[AN012]

ADVANCED NETWORK DEVICES

Zeroconf Configuration with IPClockWise (Running an Endpoint Standalone with PC)

Version 2.0

8/29/2017

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U.S.A

Proprietary Notice and Liability Disclaimer

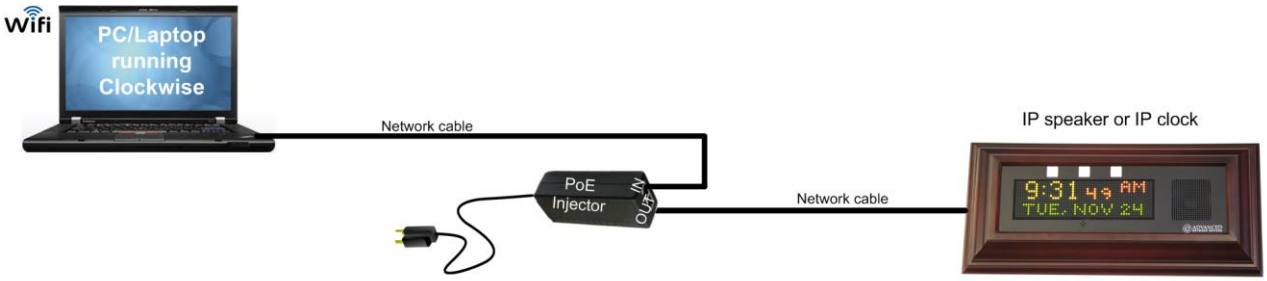
Static Electric Warning

TROUBLESHOOTING AND ADDITIONAL RESOURCES

Complete Support Site with User Guides & Help:	http://www.anetdsupport.com/
Additional App Notes:	http://www.anetdsupport.com/AppNotes
Customer Feedback Survey:	http://www.anetdsupport.com/survey
AND Legal Disclaimer:	http://www.anetd.com/legal

OVERVIEW

In certain circumstances, you may wish to run your AND device standalone with a PC or laptop, instead of connecting it to a switch or router. The PC or laptop can still stay connected to the local network or Internet via Wi-Fi. See an example scenario with a single AND device shown below.



1. **Configure the AND Device**
   a. Power on the AND device on a normal non-standalone network with connection to a DHCP server. A DHCP server is necessary for initial configuration of the device.
   b. Get the device's IP address, which you can access during the boot-up sequence (or via looking at your router's settings, or other network sniffers like Bonjour).
   c. Open the device's web page interface by entering the device's IP address into a web browser (e.g., *http://10.10.3.4* where *10.10.3.4* is the IP address of the device).
   d. Select **Device Settings → Network**.
   e. Select "static IP" as the *Network Mode*.
   f. If your PC/laptop is using WiFi, create an IP address that does not conflict with the router to which the WiFi is connected (e.g., 192.168.x.x). Set the device's IP address to that, and 255.255.0.0 as the *Netmask*.

      Otherwise, if your PC/laptop is not using WiFi, nor has a DHCP server, set 169.254.0.2 as the *IP address (169.254.x.x is a default address when no DHCP present)*, and 255.255.0.0 as the *Netmask*.
   g. Click the *Save Network Settings Changes* button.
   h. Remove the AND device from the network with the DHCP server.

2. **Configure Other AND Devices (Optional)**
   Repeat steps above for each device in use, entering a unique number for each IP address within the same sub-domain, e.g., 169.254.0.*x*, or 192.168.1.x, etc.

3. **Configure the PC/Laptop**

   a. Under *Network Connections*, right-click on the Local Area Network interface of the laptop/PC, and select *Properties*. Select *Internet Protocol (TCP/IP)* or *Internet Protocol Version 4 (TCP/IPv4)* and click *Properties*. Verify the "Obtain an IP address automatically" radio button is selected.

   If your PC/laptop is using WiFi, you must additionally click the "Alternate Configuration" tab to set the following parameters:

   - **IP Address**: similar (but not exact) to the one you chose in Step 1f above (e.g., 169.254.0.*x*, or 192.168.1.x, etc.)
   - **Subnet Mask**: 255.255.255.0
   - **Default Gateway**: to the same address as the IP address

   b. Create the network. You can connect the PC/laptop and AND device(s) to the same private network in one of three ways:

   - Direct Connect a Single AND Device
     Connect the PC/laptop to the *In* port of the injector, and the AND device to the *Out* port of the injector.
   - PoE Switch
     Connect the PC/laptop and AND device(s) into a PoE switch.
   - Normal Switch
     Connect the PC/laptop into the switch, and the AND device(s) into the switch via a PoE injector(s). Connect the switch to the *In* port of the injector, and the AND device to the *Out* port of the injector. Repeat for each device.

   c. Obtain the IP Address. Select the **Windows Menu button -> All Programs -> Accessories -> Command Prompt**. Type "ipconfig" at the command prompt, and press enter to display the network adapter information. Scroll back the command line window to find the *Local Area Connection* information that corresponds to the PC/laptop's Ethernet port plugged into the switch or injector. Note the *Autoconfiguration IPv4 Address* or *IPv4 Address* of the Local Area Connection (e.g., 169.254.155.157).

4. **Set up NTP on the Device**
   a. Start IPClockWise on the PC/laptop.
   b. Find the AND device in the Endpoints list.
   c. Double-click on the device in the list to bring up the device's web page interface.
   d. Select **Device Settings → General**.
   e. Set up the device's NTP by entering the PC/laptop's IP address (recorded above in step 3c) into the *NTP Server, primary* field, and adding a port number of "8090" (e.g., *169.254.155.157:8090)*.
   f. Enter a time zone in the *Named Time Zone* field. See details at http://www.ipspeaker.com/support20/help/timezone_by_country.html.
   g. Click the *Save Changes* button.
   h. Reboot the device.

The AND device should now get its time from the IPClockWise application, and you should be able to interact with the device via IPClockWise with events/alerts, etc.