

The grading of 'IP over DNS' project consists of the following parts

- 1 Code
 - a) Submit in time
 - b) Necessary comments in code
 - c) Completeness of required features
- 2 Readme file
 - a) The dependency of your program and how to run your program
 - b) Features of you implement.
 - c) Testing on your solution and expected testing result.
- 3 Report
 - a) Background: You need to show your understanding for the following parts and how they work in your project
 - i. TUN interface, TUN tunnel
 - ii. DNS
 - iii. Proxy/NAT
 - b) Implementation:
 - i. The network topology
 - ii. Design of your solution. How you set up TUN, how you configure the routes, how you encode data and your protocol design between the client and the server
 - iii. Extra features you implement. (optional)
 - iv. You need to explain your code here. You should put on some important code as well
 - c) Testing: the testcase on your solution and analyze the result with screenshots
 - d) Contribution: Please specify the contributions of group members
 - e) Conclusion
 - i. What you have learned in this project
 - ii. Have you met any problems and how did you solve them
 - iii. Any other you want to say about this project
- 4 Presentation
 - a) Slide: please give brief presentation of your project based on your report:
 - i. The challenges (such as encoding, asymmetry, fragmentation, etc.) and your solution.
 - ii. The network topology and your implements.
 - iii. etc.
 - b) Demonstrate your project refer to the checklist
- 5 Bonus

Including but not limit to

 - a) Improvement on transmission efficiency
 - b) Improvement on convenience of use
 - i. Script automatically setting up configuration of interface/routes/proxy/... and start the program
 - ii. Script to stop the program and recover the configuration before the program

start

- c) Improvement on privacy
 - d) Any other feature you think interesting
- What to hand in
 - a) Source code
 - b) Readme file
 - c) Report
 - d) Slide for presentation
- Checklist:
 - 1) Settings
 - a) Set up TUN interface on client and server
 - b) Configure above TUN interface
 - c) Configure routes at the client to use TUN interface
 - 2) Testing
 - a) *ping* test from client to server
 - b) *ping* test from server to client
 - c) a forwarding mechanism on Server (proxy or NAT) Use the tunnel for internet access (HTTP and any other application protocol)
<http://pv.sohu.com/cityjson>
<http://www.net.cn/static/customercare/yourip.asp>
<https://whoer.net/>
<https://ip.900cha.com/>
if your tunnel works, the above webpages will show the IP address of the server as "your IP address" instead of your real IP address
 - d) bonus feature