

## Verifying SmartDashboard is working

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## Minimal Java robot program

```
1 package org.usfirst.frc.team40.robot;
2
3
4 import edu.wpi.first.wpilibj.SampleRobot;
5 import edu.wpi.first.wpilibj.Timer;
6 import edu.wpi.first.wpilibj.smartdashboard.SmartDashboard;
7
8
9 public class Robot extends SampleRobot {
10
11     public void operatorControl() {
12         double counter = 0.0;
13         while (isOperatorControl() && isEnabled()) {
14             SmartDashboard.putNumber("Counter", counter++);
15             Timer.delay(0.10);
16         }
17     }
18 }
```

This is a minimal Java robot program that writes a value to the SmartDashboard. It simply increments a counter 10 times per second to verify that the connection is working.

# Verifying SmartDashboard is working

## Minimal C++ robot program

```
#include "WPILib.h"

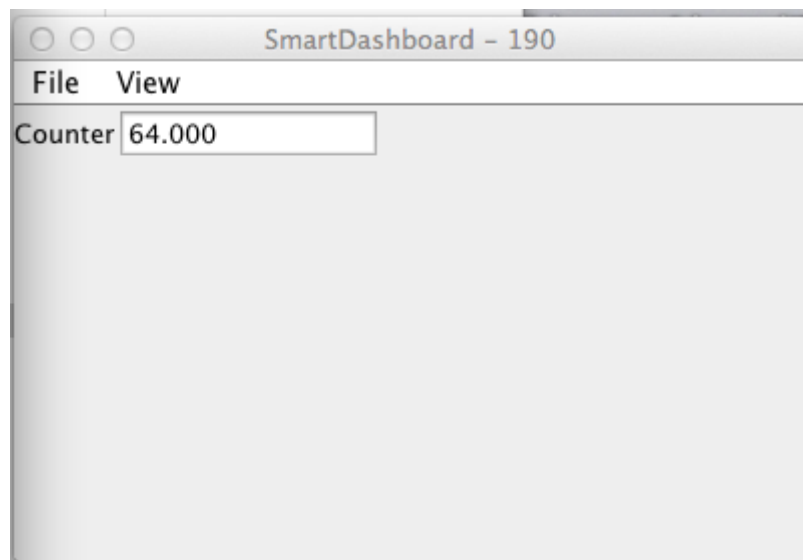
class Robot: public SampleRobot
{
public:
    Robot() {
    }

    void OperatorControl()
    {
        float counter = 0.0;
        while (IsOperatorControl() && IsEnabled()) {
            SmartDashboard::PutNumber("Counter", counter++);
            Wait(0.10);
        }
    }
};

START_ROBOT_CLASS(Robot);
```

This is a minimal C++ robot program that writes a value to the SmartDashboard. It simply increments a counter 10 times per second to verify that the connection is working.

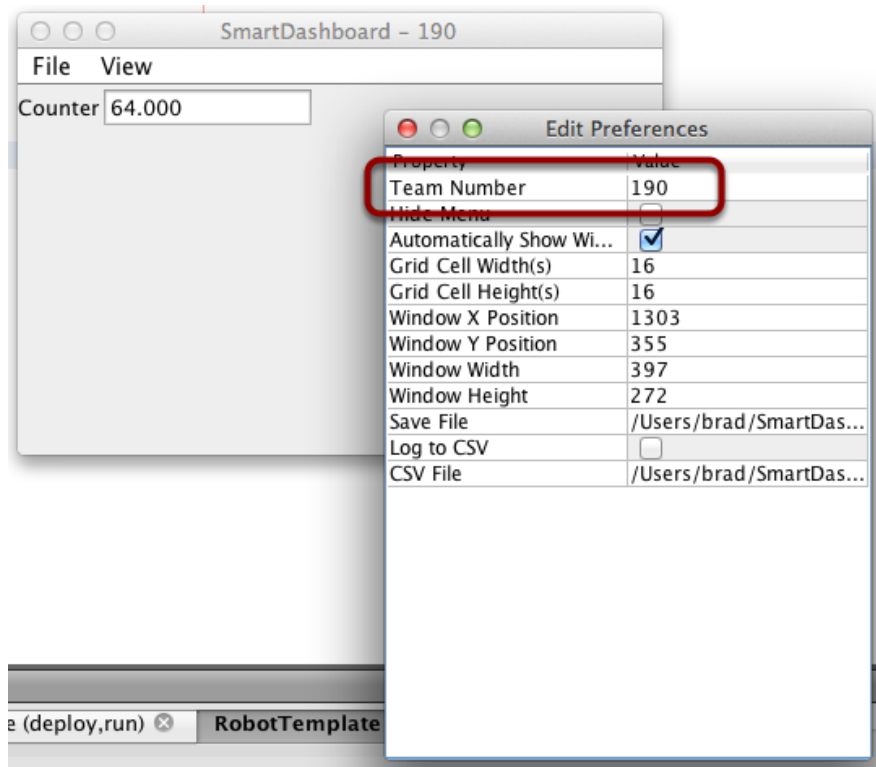
## SmartDashboard output for the sample program



The SmartDashboard display should look like this after about 6 seconds of the robot being enabled in Teleop mode. If it doesn't then you need to check that the connection is correctly set up.

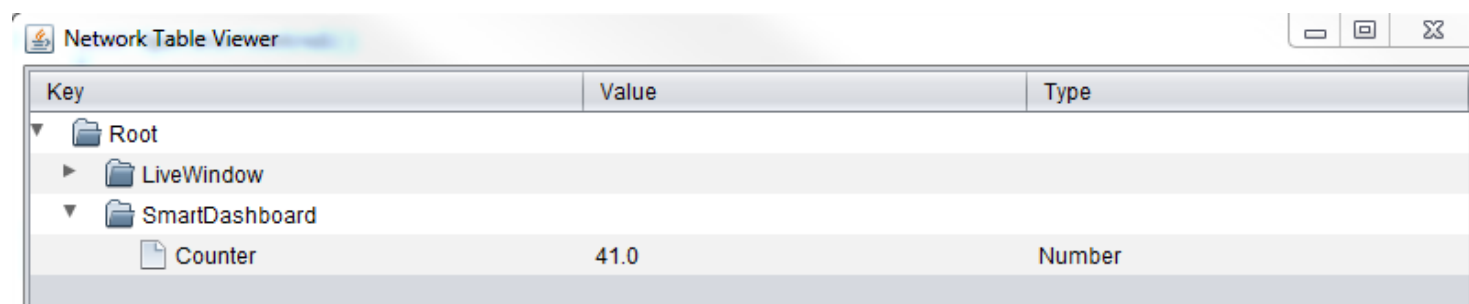
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### Verifying the IP address in SmartDashboard



If the display of the value is not appearing, verify that the team number is correctly set as shown in this picture. You get to the preferences dialog by selecting File, then Preferences.

### Using OutlineViewer to verify that the program is working



You can verify that the robot program is generating SmartDashboard values by using the OutlineViewer program. This is a java program, OutlineViewer.jar that is located in the USERHOME\wpilib\tools folder. It is run with the command: `java -jar OutlineViewer-with-dependencies.jar`. In the host box, enter your roboRIO hostname (roboRIO-####.local where #### is your team number with no leading zeroes). Then click "Start Client"

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Look at the second row in the table, the value "SmartDashboard/Counter" is the variable written to the SmartDashboard via NetworkTables. As the program runs you should see the value increasing (41.0 in this case). If you don't see this variable in the OutlineViewer then you should look for something wrong with the robot program or the network configuration.