Getting Started with Nano Vera/Hues Bridge

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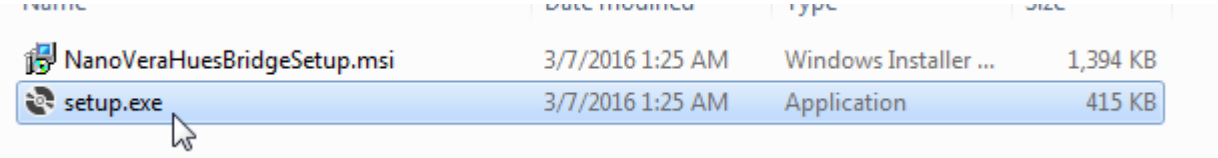
Requirements

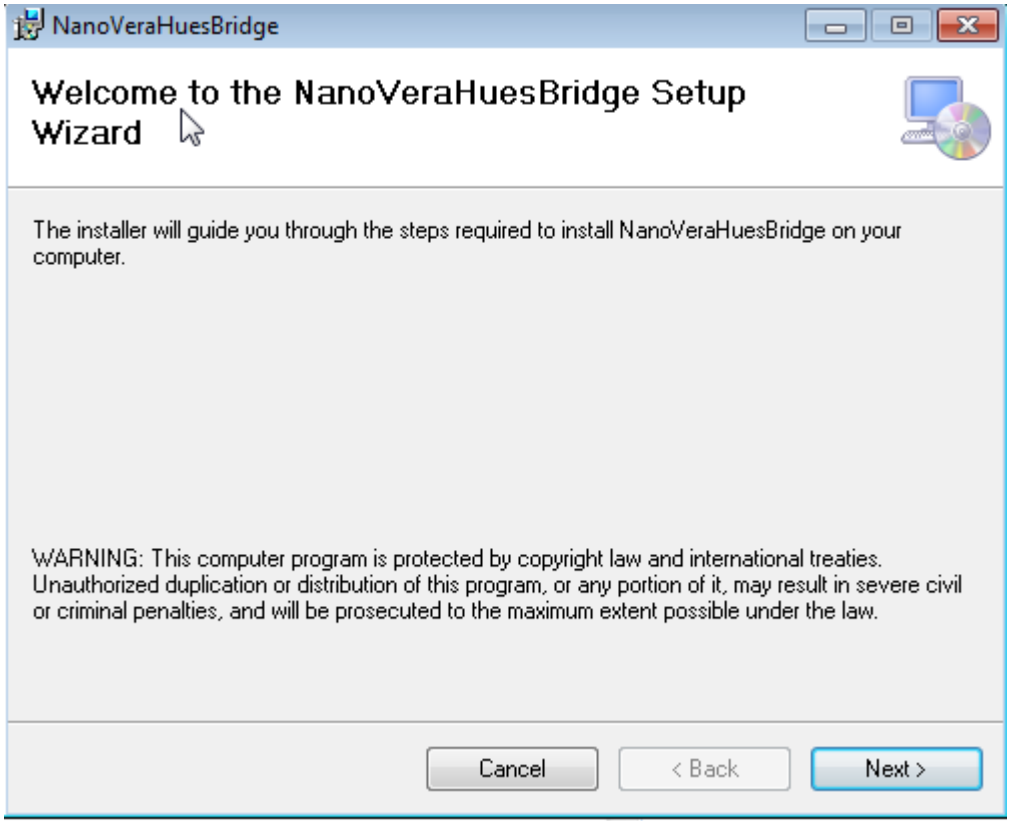
The software requires about 20mb of disk space, approximately 15mb of RAM and Microsoft .NET 4.5. It was developed on a Windows 7 PC and tested heavily on Windows 2008 r2 server, although given its modest requirements we suspect it will run on most PC's running Windows Vista or better.

Installation

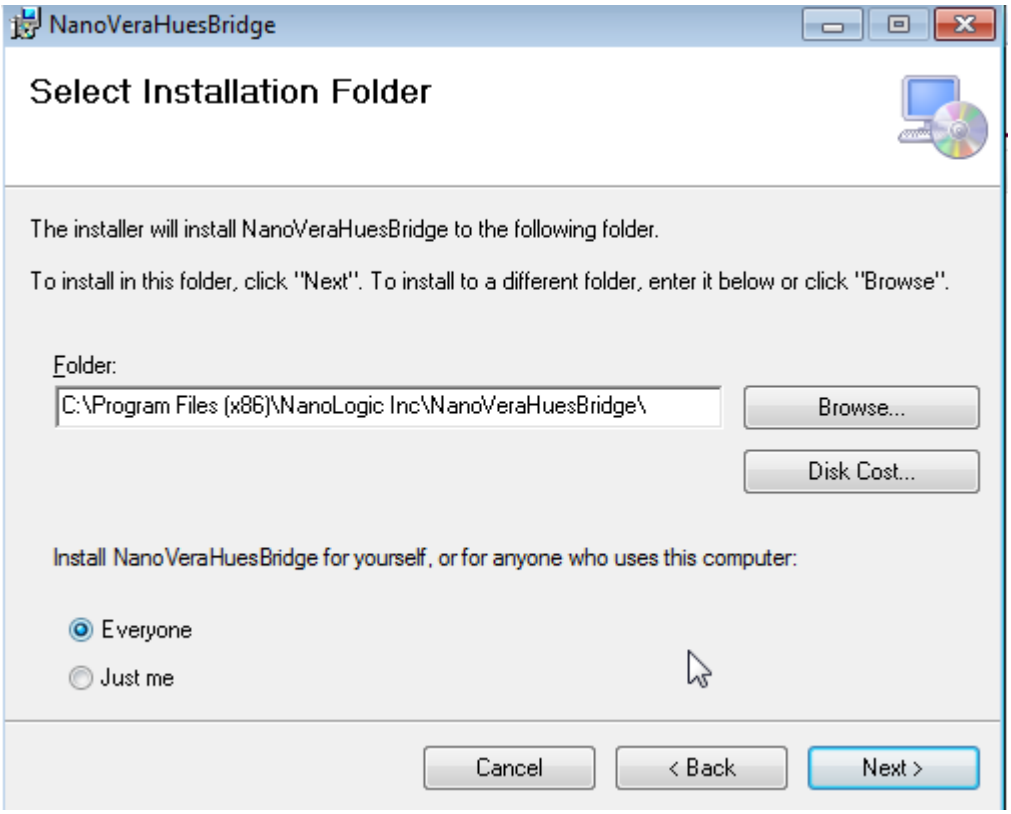
To get started, first install the service. Begin by double-clicking on the Setup file:



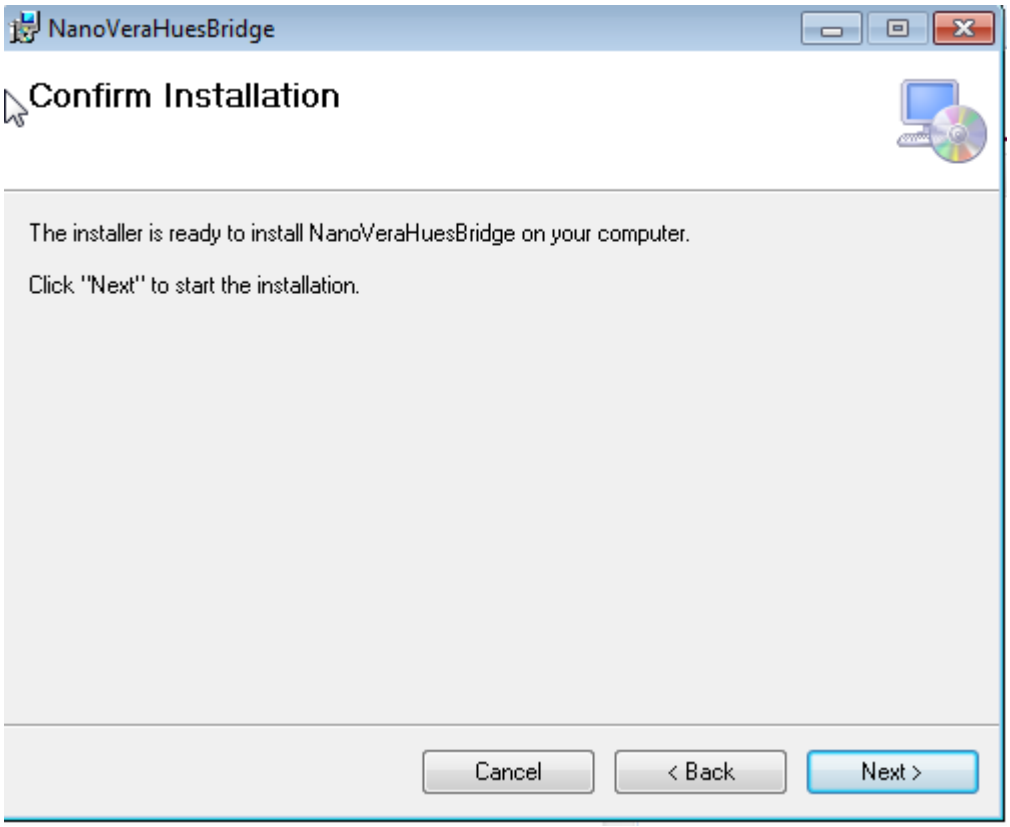
You will be presented with a wizard. Choose Next:



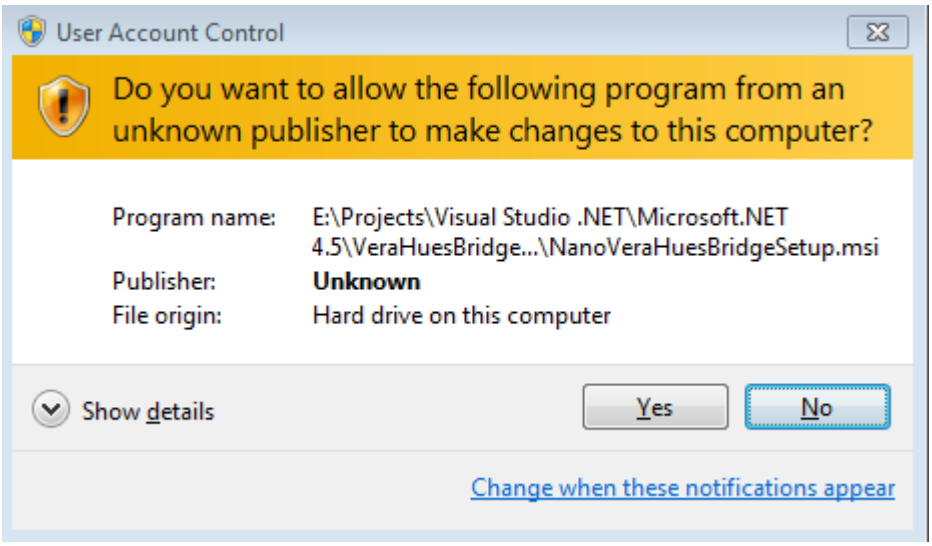
Select the Installation Directory and keep the selection for Everyone:



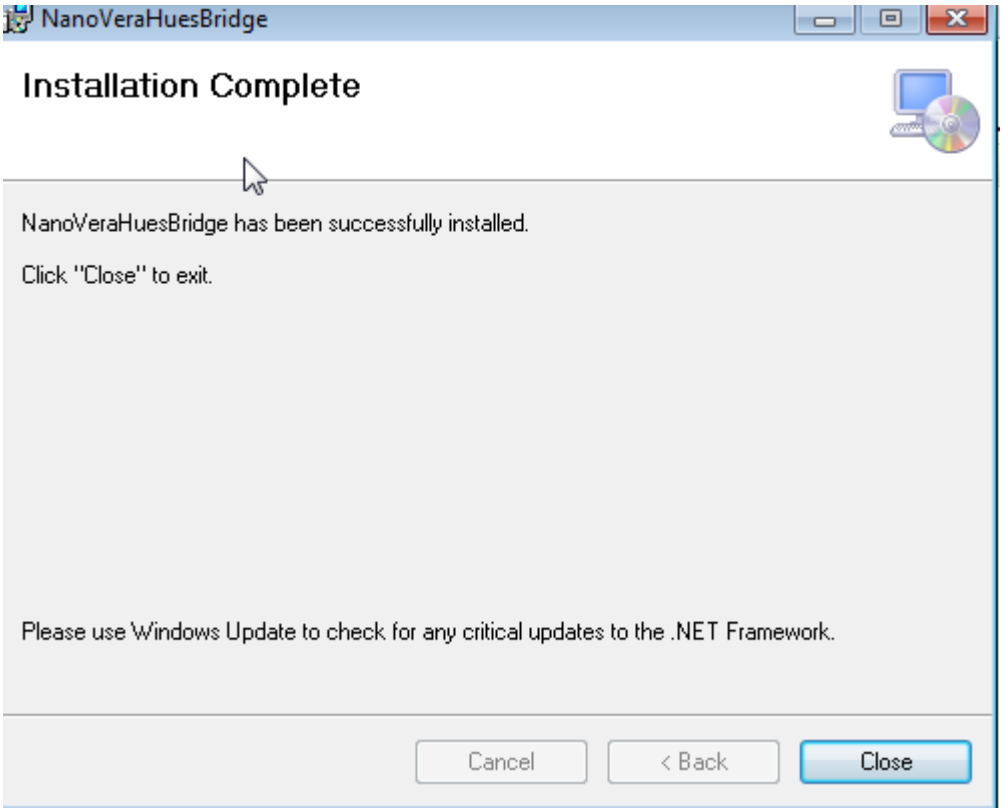
Confirm the installation:



Depending on your security settings, you may be prompted to allow the software to make changes to your computer. Select Yes.

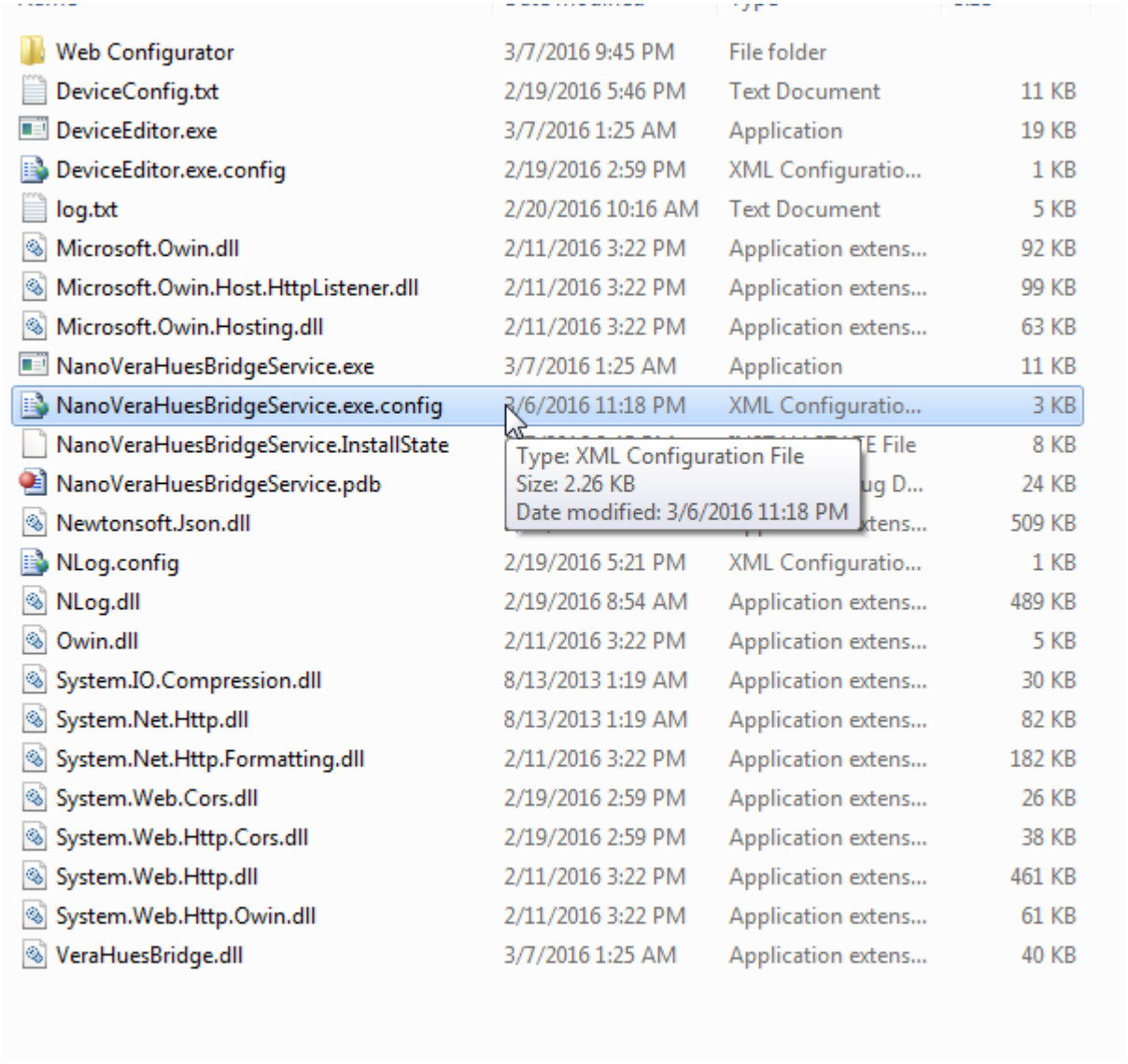


When the installation completes, click the Close button:

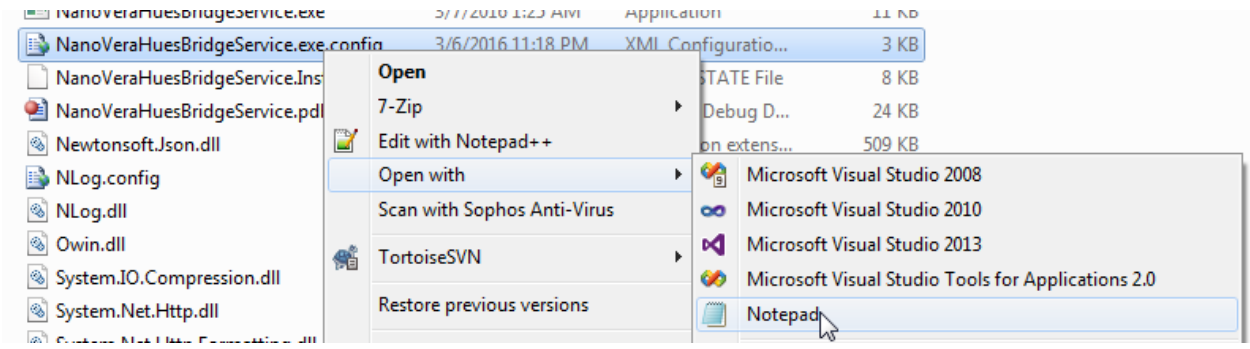


Nano Vera/Hues Bridge Service Configuration

Now that the software has been installed, navigate to the installation folder (the default was: C:\Program Files (x86)\NanoLogic Inc\NanoVeraHuesBridge). The folder should look similar to this:



Edit the NanoVeraHuesBridgeService.exe.config file with Notepad, or a text editor of your choice.



Locate the **LocalIP** and **LocalPort** settings**.**

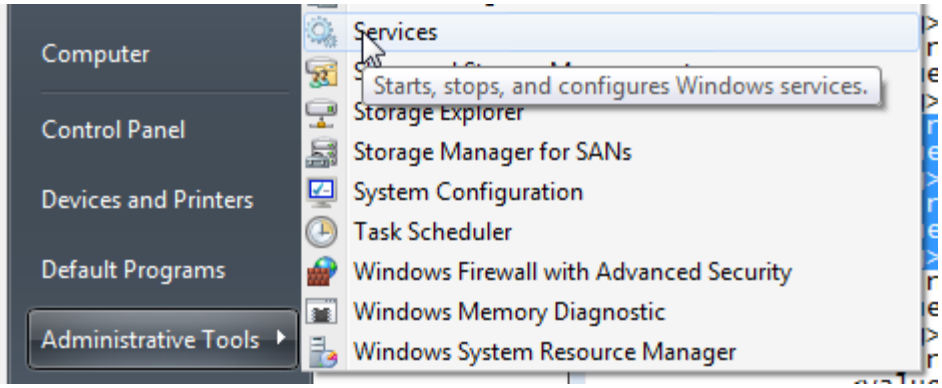
```
            <value>1900</value>
        </setting>
        <setting name="LocalIP" serializeAs="String">
            <value>10.10.1.26</value>
        </setting>
        <setting name="LocalPort" serializeAs="String">
            <value>8080</value>
        </setting>
        <setting name="UniqueID" serializeAs="String">
            <value>aef85303-330a-4eab-b28d-038ac90416ab</value>
```

Alter these settings as appropriate. Keep in mind that the LocalIP address must be an address bound to your network adapter. Also keep in mind that no other software on your computer can be using the same port as the one you select here. If you are, for example, installing this on a machine that already runs a webserver on port 80, choosing port 8080 would be a good choice. Other common choices for a port might include 8001, 8081, 8082, etc.

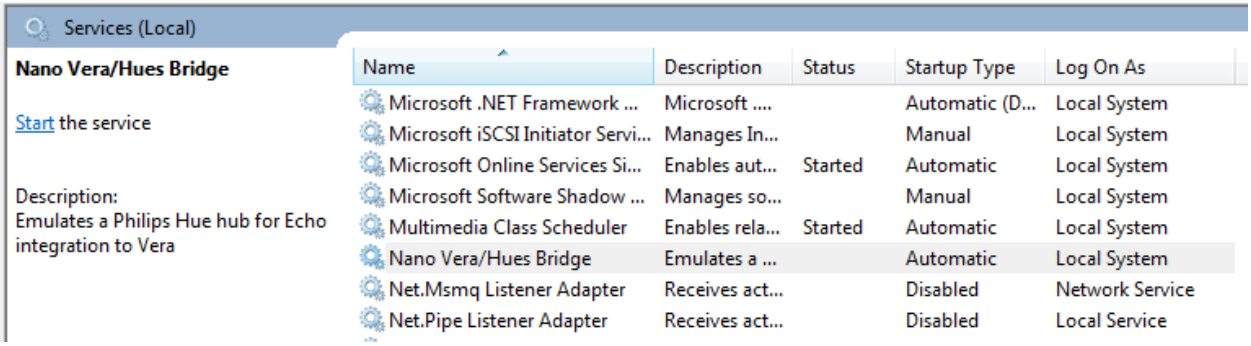
Save the file.

Windows Service Configuration

Now we need to check on the service configuration in windows. Do this by opening up the Services panel applet. There are several ways to get to it. Look for it in the Administrative Tools group in Windows 7 and above.



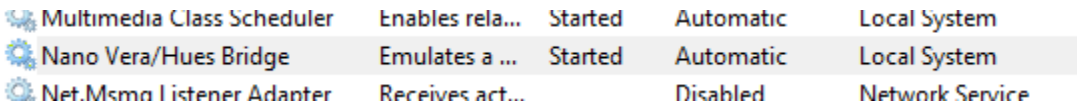
Scroll through the list of services until you find the listing for **Nano Vera/Hues Bridge.**



Right-clicking on the service will give you various options such as starting, or stopping the service. Before starting the service note the “Log On As” column. By default, the installer installs the service under **Local System**. This value does not need to be changed, but if you want to use a specific user, or if your system requires a different configuration, please keep in mind that the system will attempt to write its log files into the installation folder. You can either grant the necessary privileges to the installation folder or edit the nLog.config file and specify a different folder for the log file

destination. Altering folder permissions or editing the nLog.config file is outside of the scope of this article, except to say that Googling these will provide lots of useful information.

Now, right-click the service, and choose Start. After a short moment, the Services applet will show “Started” in the Status column:



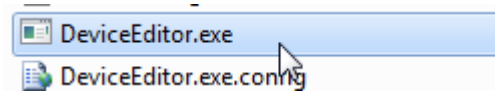
You will also have a log file named “log.txt” in the installation directory. If the service does not start, please check the log file for information about why it failed. 95% of the time it will be because either **LocalIP** or the **LocalPort** was specified incorrectly. If no log.txt file appears, most likely the account used to run the service does not have permission to write to the installation folder.

If all is well, head to the next section to configure the devices you want Echo to be able to control.

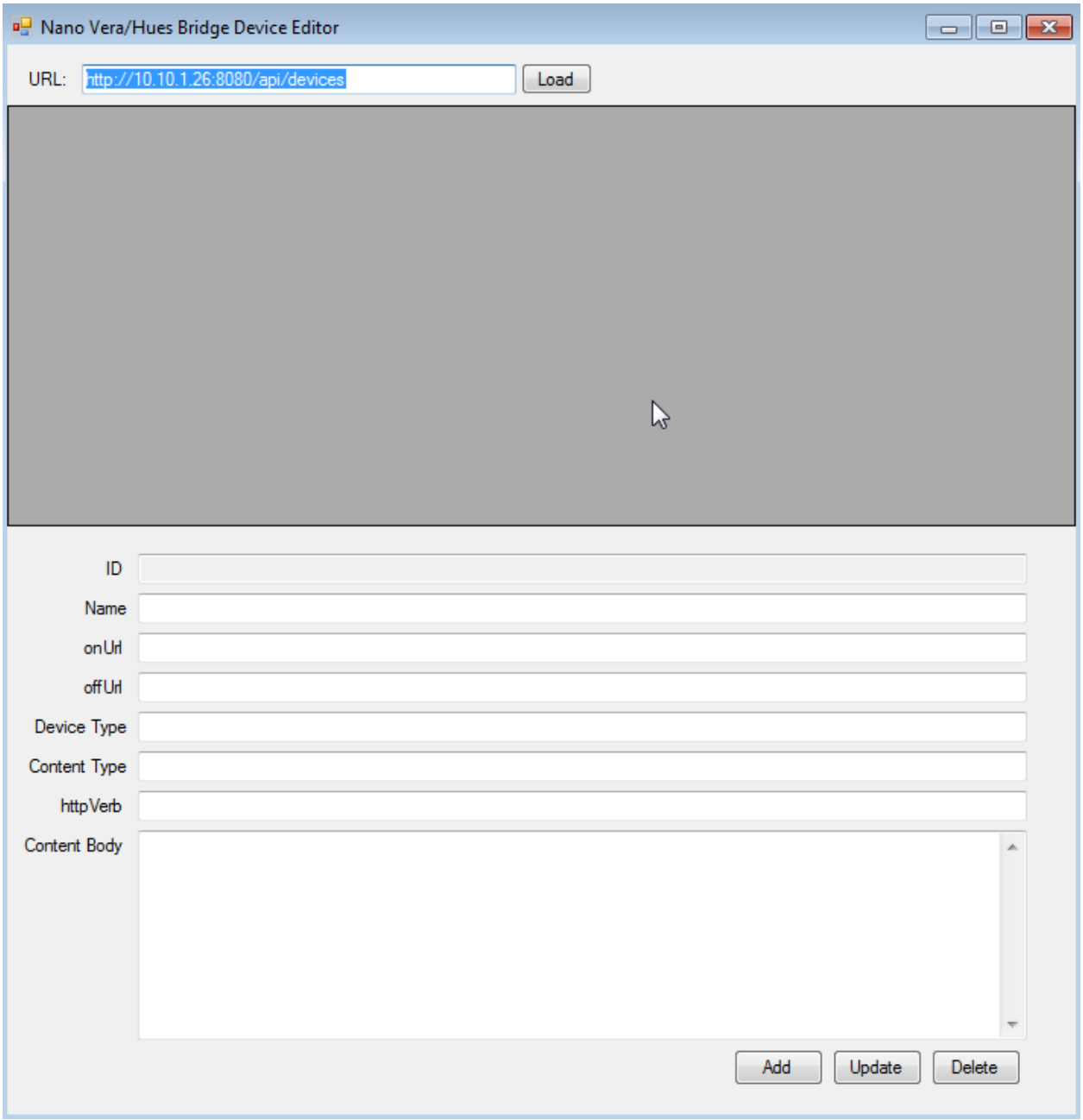
Device Configuration

There are three ways that the devices can be configured: by manually editing the DeviceConfig.txt file, by using the Web Configurator, or by using the Windows application called DeviceEditor.exe. This document will only detail how to use the DeviceEditor.

In the installation folder, double click on the Windows application named DeviceEditor.exe:



The application should look like this on startup:



In the URL field, replace the “10.10.1.26:8080” with the LocalIP and LocalPort you set in the NanoVeraHuesBridgeService.exe.config file. The resulting URL should be in the form of:

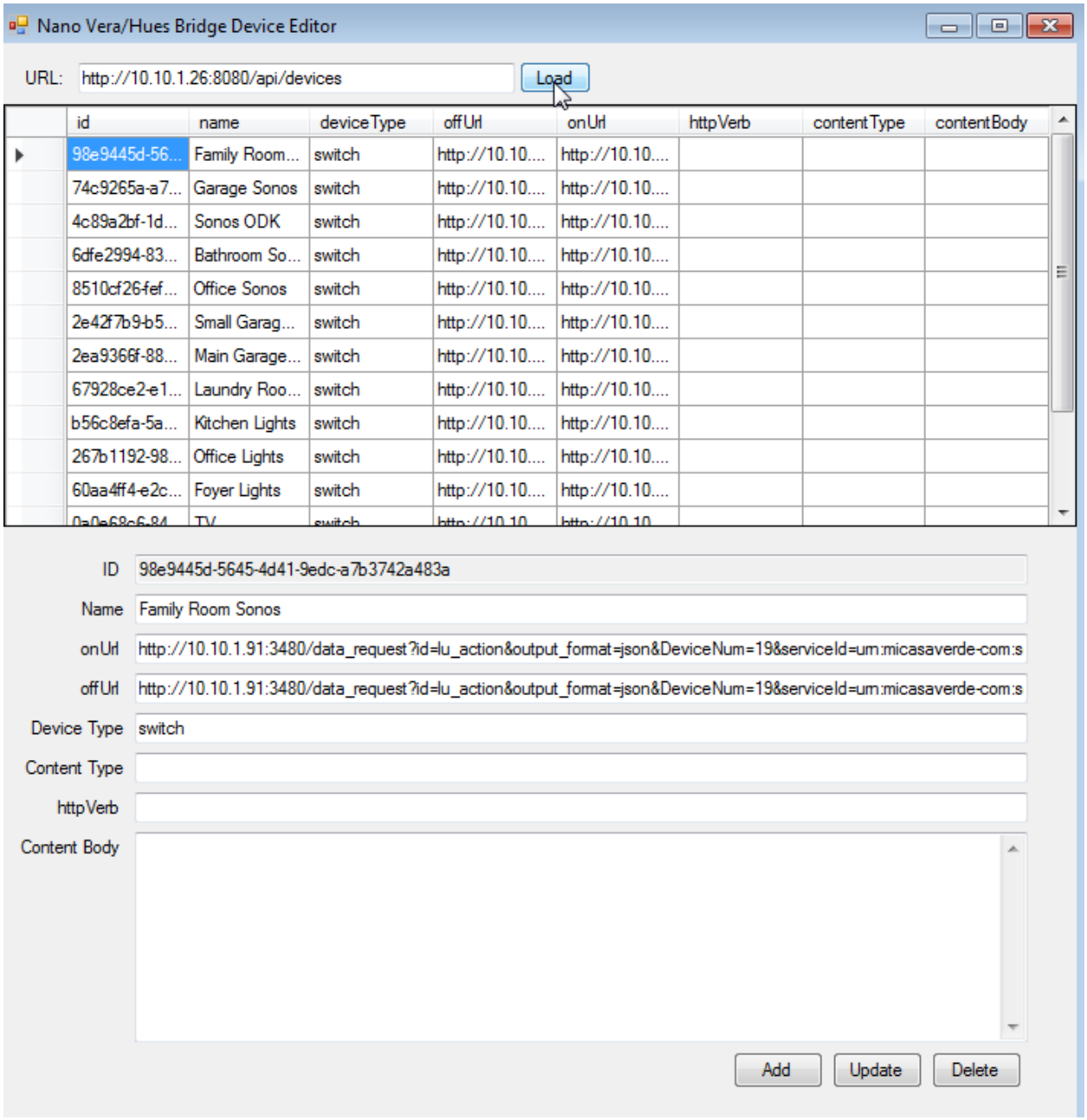
http://{ip_address}:{port}/api/devices

For example, your IP is 192.168.1.6 and your port number is 8081, your URL should appear as follows:

http://192.168.1.6:8081/api/devices

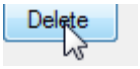
Once you have edited this field, click the Load button. If an error occurs loading the devices, or at any point in the configuring of a device, check the log.txt file in the installation directory for hints as to what might have gone wrong.

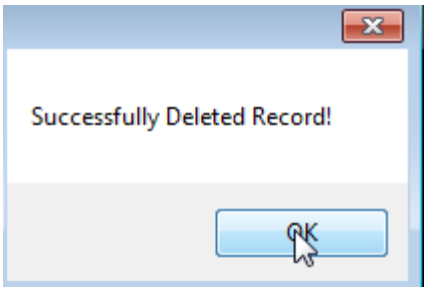
Your screen should now look like this:



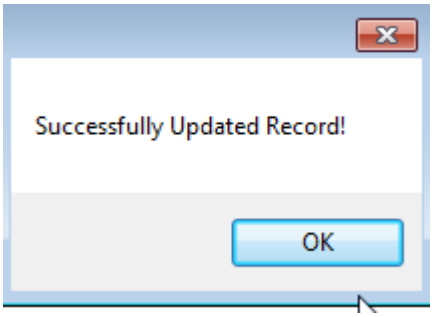
The software ships with a number of devices already configured. You will want to Delete and/or Modify them to accurately suit your Vera and Echo environment.

To Delete a device, simply select it in the grid, then click the Delete button:

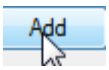


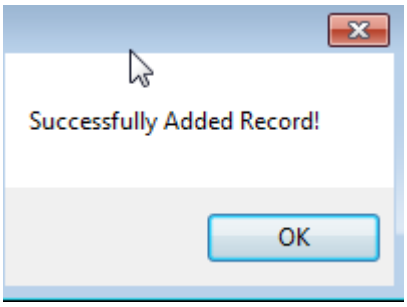


Modifying a device is as simple as clicking on the device in the grid, then making the necessary changes to field properties and choosing the Update button:



Adding a Device is also simple (though maybe not as intuitive). You can either select any record in the grid, then changing the fields as necessary and hitting the Add button, or if you have no devices at all, simply type into the empty fields and hit Add.





Some things to keep in mind when configuring devices:

1) Start simple. Work on a single device until you get it right.
2) Don't use complex names for Devices. Remember Echo has to understand how to convert your speech and match it up with the name of the Device.
3) For Vera devices, the device type is always a "switch" and httpVerb can be left blank (or else is GET). The bridge software does support POST, PUT and can send json or other content-types to the onUrl or offUrl setting.

4) For Vera, here are some typical configurations for the onUrl and OffUrl. Keep in mind that you will need to replace the 10.10.1.91 with the IP Address of your Vera server as well as adusting the port (3480) if you are not using a standard Vera configuration. Finally, you will need to update the DeviceNum (or SceneNum) with the DeviceNum (or SceneNum) of the Vera device you are trying to control.

   A Dimmable Light

   On
   http://10.10.1.91:3480/data_request?id=action&output_format=json&DeviceNum=33&serviceId=urn:upnp-org:serviceId:Dimming1&action=SetLoadLevelTarget&newLoadlevelTarget=${intensity.percent}
   Off
   http://10.10.1.91:3480/data_request?id=action&output_format=json&serviceId=urn:upnp-org:serviceId:SwitchPower1&action=SetTarget&newTargetValue=0&DeviceNum=33

   An On/Off Light

   On
   http://10.10.1.91:3480/data_request?id=action&output_format=json&DeviceNum=84&serviceId=urn:upnp-org:serviceId:Dimming1&action=SetLoadLevelTarget&newLoadlevelTarget=${intensity.percent}
   Off
   http://10.10.1.91:3480/data_request?id=action&output_format=json&serviceId=urn:upnp-org:serviceId:SwitchPower1&action=SetTarget&newTargetValue=0&DeviceNum=84

   A Scene

   On
   http://10.10.1.91:3480/data_request?id=action&serviceId=urn:micasaverde-com:serviceId:HomeAutomationGateway1&action=RunScene&SceneNum=15&output_format=json
   Off
   http://10.10.1.91:3480/data_request?id=action&serviceId=urn:micasaverde-com:serviceId:HomeAutomationGateway1&action=RunScene&SceneNum=16&output_format=json

5) Changes made using DeviceEditor are applied instantly to the service configuration file (DeviceConfig.txt). However the Amazon Echo will not know about new devices until you tell Vera to Discover Devices.

Finally, when you are ready to test your devices, proceed to the next step.

Configuring Amazon Echo

Amazon Echo is configured simply by asking Alexa to Discover Devices. Although the bridge software emulates a Philips Hue bridge, you do not need to push any buttons to put in configuration mode.

That's it! Echo should tell you she has discovered your devices. If she fails to discover your devices, check the log.txt file for any errors. Also be sure to check in the Alexa app under the Connected Home section. In our experience, sometimes an old configuration was still hanging around and needed to be removed. After testing we had nearly twenty office lights that had to be removed! Alexa does not like having twenty devices with the same name. She's smart, but not that smart.