latest Stable	Official Website
Ubuntu	Latest Stable	Default Repositories

See [Installing SCons](#) for detailed instructions.