

ASSIGNMENT 7

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Question 1

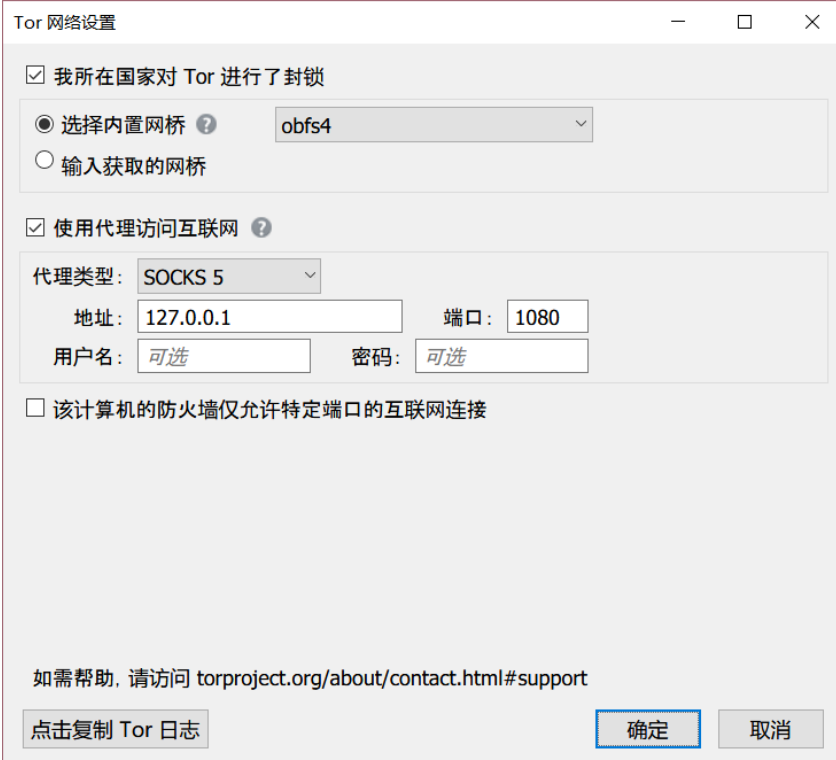
Attack: adversary operates all of the mixes

如果仅仅使用一个 mixing server, 很有可能 attacker 会逆向解析出 Tor 线路, 从而得到 source ip。使用多个 mixing server 可以大大提高 attacker 攻击的难度, 从而提高匿名性。

Question 2

Tor Browser Config

Tor Browser 配置见图 1



The screenshot shows the 'Tor 网络设置' (Tor Network Settings) window. It contains the following elements:

- A checked checkbox: '我所在国家对 Tor 进行了封锁' (My country has blocked Tor).
- Two radio buttons for bridge selection:
 - Selected: '选择内置网桥 ?' (Select built-in bridge ?) with a dropdown menu showing 'obfs4'.
 - Unselected: '输入获取的网桥' (Enter bridge from list).
- A checked checkbox: '使用代理访问互联网 ?' (Use proxy to access the Internet ?).
- Proxy configuration fields:
 - '代理类型:' (Proxy type) dropdown set to 'SOCKS 5'.
 - '地址:' (Address) text box containing '127.0.0.1'.
 - '端口:' (Port) text box containing '1080'.
 - '用户名:' (Username) text box containing '可选' (Optional).
 - '密码:' (Password) text box containing '可选' (Optional).
- An unchecked checkbox: '该计算机的防火墙仅允许特定端口的互联网连接' (The firewall on this computer only allows Internet connections on specific ports).
- Footer text: '如需帮助, 请访问 torproject.org/about/contact.html#support'.
- Buttons at the bottom: '点击复制 Tor 日志' (Click to copy Tor logs), '确定' (OK), and '取消' (Cancel).

图 1: Tor Browser Config

Hide IP address

SJTU ip address: 202.120.19.66

我们使用 Tor Browser 实现 Onion Routing, 我们发现其中 Tor 线路为

$STJU\ ip(202.120.19.66) \rightarrow Tor\ Brige \rightarrow 195.123.216.239 \rightarrow 178.141.178.136 \rightarrow Internet$

我们同样在 Tor Browser 查询 ip, 发现 ip 地址确实显示为: **178.141.178.136**, 见图 2



图 2: Tor Browser

Change IP address from Tor

为了加强 Tor Browser 的匿名性, 我们间歇性地更换 IP 地址, 新建 Tor 线路, 见图 3.

$STJU\ ip(202.120.19.66) \rightarrow Tor\ Brige \rightarrow 195.154.181.146 \rightarrow 94.130.182.104 \rightarrow Internet$

我们发现, ip 地址更改为 **94.130.182.104**



图 3: Change IP address