

Retrying Failed Tests

In this topic, we will see how to trigger the failed tests.

WE'LL COVER THE FOLLOWING



- Manually re-running failed tests
- Programmatically re-running failed tests

Manually re-running failed tests

At the end of the test suite run, by default, *testng-failed.xml* is created in the output directory containing only the *failed* tests. We can run this test suite to rerun only the failed tests.

Programmatically re-running failed tests

To programmatically trigger the failed tests right after the tests fail, we can use `IRetryAnalyzer`. Implementation of the `SampleRetryAnalyzer` needs to be added to test methods to enable this.

```
import org.testng.IRetryAnalyzer;
import org.testng.ITestResult;

public class SampleRetryAnalyzer implements IRetryAnalyzer {

    private int retryCount = 0;
    private static final int maxRetryCount = 2;

    @Override
    public boolean retry(ITestResult result) {
        if (retryCount < maxRetryCount) {
            retryCount++;
            return true;
        }
        return false;
    }
}
```

```
}
```

The above code snippet is to tell TestNG how many times the retrying of failed tests should be attempted. This implementation requires adding

`@Test(retryAnalyzer = SampleRetryAnalyzer.class)` to every test method.

```
import org.testng.Assert;
import org.testng.annotations.Test;

public class SampleTestClass {

    @Test(retryAnalyzer = SampleRetryAnalyzer.class)
    public void testMethod() {
        Assert.fail();
    }
}
```

To avoid this repetition and make this globally applicable for all the test methods, we can make sure of `IAnnotationTransformer` listener of TestNG as:

```
public class RetryListener implements IAnnotationTransformer {

    public void transform( ITestAnnotation annotation, Class testClass, Constructor testConstructor, Method testMethod ) {
        annotation.setRetryAnalyzer(SampleRetryAnalyzer.class);
    }

}
```

And this listener needs to be added in the test class like

`@Listeners(SampleRetryAnalyzer.class)` or in *testng.xml* as:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">
<suite name="Sample Test Suite" parallel="tests" thread-count="5">
    <listeners>
        <listener class-name="com.example.SampleRetryAnalyzer" />
    </listeners>
    <test name="Sample Test">
        ...
    </test>
</suite>
```

That is how the failed tests can be tried again. In the next lesson, you will learn how to make your own annotations.