

Man in th Middle

Team 5

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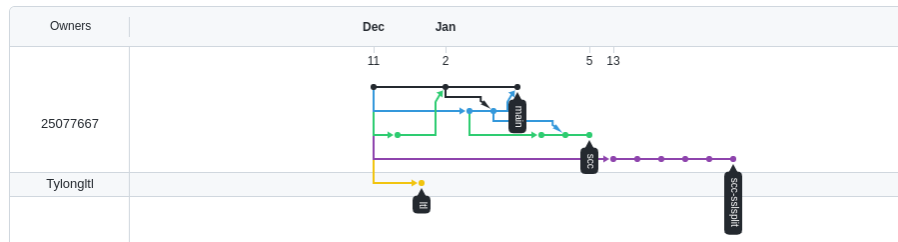
M093040094 Wen-Tao Wang

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GitHub repository

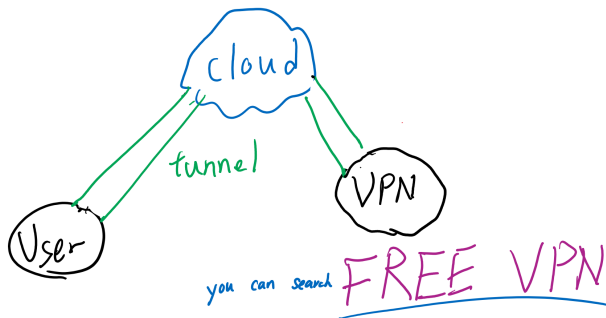
Network graph

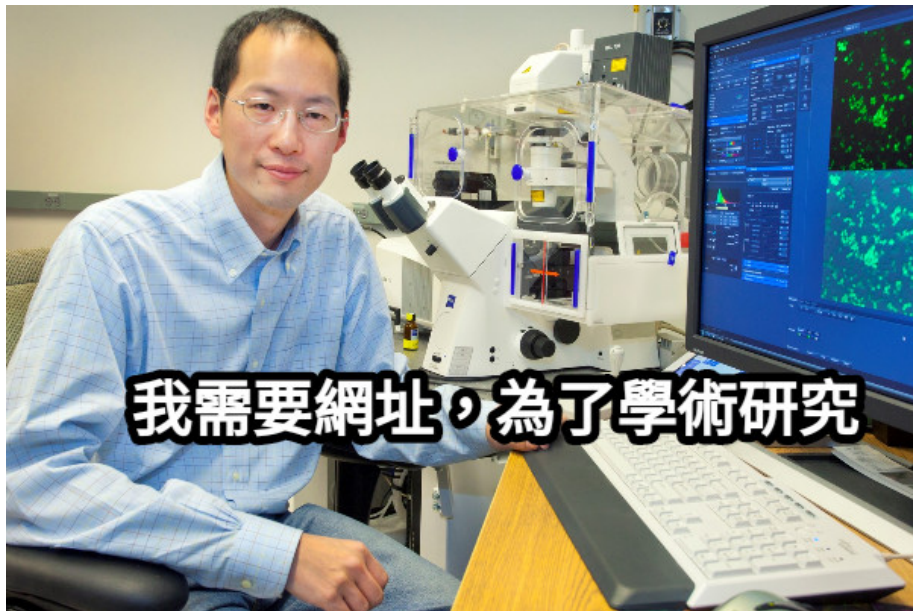
Timeline of the most recent commits to this repository and its network ordered by most recently pushed to.



Scenario

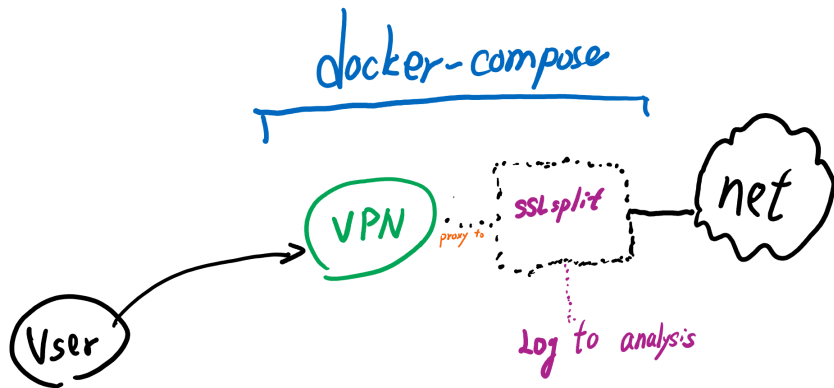
User: Wow, there is a **FREE** vpn to **NSYSU**.





我需要網址，為了學術研究

Architecture



Video Records

Vulnerabilities

```
..
48     var pwdmask = "*****";
49     /* NSYSU00s begin 0p00K0X0[0K00(0)0000000000s0K0X, 0000|0K00}) */
50     // var md5key = MD5(node.password.value);
51     // var cypkey = md5key.substr(0,4) + node.Login_key.value.substr(0,4);
52     var cypkey = node.Login_key.value.substr(0,8);
53     /* NSYSU00s begin end */
54     node.encrypt_pwd.value = stringToBase64(des(cypkey, node.password.value, 1));
55     node.password.value = pwdmask.substr(0,node.password.value.length);
56
57     return true;

```

```
▼ <form method="post" action="/login.php" id="loginForm" name="loginForm" onsubmit="return formSubmit();" autocomplete="off">
  <input type="hidden" name="reurl" value>
  <input type="hidden" name="login_key" value="3041aad0ed4a952bf8e4501c1291188">
  <input type="hidden" name="encrypt_pwd" value>
  ▶ <div id="loginBlockContainer">...</div> == $0
</form>

```

- login_key: 3041aad0ed4a952bf8e4501c1291188
- encrypt_pwd: SQNsTh2hn82RYnDMkn/7u3blVO+u62p4

Hint

$$F = \text{base}_{64}^{-1}$$

$$G = \text{DES}^{-1}(3041aad0ed4a952bf8e4501c1291188)$$

$$\text{Flag: } G \circ F(\text{encrypt_pwd})$$

DNS pollution

Hack you in silence

Solution: Certificate pinning