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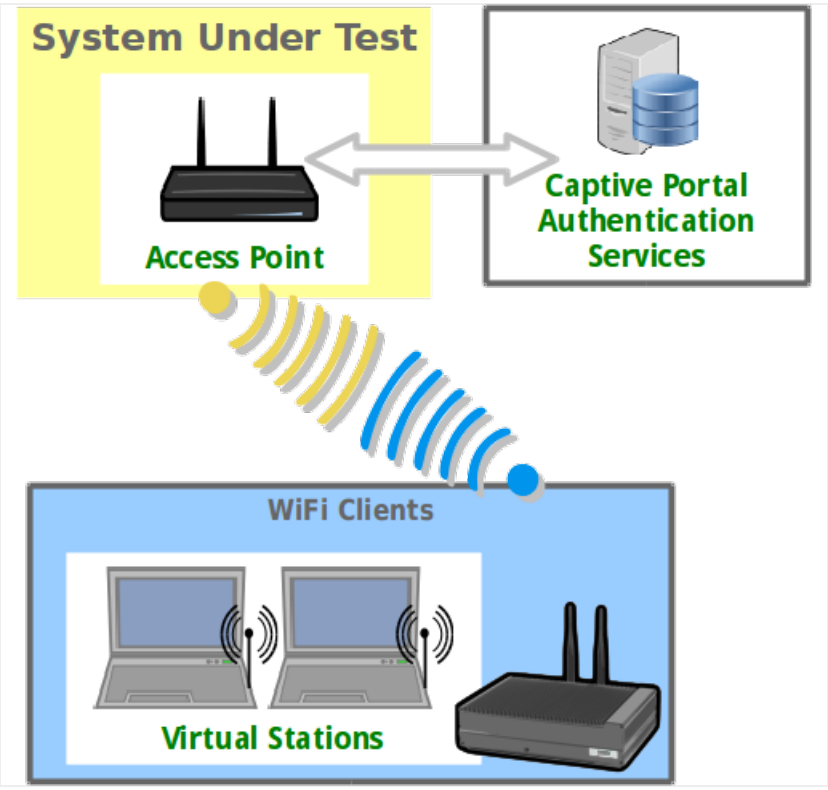
WiFi Captive Portal Login

Goal: Create many user sessions to a WiFi captive portal gateway.
Airports, arenas and coffee shops often offer open WiFi service that is gated with a web sign-on form. This is called a captive portal. LANforge can run a custom login script on a virtual station to emulate sign-in on the captive portal web page. The following example will create one hundred stations and have them authenticate through a captive WiFi portal.



1. Prepare a portal login script (`lf_ifup_post`)
2. The `lf_ifup_post` script will be called after DHCP assignment for a station occurs. It can also be called before DHCP release. This script is called from the LANforge resource hosting the virtual station.
    A. The script should be in directory `/home/lanforge/`.
    B. LANforge will pass these arguments to the script
        A. `-i` - station device
        B. `--ip4` - station ip address
        C. `--ip6` - station ipv6 address
        D. `--dns` - station DNS address
        E. `--mgt` - pipe name for reporting results to LANforge
    C. Custom parameters to the script can be provided.
    D. The script can have another name.

E. LANforge expects these return values:

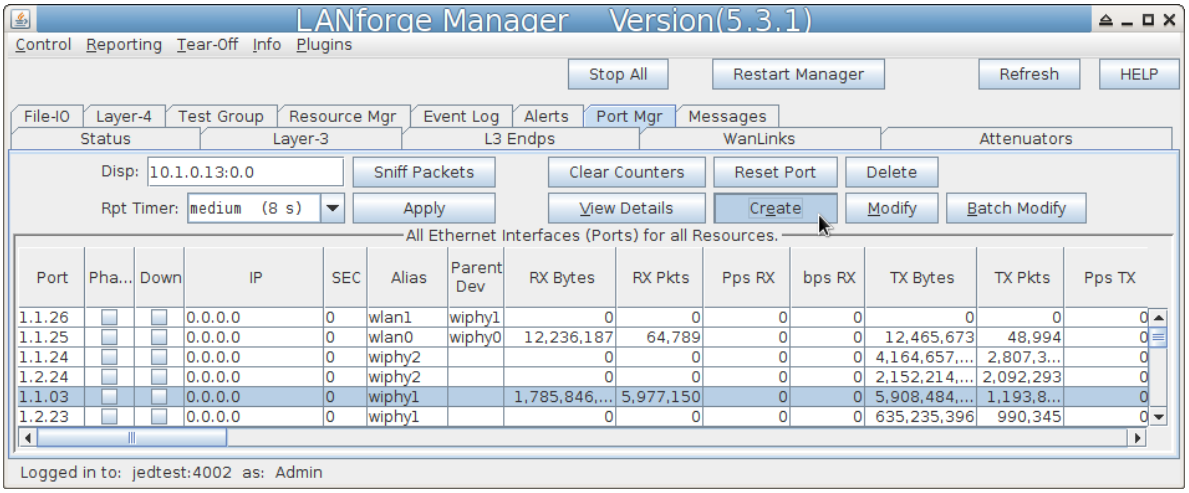
A. **OK**

B. **FAIL**

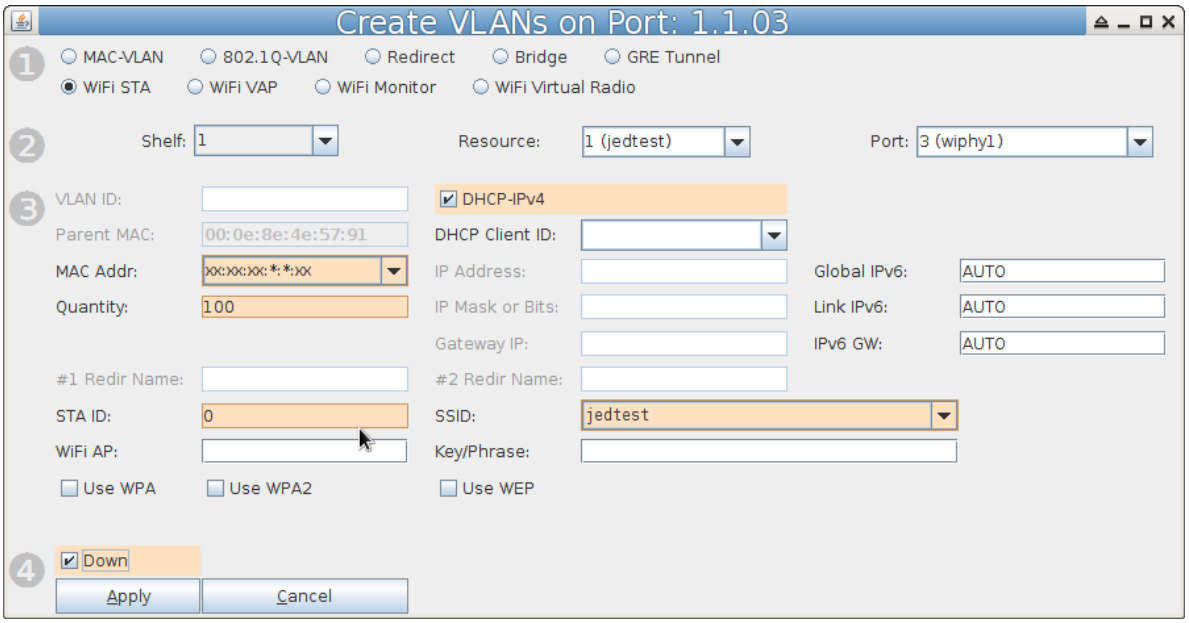
C. **FAIL:reason**, this provides feedback on failure occurrance.

3. Create WiFi stations

A. In the **Ports** tab, select *wiphy1* and click **Create**



B. In the **Create VLANS** window, craft ten wifi stations:



A. Select *WiFi STA*

B. For MAC address, choose `xx:xx:xx:*:*:xx`

C. Select *DHCP-IPv4*

D. Enter *Quantity* **100**

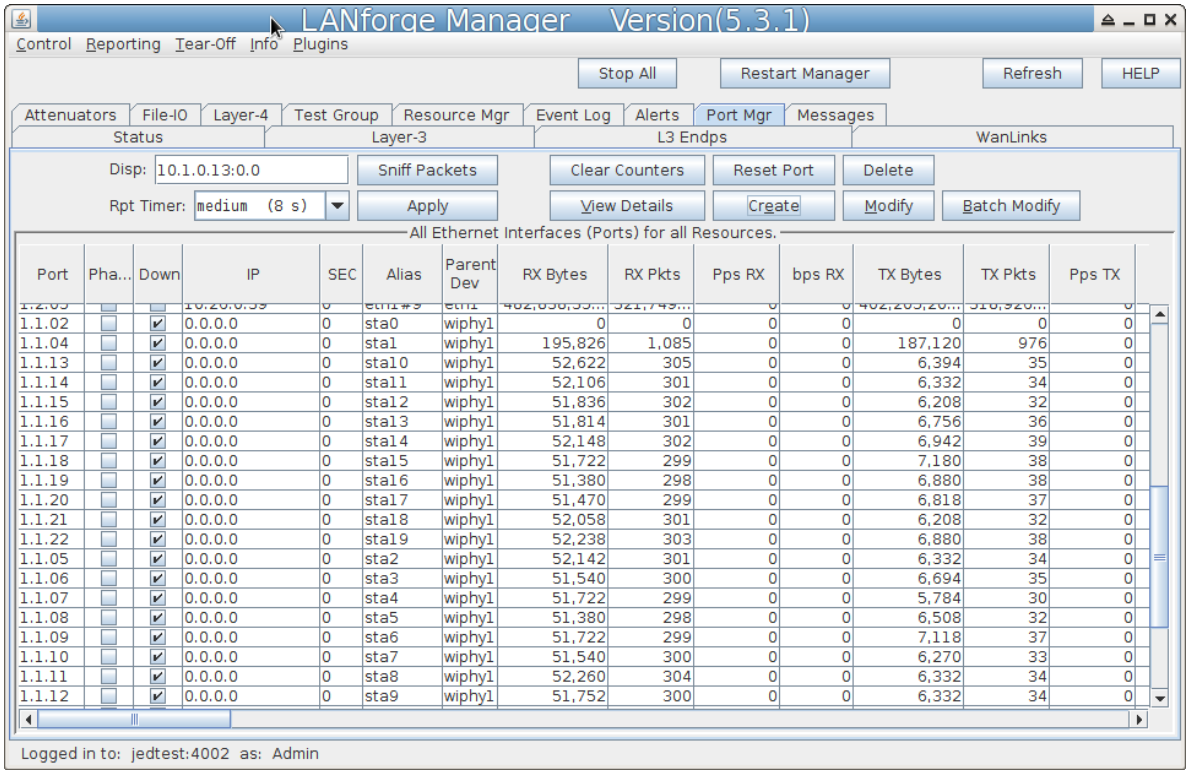
E. Specify **0** for *STA ID*

F. The example *SSID* for this cookbook is `jedtest`

G. Select the **Down** option. This postpones the stations making a DHCP request until they are explicity admin up.

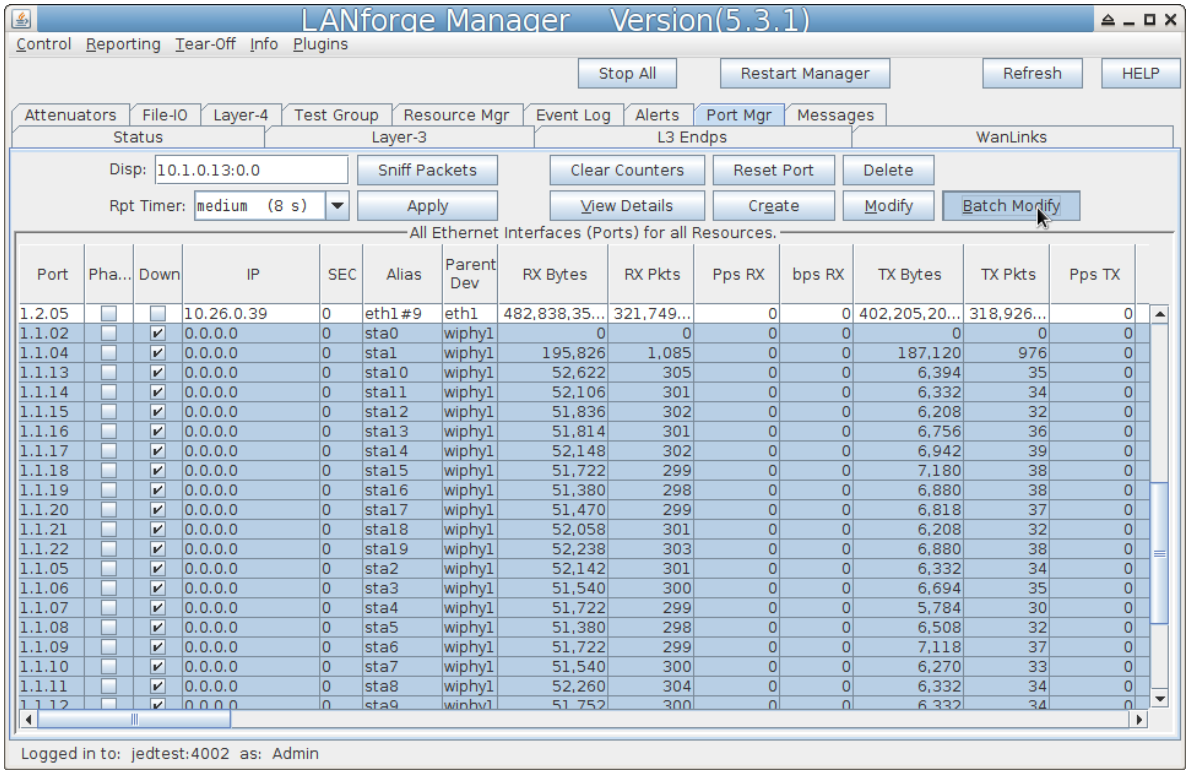
H. ...and then click **Apply**

C. You will see ten station created:

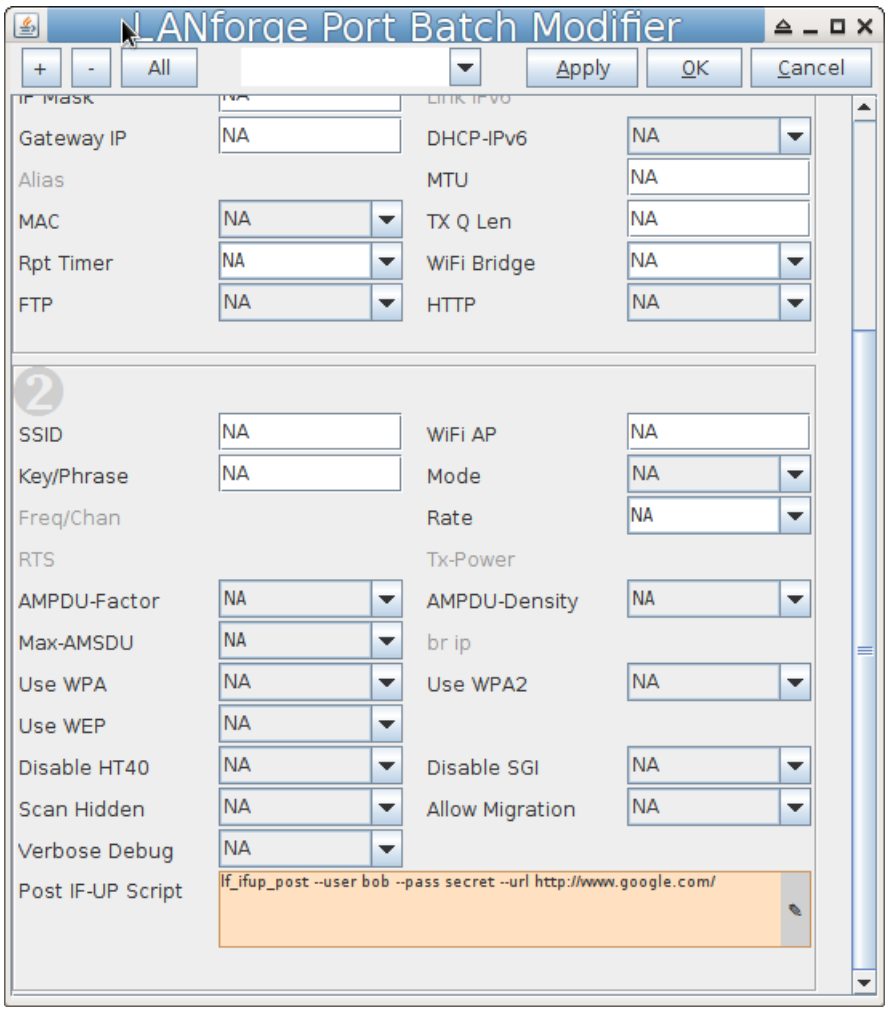


4. Batch Modify Stations in order to update `lf_ifup_post` parameters

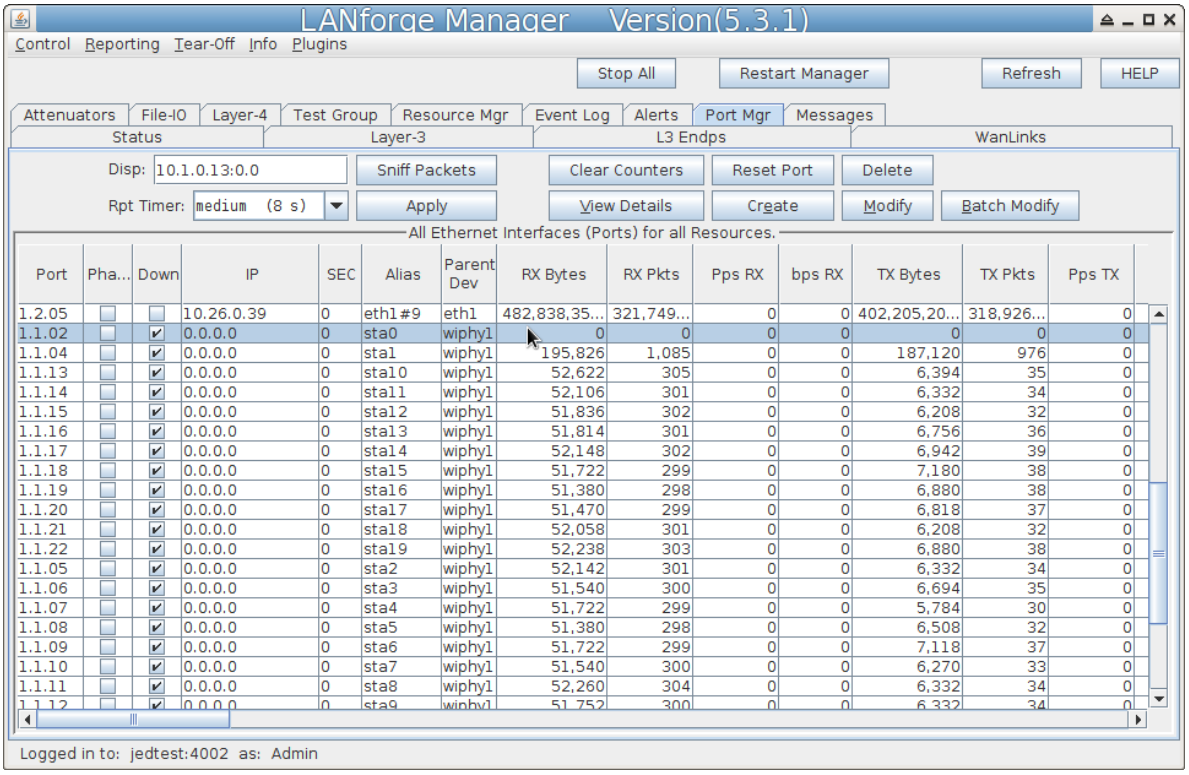
A. Highlight stations and click **Batch Modify**



B. In the *Batch Modify* screen, click the **+** button and expand to Group 2.

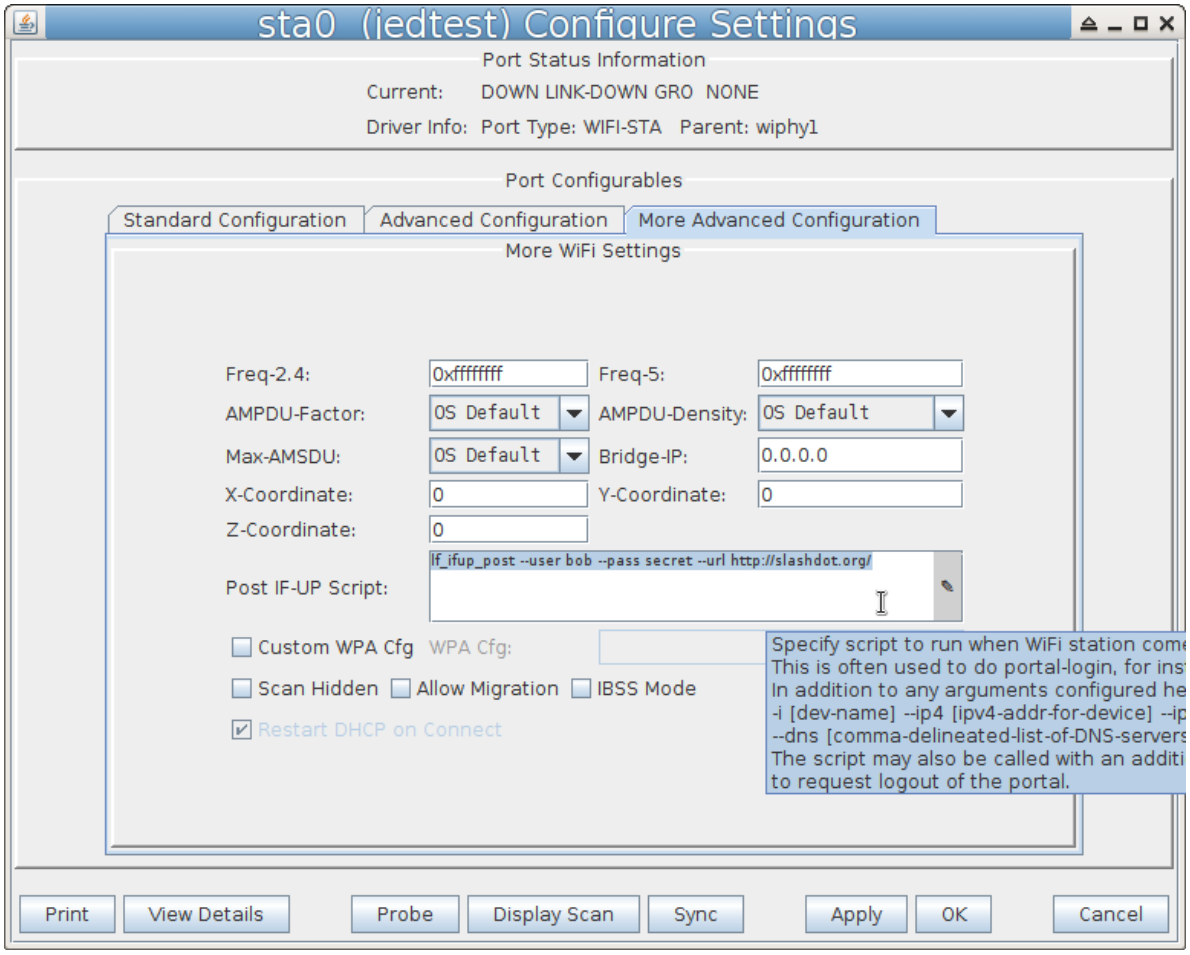


C. Edit the IF POST field. Enter the file name and any extra arguments that the script will want for this port.
Example: `lf_ifup_post --user bob --pass secret --url http://slashdot.org/`



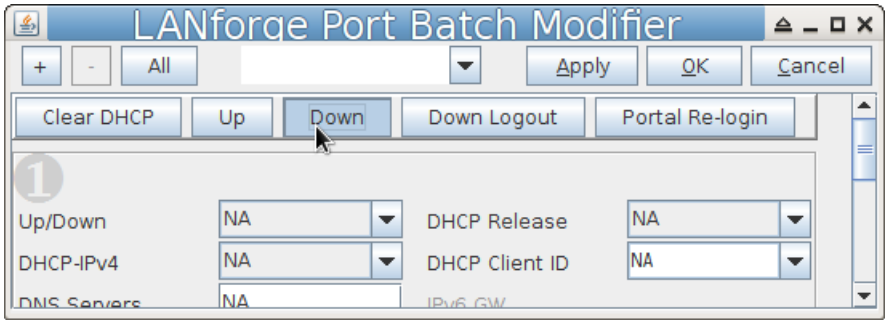
D. Click the **Apply** button to apply the changes. Do not close the window yet.

E. To check the value of each port's **IF/UP Post** you can use the *Ports* tab. In the port *Configure Settings* window, in the **More Advanced Tab** you can find the IF/UP script value.

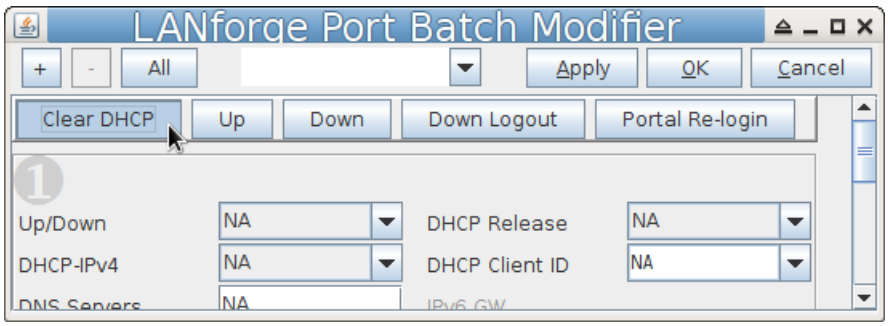


5. Testing a station. We will toggle it up and down and look at the logs to find problems.
   A. Highlight one of your stations in the *Ports* tab.
   B. Set the *Report Time* to `1s` and click **Apply**
   C. In the *Batch Modify* window, click the **Up** button. This is the same as settting **Up/Down** to **UP** and clicking **Apply**
   D. Watch the *Wireless Messages* and *LANforge Messages* windows for error messages. The *Ports* tab will update the station status.

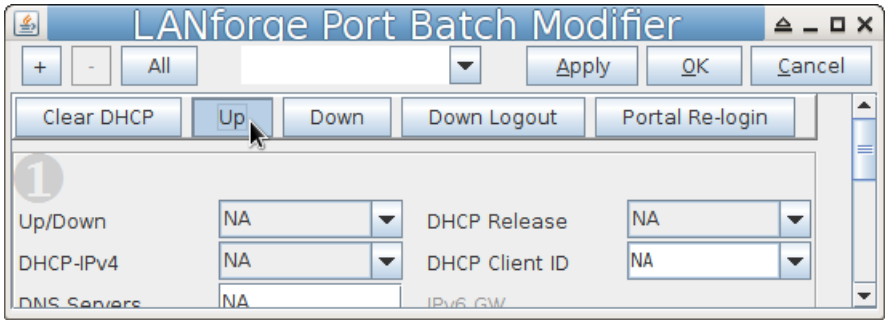
6. Use the *Batch Modify* window to **Force DHCP Renewal**
   A. Click **Down**



B. click **Clear DHCP**

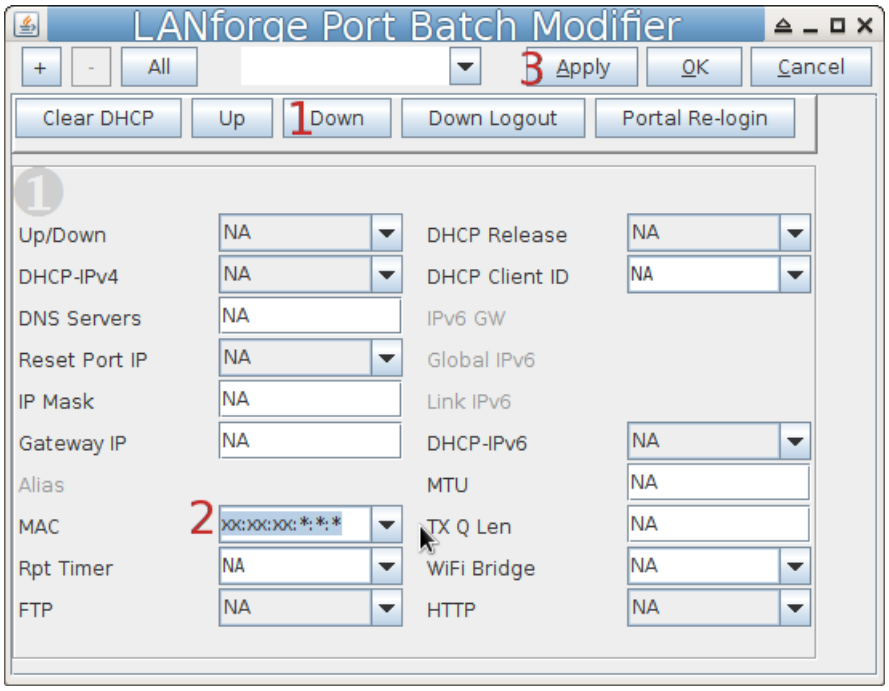


C. click **Up**



7. Use the *Batch Modify* window to **Re-Login to Portal**
   A. Click **Portal Re-Login**
   B. *If you wanted to change other parameters:*
   C. Click **Down Logout**
   D. Set *Up/Down* to **Down**
   E. Change another station parameters and then click **Apply**
   F. Click **Up**

8. Use the *Batch Modify* window to **Change station MAC addresses**



   A. Click **Down**
   B. Set *MAC Addr* to `xx:xx:xx:*:*:*` randomize the mac address

C. Click **Apply**

D. Click **Up**