Configuring a customer owned router to function as a switch with Ultra TV

This method will turn the customer router into a wireless switch and allow the Ultra Gateway to perform routing functions and allow all computers to share media through the HomeConnect feature. Only the Gateway will perform routing functions.

Description
The wireless is disabled on the Ultra gateway and is connected to the customer owned wireless router via Ethernet through one of the numbered Ethernet ports. The Internet/WAN port is not used at this time. The DHCP is disabled on the customer owned router to give the Ultra gateway the ability to assign IP Address to all connected devices. The customer owned router acts as a wireless switch in this method, allowing the customer to have expanded wireless range without sacrificing some of Ultra TV's features.

Example
This image shows how devices are connected to the Gateway and the customer owned router.
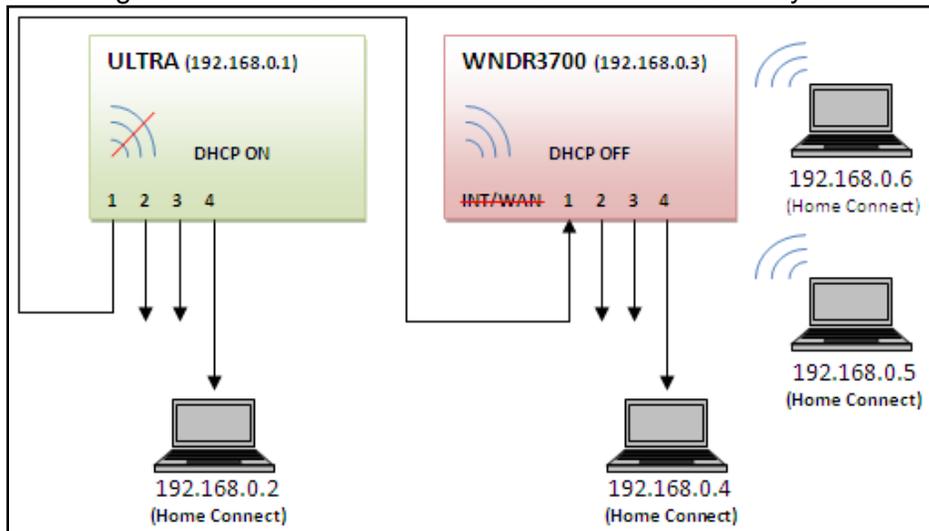
For this article, a Netgear WNDR3700 wireless router was used as an example. Information will vary between manufacturer and model of router.

Configuring the Customer Owned Router and the Gateway

1. Connect a computer to the Gateway via Ethernet.
2. Access the Gateway
3. Verify all Gateway settings match WOW! standards
   - If the Gateway was already configured using this method, confirm all other settings before making any additional changes.
4. Deselect the "Enable Wireless" option.
5. Click the "Apply" button.
6. Disconnect the computer's Ethernet cable from the Gateway.
7. Connect the computer's Ethernet cable to 1 of the "2", "3", or "4" Ethernet ports on the customer's router.
8. Enter "192.168.1.1" into the address bar of a web browser.
   - The IP address may vary between manufacturers.
9. Press the "Enter" key on the keyboard.
- This should access the router's admin screen.
10. Enter the needed information to access the router's admin screen.
    - The default login information can usually be found on the router, in the router's instructions, or on the manufacturer's website.
11. Click the "LAN Setup" option found under the Advanced section.
12. Deselect the "Use Router as DHCP Server" option.
13. Click the "Apply" button.

14. Connect an Ethernet cable to the "1" Ethernet port on the customer's router.
    - If a device is already connected, move the device's Ethernet cable to a different port on the router.
15. Connect the other end of the Ethernet cable to the "1" Ethernet port on the Gateway.
16. Test computers and devices for Internet access.

Changing the IP Address Scope of the Customer Owned Router
This method allows the Gateway and the customer's router to perform routing functions. This allows the customer to use QOS, Port Forwarding, Administration, and other feature of the router. Only computers connected directly to the Gateway via Ethernet are able to share media through HomeConnect.

Description
In this method, the wireless is disabled on the Gateway. An Ethernet cable is connected between the numbered Ethernet ports on the Gateway to the Internet/WAN port on the customer owned router.

Example
This image shows how devices are connected to the Gateway and the customer owned router.
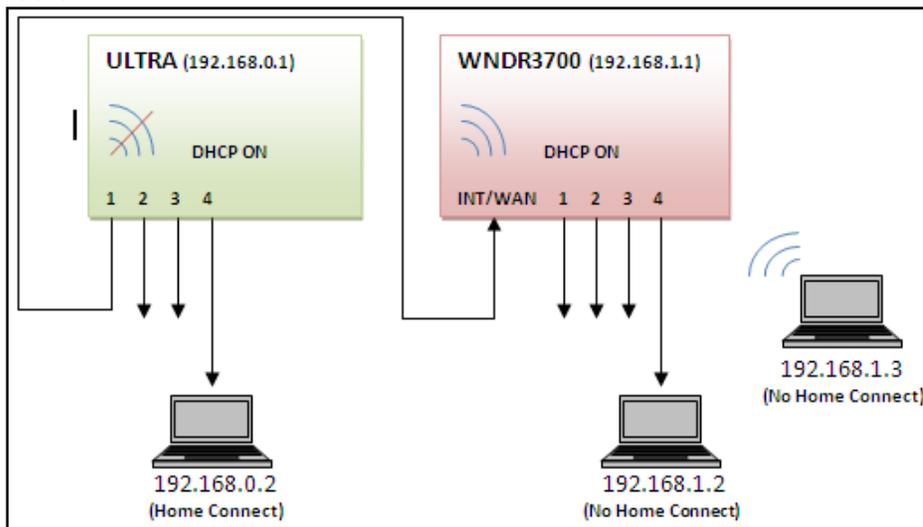
The DHCP is left enabled on the customer owned router; in order give the Ultra gateway and the customer's router the ability to assign IP Address to all connected devices. Acting as a wireless router, the customer will have access to all of the advanced options and expanded wireless range available in their router. However, the only devices that will be able to share media through Home Connect will have to be hard wired via Ethernet directly to the Ultra gateway. Devices that are connected to the customer's router will be on a separate LAN and be unable to communicate with the Ultra equipment. Listed on the next page are the steps that need to be taken to properly setup this method.

For this document, a Netgear WNDR3700 wireless router was used as an example. Information will vary between manufacturer and model of router.

Configuring the Customer's Router
1. Connect a computer to 1 of the "1", "2", "3", or "4" Ethernet ports on the customer owned router.
2. Enter "192.168.1.1" into the address bar of a web browser.
   - The IP address may vary between manufacturers.
3. Press the "Enter" key on the keyboard.
   - This should access the router's admin screen.
4. Enter the needed information to access the router's admin screen.
   - The default login information can usually be found on the router, in the router's instructions, or on the manufacturer's website.
5. Click the "Basic Settings" option found under the Setup section.
6. Select the "Use Static IP Address" option.
7. Create a new IP address for the router.
   a. Enter "192.168.0.10" in the IP Address fields.
   b. Enter "255.255.255.0" in the IP Subnet Mask fields.
   c. Enter "192.168.0.1" in the Gateway IP Address fields.
   d. Enter the correct DNS servers, from the table below, in the Primary DNS and Secondary DNS fields.

> **NOTE:** A different IP address can be used for the IP Address anywhere in the range of 192.168.0.10 to 192.168.0.254.

Cleveland	Columbus	Illinois	Michigan	Evansville
64.233.214.34	64.233.222.2	64.233.207.8	64.233.217.2	64.233.219.99
64.233.214.41	64.233.222.7	64.233.207.9	64.233.217.3	64.233.206.99
			64.233.217.5	

8.   Click the "Apply" button.
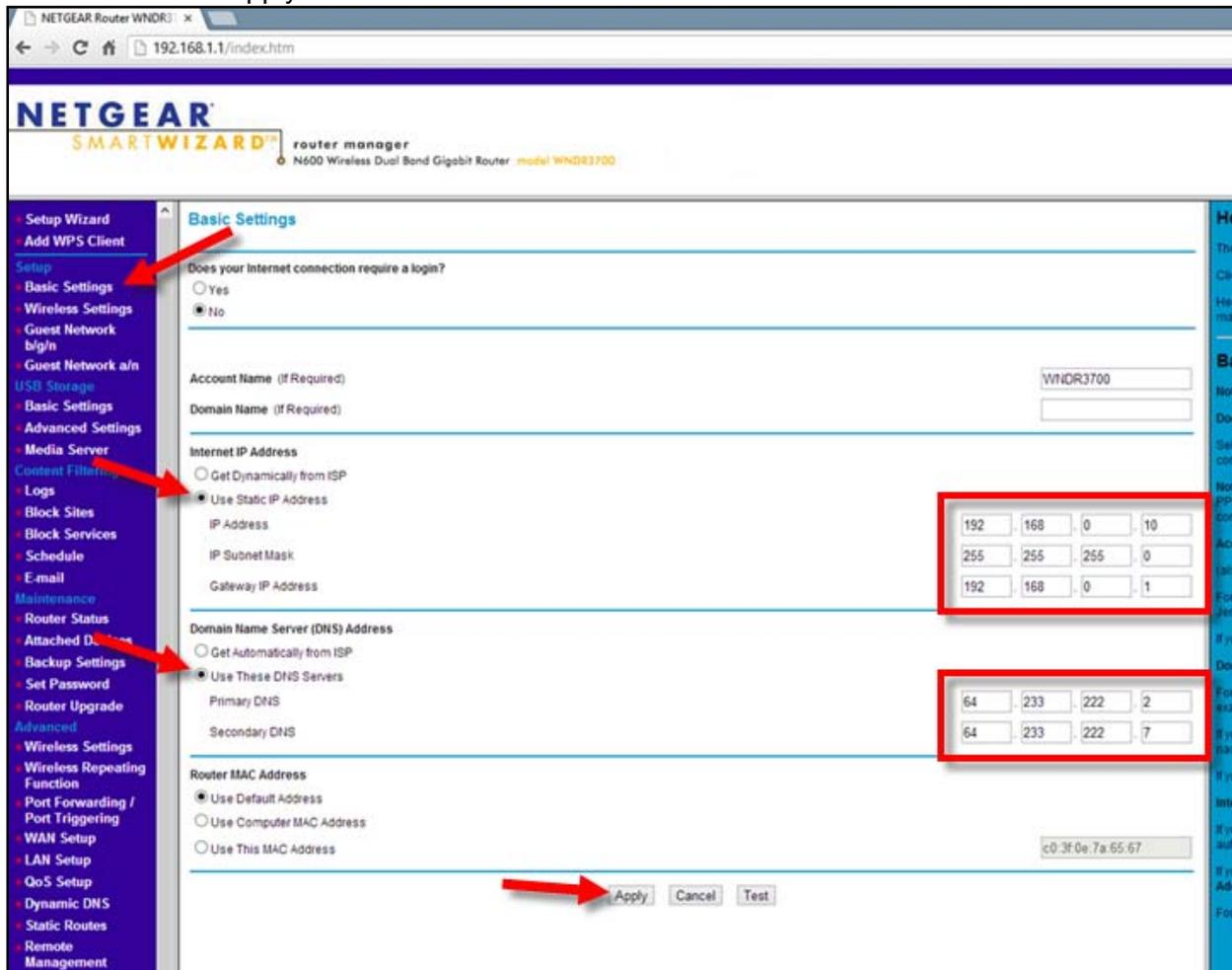
9.   Enter "192.168.1.1" into the address bar of a web browser.
  •   The IP address may vary between manufacturers.
10.   Press the "Enter" key on the keyboard.
  •   This should access the router's admin screen.
11.   Enter the needed information to access the router's admin screen.
  •   The default login information can usually be found on the router, in the router's
      instructions, or on the manufacturer's website.
12.   Click the "LAN Setup" option found under the Advanced section.
13.   Select the "Use Router as DHCP Server" option.
14.   Enter "192.168.1.1" in the IP Address fields.
15.   Enter "2" in the last field of the Starting IP Address fields.
16.   Enter "254" in the last field of the Ending IP Address fields.

17.   Click the "Apply" button.
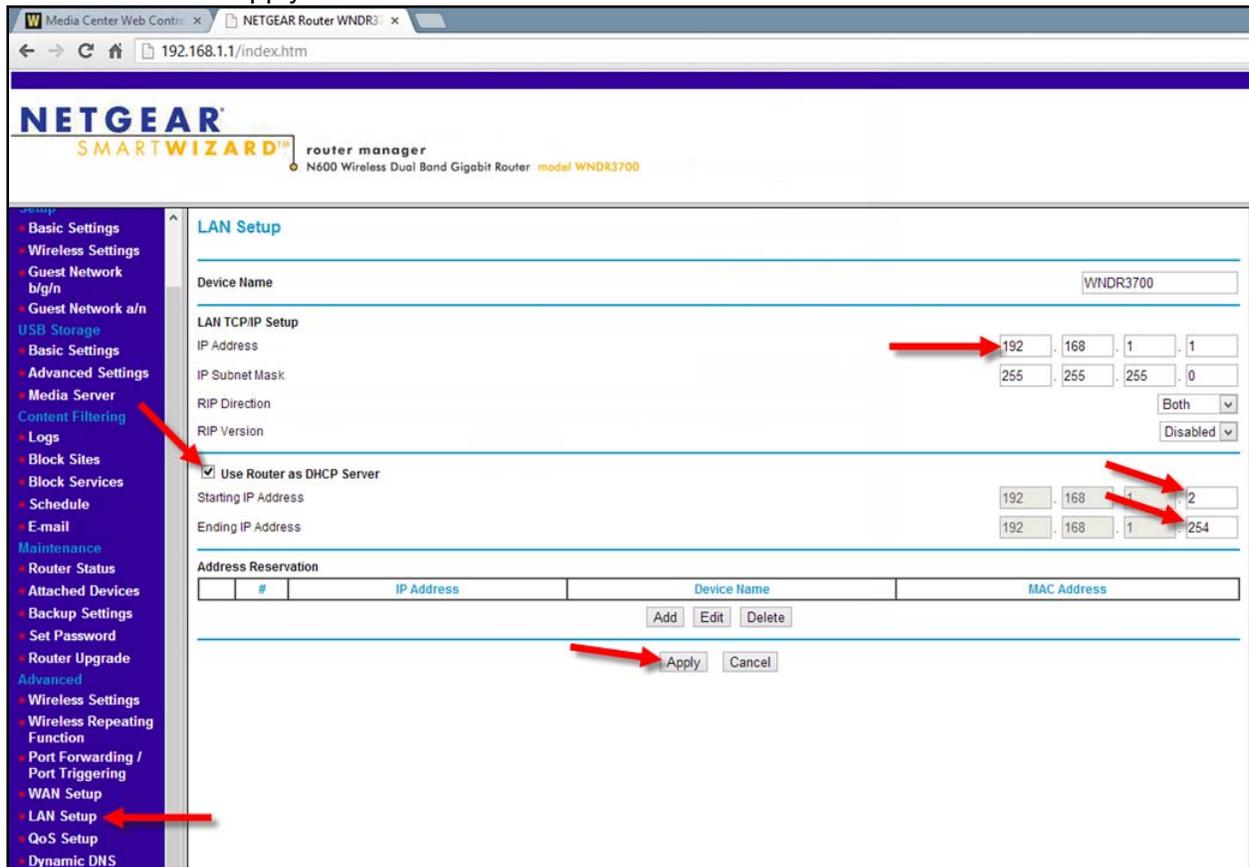
18.   Connect a computer to the Gateway via Ethernet.
19.   Access the Gateway.
20.   Verify all Gateway settings match WOW! standards.
   • If the Gateway was already configured using this method, confirm all other settings
     before making any additional changes.
21.   Deselect the "Enable Wireless" option.
22.   Click the "Apply" button.
23.   Click the "Firewall" tab.

24.   Deselect the "Enable Firewall" option.
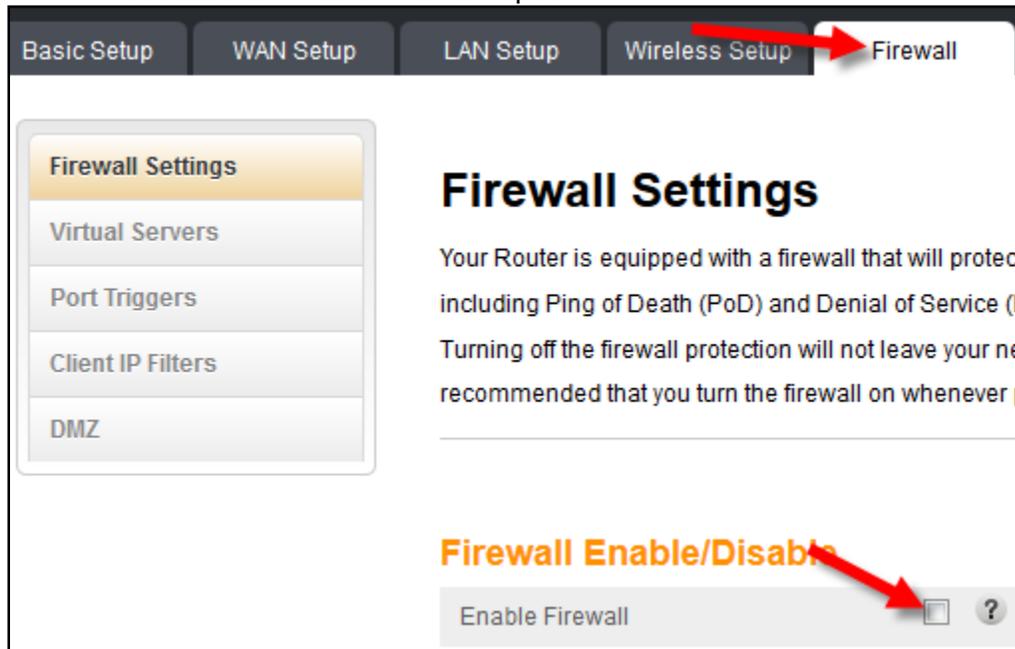
25.   Click the "Apply" button.
26.   Click the "Firewall" tab, if needed.
27.   Click the "DMZ" button.
28.   Select the "Enable DMZ" option.
29.   Enter "192.168.1.1" in the Private IP field.
        • If a different IP address was assigned to the customer owned router in step 14, enter
          it instead.
30.   Click the "Apply" button.
31.   Connect an Ethernet cable to port "1" on the Gateway.
32.   Connect the other end of the same Ethernet cable to the Internet/WAN port on the
        customer owned router.
33.   Power cycle the customer owned router to ensure a valid IP address is obtained.
34.   Refresh the IP address of all devices connected to the customer owned router's wireless
        or Ethernet connections.
35.   Verify devices are connecting to the Internet.