



# **Nightshade Framework Testing Computer Setup (Windows)**

**Melissa Tondi**

**Brian Kitchener**

**Roland Burrows**

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# Nightshade Framework Overview

## Framework Summary

Nightshade is a C# Eggplant Test Runner, built in Visual Studio 2012 with .Net 4.0. Specifically, it's built on top of Gallio and MbUnit. MbUnit is a unit testing framework similar to NUnit, but with more advanced features for UI automation. Gallio is a unit test runner that contains advanced reporting along with both GUI and Command line execution. In addition, tests can be executed from Visual Studio using the TestDriven.net plugin.

## The problem that the Framework solves

Motorola desired the ability to run a 100 hour long multi-device stability test against a number of different mobile devices and operating systems using Testplant's Eggplant automation tool. However, the Eggplant GUI and scripting language SenseTalk is limited in its ability to execute these types of tests for the reasons outlined below:

- Memory Issues - Eggplant Runs out of memory around 40 hours in.
- Multi Device Support - The Eggplant GUI offers only basic multi device testing and didn't support the scope, complexity, and robustness required by Motorola.
- SenseTalk scripting limitations. Have to learn a new scripting language, and are required to work around its limitations was time consuming. Resulting code was difficult to reuse.
- Code reusability - Reusable code is hard to create and maintain in SenseTalk, but it's much easier in a strongly typed language like C# using the Page Object design pattern.
- Controlling test execution from outside of Eggplant allows us to customize and stabilize Eggplant to Motorola's needs.

## Framework Execution

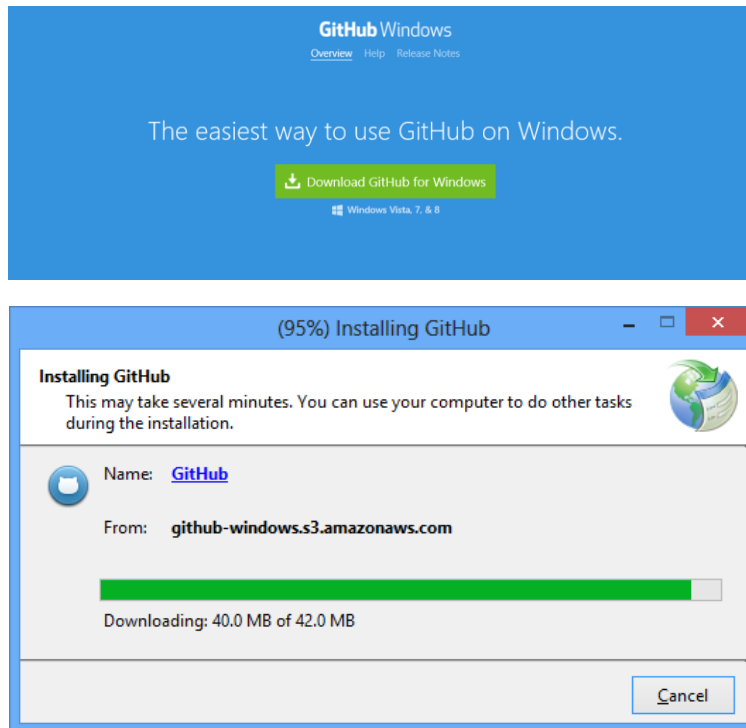
Nightshade requires .Net 4.0, Gallio version 3.14, Visual Studio 2012 or later, and Eggplant installed on the local machine with a valid license. Nightshade launches Eggplant Drive as a java jar, and communicates to it via an XmlRpc service. The Nightshade runner connects to the devices using an IP address, so the devices must be reachable via the IP addresses supplied in the config file. All test settings are configurable either in the App.config file or by setting the properties in the Config class.

Nightshade is built using multiple layers of abstraction. This is to organize and categorize where information lives to help maximize code reuse. Fundamentally, all code comes down to a series of conditions. We want to avoid having a giant series of nested if statements, as debugging and maintaining that code isn't realistic.

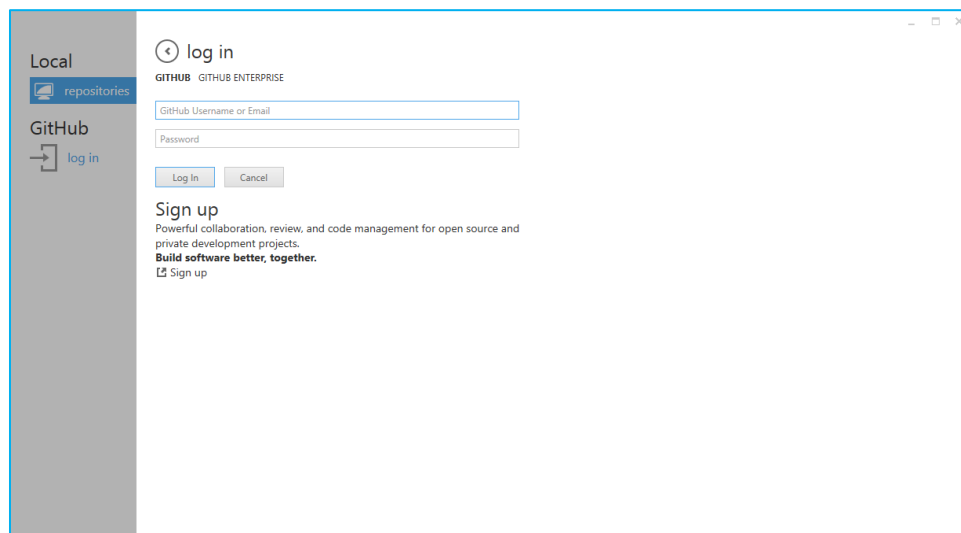
# Github for Windows – Setup Notes

## Github UI – The Power of Github without hassle of the Command Line

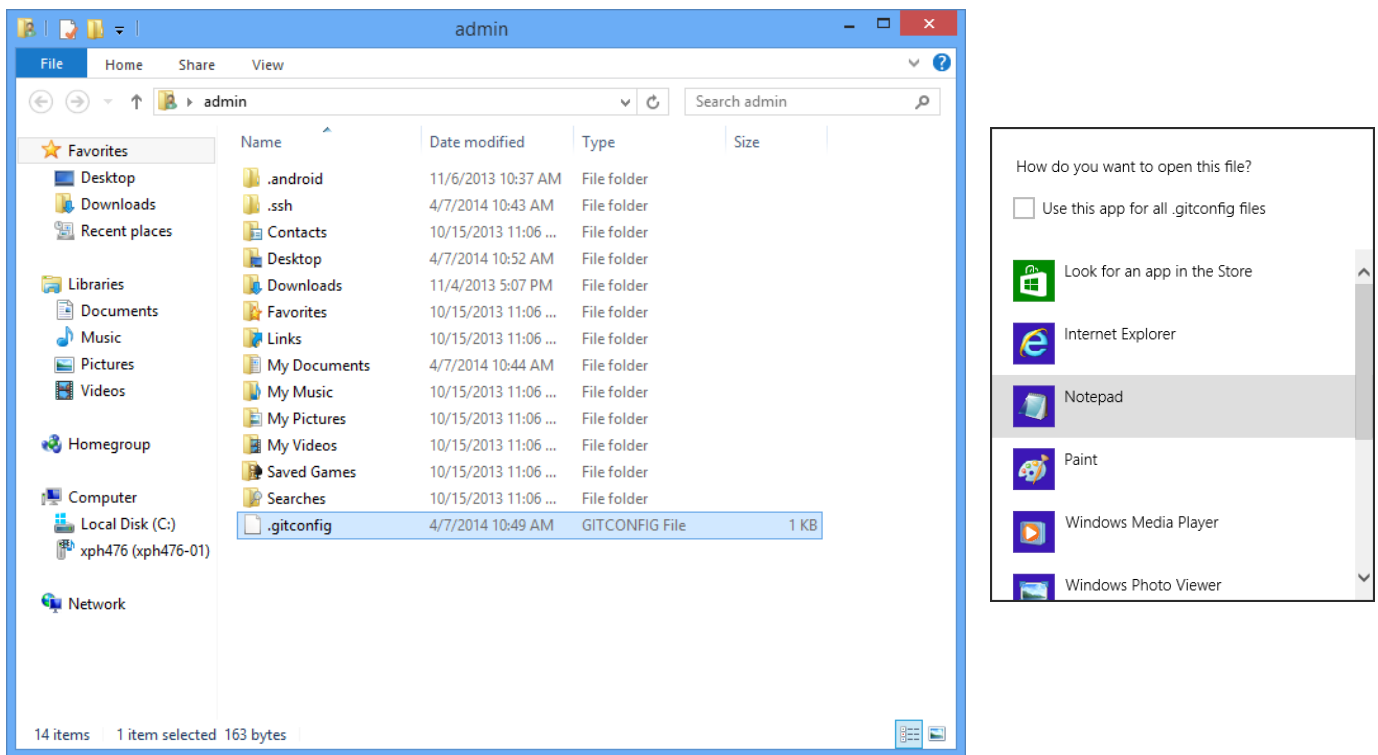
1. [Download the application.](#)



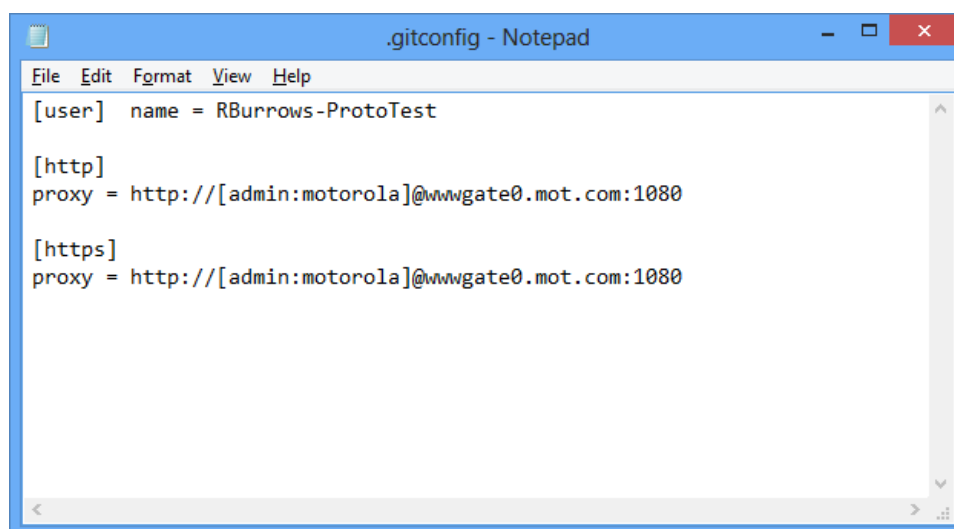
2. Log into a Github account that is subscribed to the private ProtoTest.Nightshade github repository.



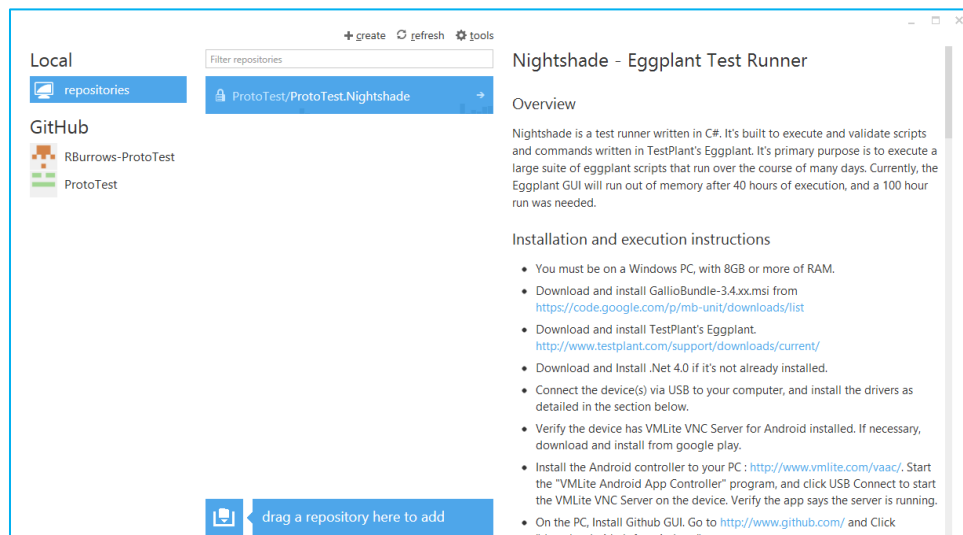
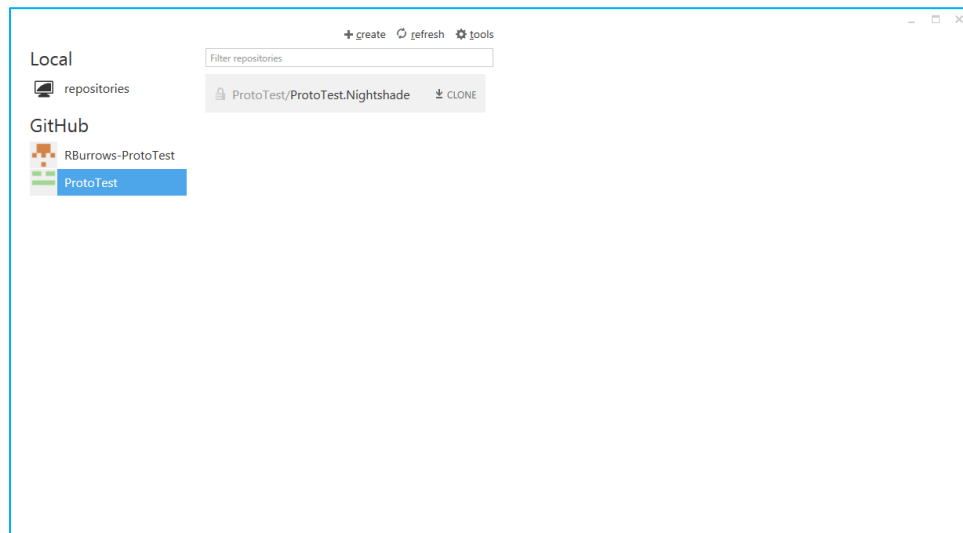
3. If testing computer's internet connection is through a Motorola network that utilizes a proxy, that proxy will have to be declared in the Github application. Navigate to the computer's .gitconfig file. Open with Notepad.



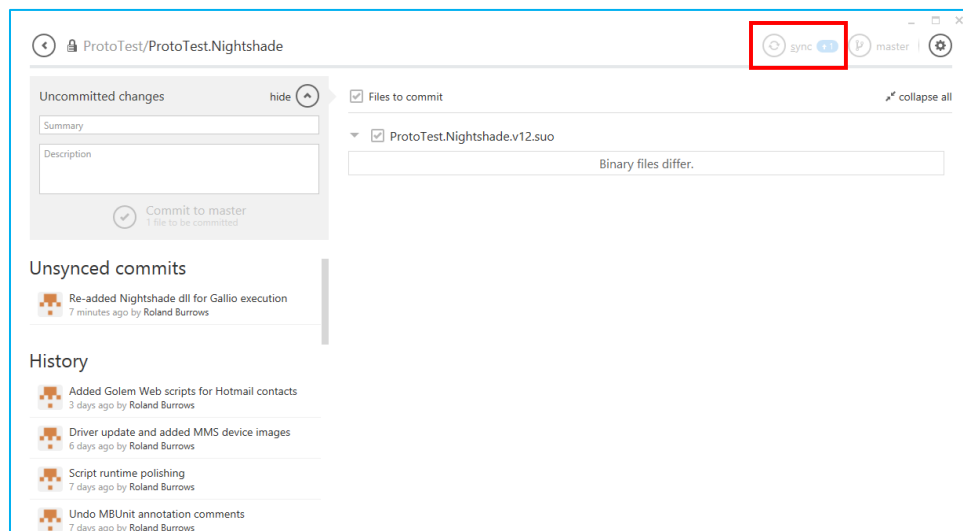
4. Configure the file as shown (or use appropriate proxy information):



## 5. Clone the ProtoTest.Nightshade code repository.



## 6. If a commit has been made by a ProtoTest or Motorola engineer, the “sync” icon will indicate how many commits the local clone is behind by.



## About ProtoTest

Since 1998, ProtoTest has helped clients test software to ensure a positive user experience. Our Denver mobile app test lab is equipped with a collection of virtual and physical smartphones and tablets, including popular models from Apple, Samsung, HTC, LG, Motorola, Amazon, and more. The ProtoTest lab is staffed with experts skilled in functional and performance test automation with leading commercial and open source tools. Our staffing practice draws from a diverse talent community to fill contract, contract-to-hire, and direct-hire openings for testing professionals and other roles in the software lifecycle. ProtoTest's clients include industry leaders such as DigitalGlobe, Pearson, Covidien, and MyForce. For more information, please visit [ProtoTest.com](https://ProtoTest.com).