How we configured >100 routers in .1 sec

Note the dot

The Context

- Network provider
- Vendor Zoo
- ~100K routers, switches, etc.
- Only thing in common - SSH
- Engineers configure manually
- Let’s write some code to rescue

Socket Programming

- Of a healthy person:

```
s = socket()
s.write(“command\n”)
result = s.read()
s.write(“command\n”)
result = s.read()
s.write(“command\n”)
result = s.read()
```

- The smoker:

```
s = socket()
s.write(“command;command;conquer\n”)
result = True
```

The Speed Gain

- 30 sec – 1.5 min
  Netmiko (Paramiko)
- 0.1 – 0.5 sec
  Our lib

Wait, but...

- Hand the socket over to background thread, receive response from device,
  log it
- If everything was fine you don’t need it
- If smth bad happen, you read the logs

Sugar on top

- External testing:
  ARP-tables filled up with mac-address
  when the ping reaches the host
  inside the valid vlan

  So, we got ARP == we made a vlan

  No need to read (parse) device’s response

- Cheap threads = 1000 devices in >1 sec

- Or 10 000 devices for that matter

Show me the code

- https://github.com/iberestenko/highload

The End

- I will add more details and couple slides, but will keep the brief spirit
- Maybe some pics for fun as well
- Thanks