Atitit 性能提升 异步futuretask 回调 的实现 guava ListenableFuture

# 接口

传统JDK中的Future通过异步的方式计算返回结果:在多线程运算中可能或者可能在没有结束返回结果，Future是运行中的多线程的一个引用句柄，确保在服务执行返回一个Result。

ListenableFuture可以允许你注册回调方法(callbacks)，在运算（多线程执行）完成的时候进行调用,  或者在运算（多线程执行）完成后立即执行。这样简单的改进，使得可以明显的支持更多的操作，这样的功能在JDK concurrent中的Future是不支持的。

ListenableFuture 中的基础方法是[addListener(Runnable, Executor)](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/ListenableFuture.html" \l "addListener(java.lang.Runnable, java.util.concurrent.Executor)), 该方法会在多线程运算完的时候，指定的Runnable参数传入的对象会被指定的Executor执行。

# 添加回调（Callbacks）

多数用户喜欢使用 [Futures.addCallback(ListenableFuture<V>, FutureCallback<V>, Executor)](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/Futures.html" \l "addCallback(com.google.common.util.concurrent.ListenableFuture, com.google.common.util.concurrent.FutureCallback, java.util.concurrent.Executor))的方式, 或者 另外一个版本[version](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/Futures.html" \l "addCallback(com.google.common.util.concurrent.ListenableFuture, com.google.common.util.concurrent.FutureCallback))（译者注：[addCallback](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/src-html/com/google/common/util/concurrent/Futures.html" \l "line.1106)([ListenableFuture](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/ListenableFuture.html" \o "interface in com.google.common.util.concurrent)<V> future,[FutureCallback](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/FutureCallback.html" \o "interface in com.google.common.util.concurrent)<? super V> callback)），默认是采用 MoreExecutors.sameThreadExecutor()线程池, 为了简化使用，Callback采用轻量级的设计.  [FutureCallback<V>](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/FutureCallback.html) 中实现了两个方法:

* [onSuccess(V)](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/FutureCallback.html" \l "onSuccess(V)),在Future成功的时候执行，根据Future结果来判断。
* [onFailure(Throwable)](http://docs.guava-libraries.googlecode.com/git-history/release/javadoc/com/google/common/util/concurrent/FutureCallback.html" \l "onFailure(java.lang.Throwable)), 在Future失败的时候执行，根据Future结果来判断。