# StarCraft AI Testing

## Environment Configuration

These are steps for setting up a computer or virtual machine to run a bot using the BWAPI with the BWAM automation scripts. You will need to do this on at least two computers to play bots against each other.

1. Install Windows OS
2. Install 7Zip (<http://www.7-zip.org/>)
3. Install StarCraft in the default location
4. Install StarCraft: Brood War in the default location
5. Upgrade StarCraft: Brood War to version 1.16.1 through battle.net or downloading the patch from Blizzard (<http://us.battle.net/support/en/article/starcraft-patch-information>)
6. Follow steps provided by Blizzard to run StarCraft with no CD
   1. Make sure you have "Hide extensions for known types" unchecked under Explorer Folder Options
   2. If you own StarCraft: Brood War, copy "INSTALL.EXE" from the StarCraft: Brood War CD to your StarCraft folder and rename it to "BroodWar.mpq"
7. Install Visual Studio 2008 SP1 or VS 2008 SP1 redistributable
   1. If you are installing Visual Studio 2008
      1. Install in default location
   2. If you are installing VS 2008 SP1 redistributable
      1. Install with default options from Microsoft (<http://www.microsoft.com/en-us/download/details.aspx?id=5582>)
      2. Rename this file so that Chaoslauncher doesn’t try to load the debug plugin

“C:\Program Files\Chaoslauncher\BWAPI\_ChaosLauncherInjectord.bwl”

To

“C:\Program Files\Chaoslauncher\BWAPI\_ChaosLauncherInjectord.bwl.hide”

1. Install Chaoslauncher
   1. Can download using “Chaoslauncher for 1.16.1” link at <http://wiki.teamliquid.net/starcraft/Chaoslauncher>
   2. Extract zip file to “C:\Program Files\Chaoslauncher”
   3. Launch Chaoslauncher and ensure the following checkboxes are checked:
      1. BWAPI Injector (1.16.1) RELASE
      2. W-MODE 1.02
   4. Close Chaoslauncher
2. Install BWAPI (Instructions as of 3.7.3)
   1. Download and extract latest version of the BWAPI (<http://code.google.com/p/bwapi/>)
   2. Copy the contents of Chaoslauncher/ to your Chaos Launcher folder
   3. Copy the contents of StarCraft/ to your actual StarCraft folder
   4. Copy the contents of WINDOWS/ to your C:\WINDOWS or anywhere on your system PATH
3. Install AutoHotkey in the default location (<http://www.autohotkey.com/>). Only needed if you are going to be compiling the host/client scripts on this machine.
4. Install the latest Java SDK SE

## Setting up a Match

1. Update TestConfiguration.txt to specify the host and client AIs and the number of matches to be played
2. Run the Built.bat file in the BWAM folder
3. In the Output folder that is produced, copy the Host folder to the host machine and the Client folder to the client machine
4. Ensure the following assumptions are true
   1. On both the client and host machine, Chaoslauncher only has the following checkboxes selected:
      1. BWAPI Injector (1.16.1) RELASE
      2. W-MODE 1.02
   2. All of the Host and Client AI DLLs called out in the test configuration file have already been placed in the “StarCraft\bwapi-data\AI” folder
   3. All BWAPI dll revisions required by those AI DLLs have already been placed in the “StarCraft\bwapi-data\revisions” folder
   4. Make sure that the two computers can see each other and play StarCraft with each other over the network normally. You may have to add StarCraft as an exception in the firewall settings for the computer hosting the game.
   5. The bwapi.ini on the host machine must call out a tournament module. In the OnEnd method of the tournament module, it must create the following file “C:\BroodwarAutoMatchup\_GameOverFlag.txt”. The host program polls for this file to exist to determine when an individual StarCraft match has ended.
5. On the host machine, run StartHost.bat
6. On the client machine, run StartClient.bat