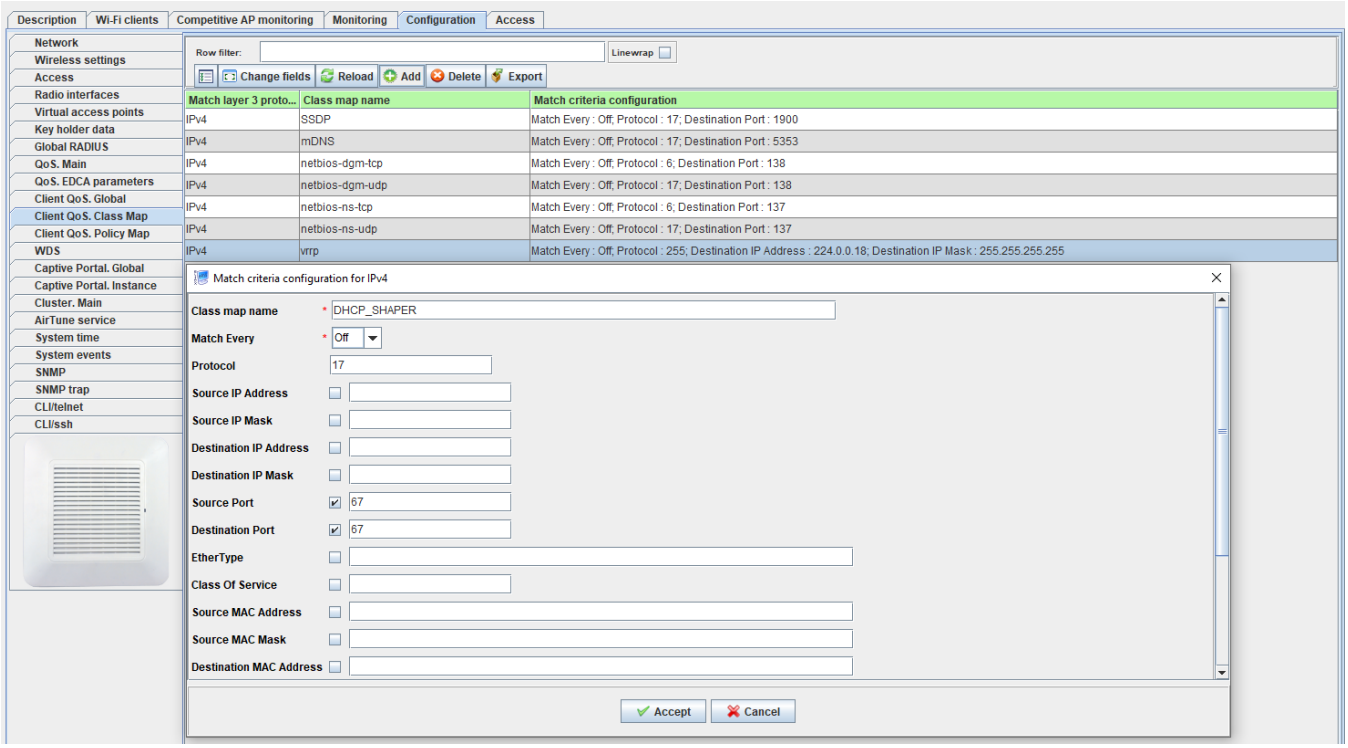
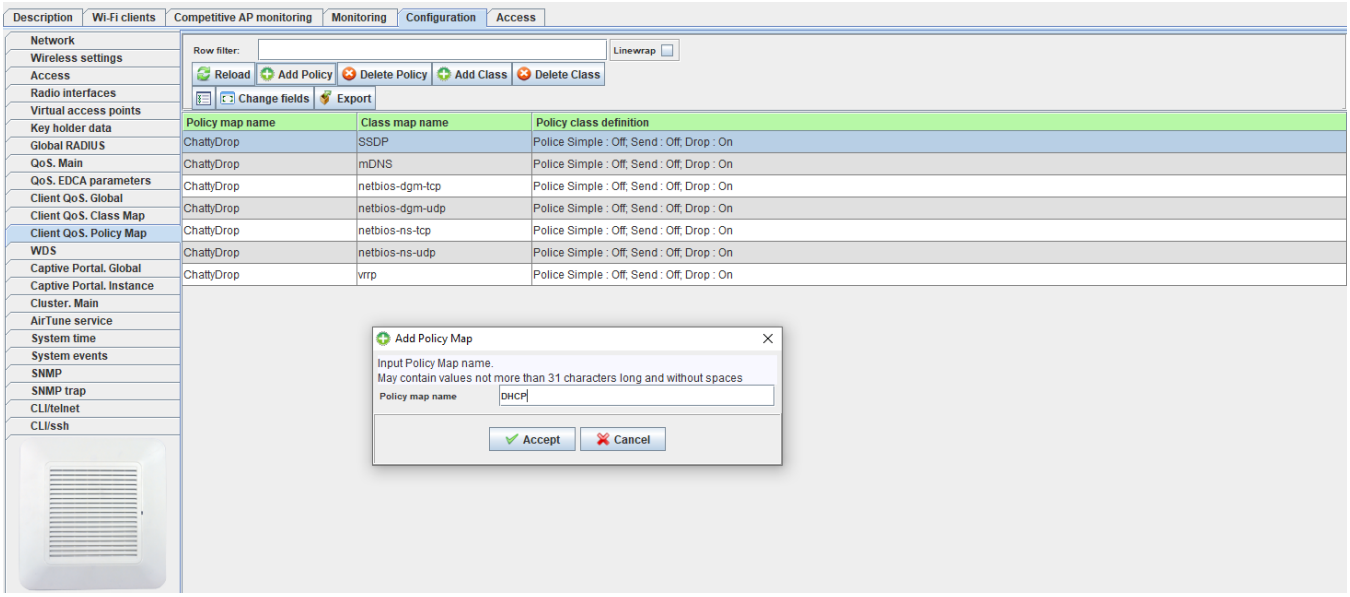
v1.14_Setting 'Rate limit' (DHCP traffic) on AP and ESR

To configure DHCP shaper via EMS on an access point:

1. Select Configuration
2. Select Client.QoS Class Map tab
3. Add a required class
4. Protocol = 17 (UDP), Source/Destination Port = 67

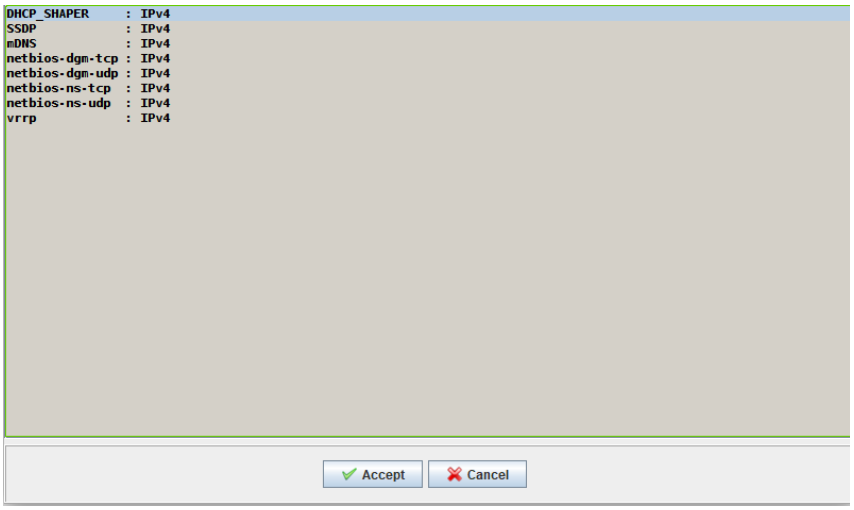


When the class is created, select Client.QoS Policy.Map and add a policy ("Add Policy" button).

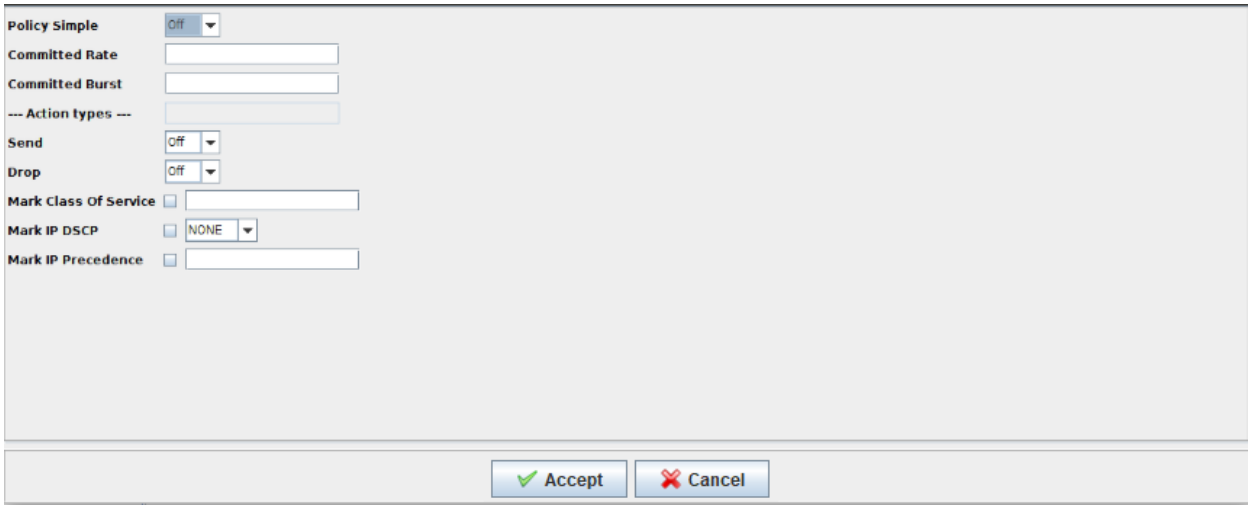


Then add the class to the policy.
To do that, select the class and click "Add Class" button.

```
63
Host is up (0.00056s latency).
PORT     STATE         SERVICE
```



After that, specify limits and action in the opened window.

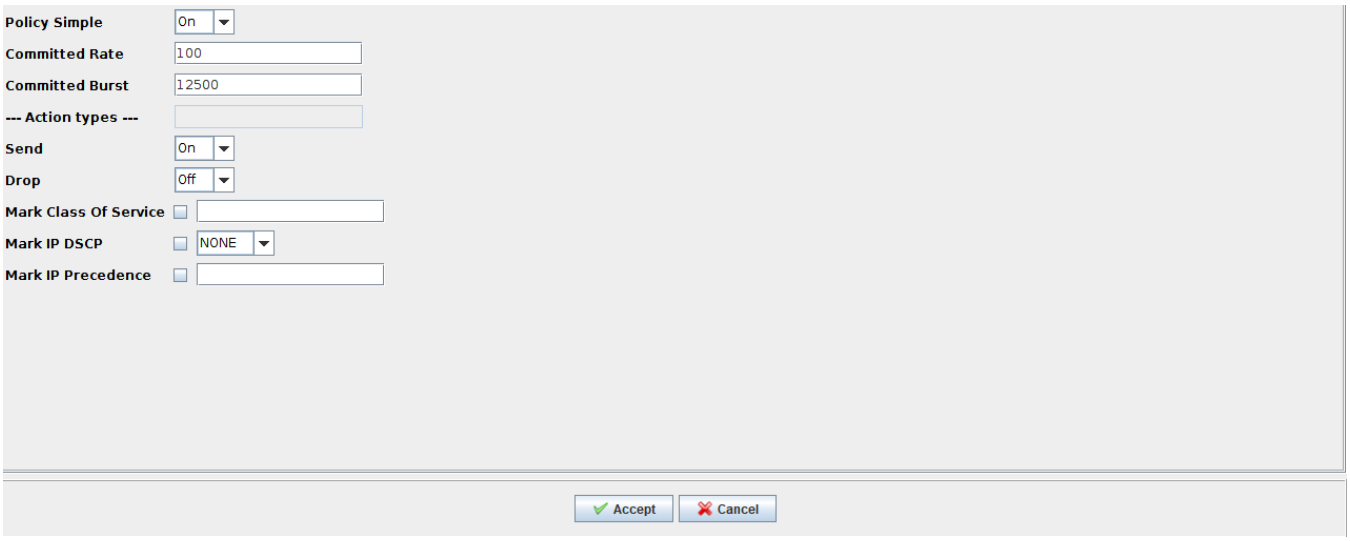


Policy Simple is a simplified setting where two parameters are defined:

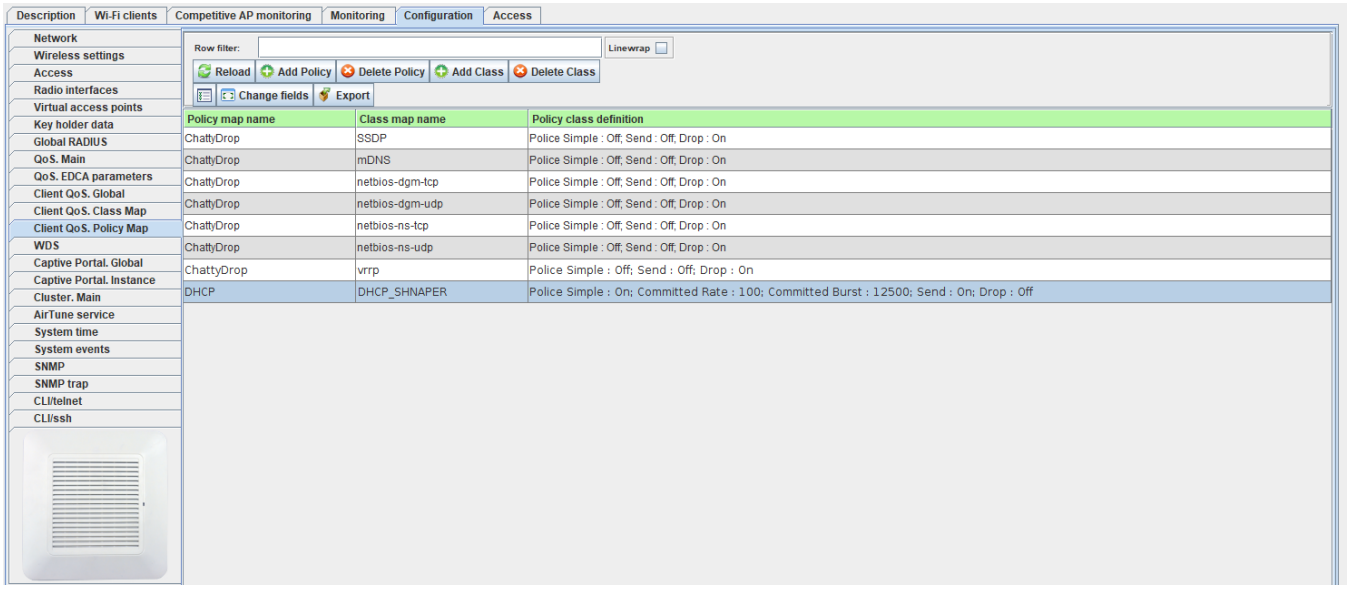
- Committed Rate — the bandwidth guaranteed for matching traffic.
- Committed Burst — the maximum packet size in bytes that conforms the amount of traffic sent. It should ideally be 1.5 times higher than Committed Burst in bytes to work correctly.

The action performed on the traffic should be selected in Action types.
Send — if set to On, all packets of corresponding traffic flow will be transmitted;
Drop — if set to On, all packets of corresponding traffic will be dropped.

Only the traffic with certain speed should be transmitted, the rest of the packets should go to Drop. Consequently, enter the values and set Send to On.



The result will be a rule limiting DHCP traffic to 100 kbps.



When configuring a shaper on ESR, either Discover (from client to server) or Offer (from server to client) transmitting may be limited.

1. Limiting DHCP Discover transmitting from client to server

```
security zone-pair any self
  rule 999
    action permit
    rate-limit pps 2
    match not fragment
    match protocol udp
    match destination-port DHCP
    enable
  exit
exit
```

2. Limiting DHCP Offer transmitting from server to client

```
security zone-pair apuser any
  rule 999
    action permit
    rate-limit pps 2
    match not fragment
    match protocol udp
    match destination-port DHCP
    enable
  exit
exitt
```