

# OPC Sample Code

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## Abstract

This article is briefly describes how to setup a sample application that works with OPC clients.

My personal opinion is that OPC is a horrible platform and people responsible for it should be hunted down and killed alongside one direction.

## Setup

```
// Declare a Server first.
String OPCServerName = "{Here comes your OPC s name}";
ObjOPCServer = new OPCServer();
ObjOPCServer.Connect(OPCServerName, "");
// Then a Object group because to add an item changed event.
ObjOPCGroups = ObjOPCServer.OPCGroups;
ObjOPCGroup = ObjOPCGroups.Add("OPCGroup1");
// The item changed event.
ObjOPCGroup.DataChange += new
DIOPCGroupEvent_DataChangeEventHandler(ObjOPCGroup_DataChange);
// Now the Iteem
ObjOPCGroup.OPCItems.AddItem("{tag name or address (like {plc name on server}!%mw0})", 1);
// Update rate and other miscellaneous
ObjOPCGroup.UpdateRate = 10;
ObjOPCGroup.IsActive = true;
ObjOPCGroup.IsSubscribed = true;
```

## Datachange Event Handler

```
private void ObjOPCGroup_DataChange(int TransactionID, int NumItems, ref Array ClientHandles)
{
    for (int i = 1; i &lt;= NumItems; i++){
        if ((Convert.ToInt32(ClientHandles.GetValue(i)) == 1)) {
            textBox1.Text = ItemValues.GetValue(i).ToString();
        }
    }
}
```

```

    }
}
}

```

I get a lot of “where do I download this magic dll” type questions, just do a quick Interop.OPCAutomation.dll search on dgd.

### Full sample app

```

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using OPCAutomation;
namespace OPC
{
    public partial class Form1 : Form
    {
        OPCServer ObjOPCServer;
        OPCGroups ObjOPCGroups;
        OPCGroup ObjOPCGroup;
        string OPCServerName;
        public Form1()
        {
            try
            {
                InitializeComponent();
                OPCServerName = "{Here comes your OPC server's name}";
                ObjOPCServer = new OPCServer();
                ObjOPCServer.Connect(OPCServerName, "");
                ObjOPCGroups = ObjOPCServer.OPCGroups;
                ObjOPCGroup = ObjOPCGroups.Add("OPCGroup1");
                ObjOPCGroup.DataChange += new DIOPCGroupEvent_DataChangeEventHandler(ObjOPCGroup);
                ObjOPCGroup.OPCItems.AddItem("{tag name or address (like {plc name on server}");
                ObjOPCGroup.UpdateRate = 10;
                ObjOPCGroup.IsActive = true;
                ObjOPCGroup.IsSubscribed = true;
            }
            catch (Exception e){
                MessageBox.Show(e.ToString());
            }
        }
    }
}

```

```

private void button1_Click(object sender, EventArgs e)
{
}

private void ObjOPCGroup_DataChange(int TransactionID, int NumItems, ref Array ClientHandles, ref Array ItemValues)
{
    for (int i = 1; i <= NumItems; i++)
    {
        if ((Convert.ToInt32(ClientHandles.GetValue(i)) == 1))
        {
            textBox1.Text = ItemValues.GetValue(i).ToString();
        }
    }
}

private void Form1_Load(object sender, EventArgs e)
{
    OPCServerClass GlobalOPCServer = new OPCServerClass();
    Array ServerList = (Array)GlobalOPCServer.GetOPCServers("");
    for (int i = 1; i <= ServerList.Length; i++)
    {
        comboBox1.Items.Add(ServerList.GetValue(i).ToString());
    }
}
}
}

```