员工侧安全

一站式解决方案最佳实践

止介(Feei)



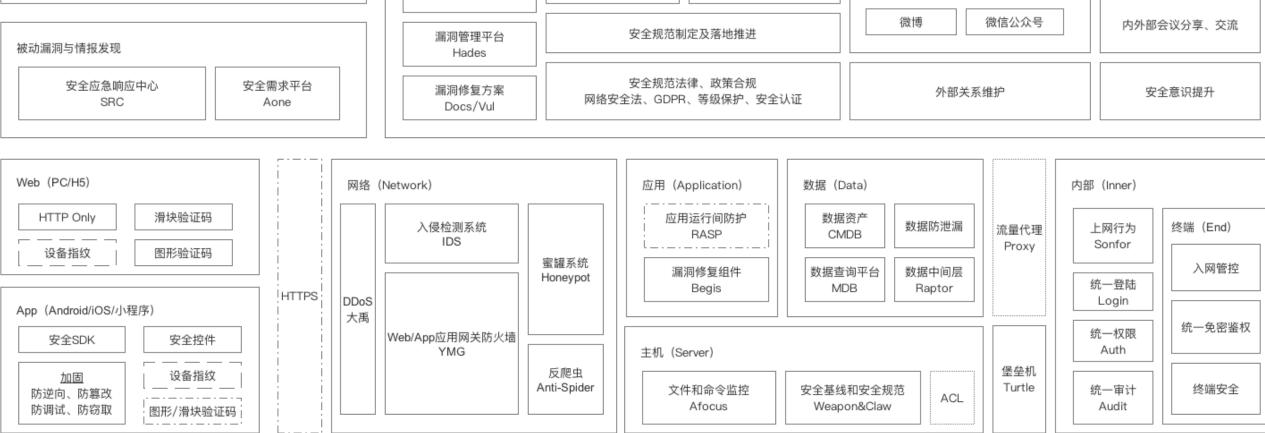


- ▶ 白帽子, Cobra、GSIL作者
- ▶ 专注漏洞自动化发现与防御
- ▶ 美丽联合集团 网络信息安全总监

美丽联合集团网络信息安全架构(2018 by Feei)

缺陷 | 深入中 | 建设中 | 未涉及





Staff Endpoint Security



- Wi-Fi Attack
- VPN
- Username&Password
- Malware/Vulnerability
- LockScreen
- Security Config

Wi-Fi Attack







AIRCRACK-NG



Social Engineering

VPN/Username&Password





Vulnerability&Malware

- CVE-2017-8768 SourceTree RCE <=2.5c
- JetBrains All IDES RCE&LFD <=2016.1
- XcodeGhost malware
- Sparkle Updater(iTerm/SequelPro/Tunnelblick) MITM&RCE



















LockScreen





Security Resolution

Zero Trust

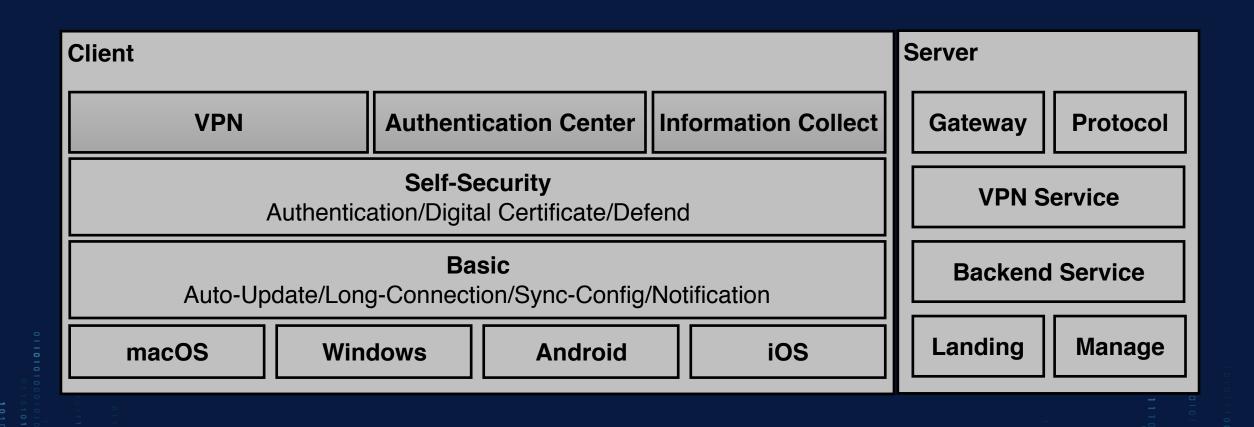
- · No INTRANET
- · No PASSWORD
- ANYTHING NEED AUTH
- · AUTH BY USER+DEVICE
- TRAFIC AND AUDIT

Security Resolution

- · Wi-Fi Attack
- VPN
- · Username & Password

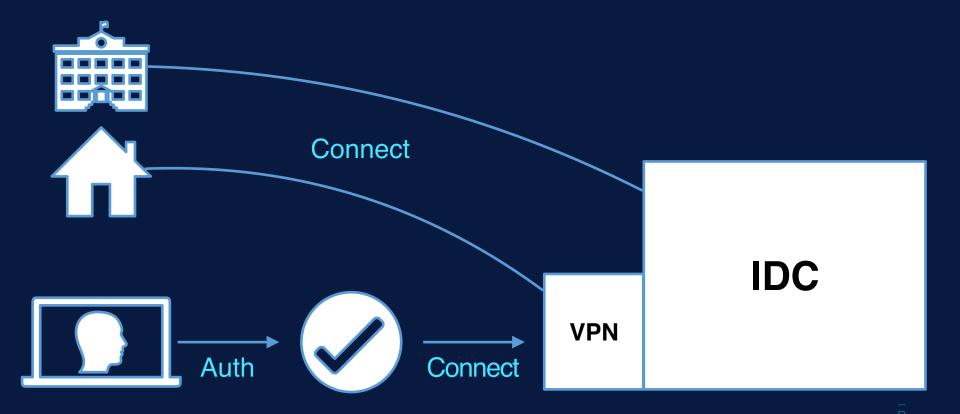
- Malware/Vulnerability
- · Lock Screen
- · Security Config

One Client Solves All



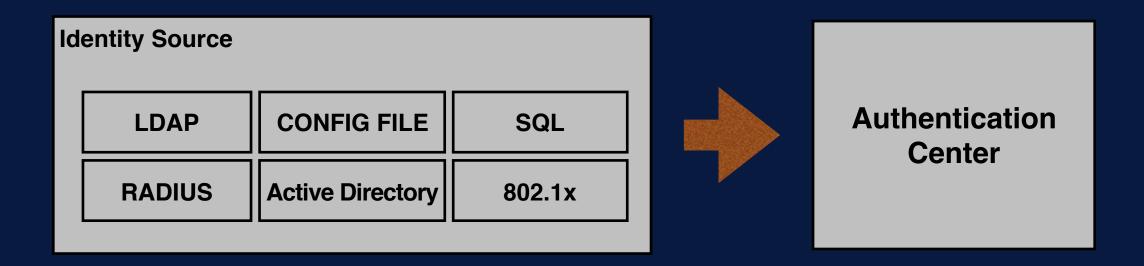
VPN

Before Base Network

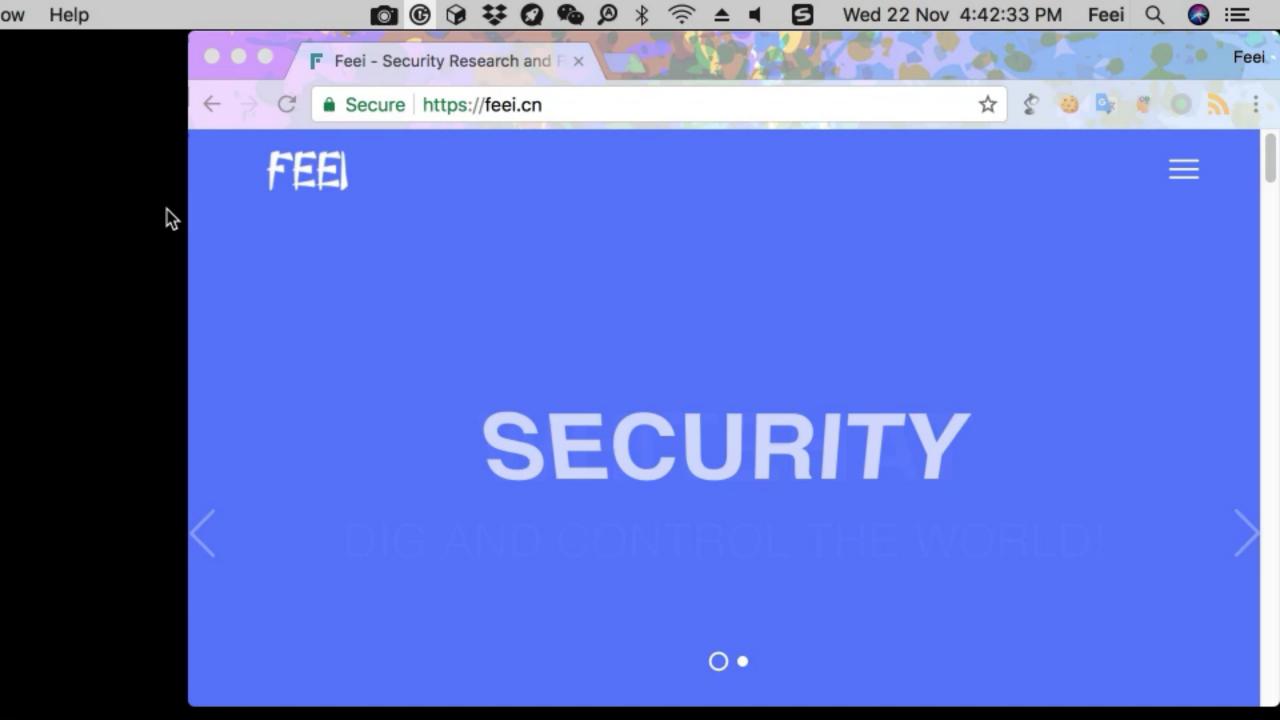


After Base User/Device

Authentication Center





















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Feei Q



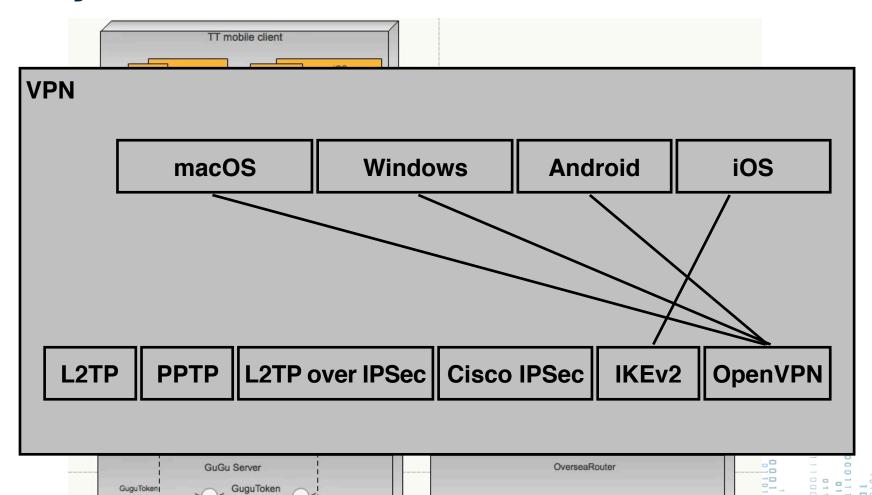


→ Projects _



Difficulty 1: Cross Platform VPN

- Cross Platform
- Extensibility
- Stability
- Security



Difficulty 2: No-password for VPN

Token交互流程

Client Server 1. 发送认证信息(用户名、密码、验证码)、 基础信息(序列号、IP等) 2. 生成一个SessionID并返回给客户端, 客户端储存好 3. 每次发送请求 (Socket、HTTP) 时 都带上这个SessionID。 约定统一的错误码,遇到Token验证失败时客户端 删除Token并退出登录状态。

Token生成规则

- 随机数(客户端存储)
 32位随机字符串(数字字符)
- 防伪造(服务端存储)
 随机数生成时和客户端传上来的序列号进行绑定
- 标识用户(服务端存储)
 随机数生成时和验证通过的UID进行绑定
- 4. 生效时间(服务端存储) 后台记录随机数的生效时间

Token失效规则

随机数不符合32位数字字符的规则 随机数不存在 随机数和序列号不是一对 随机数和UID不是一对 随机数全效时间超过7天

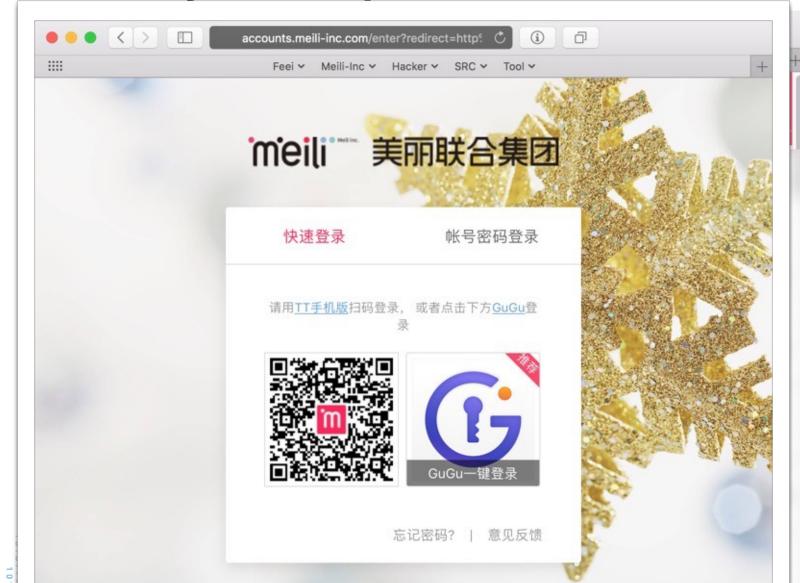
退出时删除随机数及对应信息

Difficulty 2: No-password for Web

GuGu免密交互流程

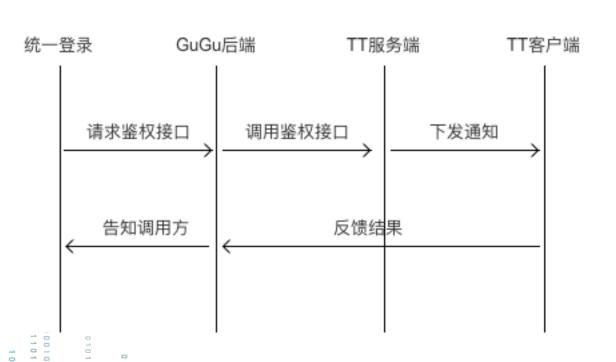


Difficulty 2: No-password for Web



Difficulty 2: No-password for App

GuGu移动端免密鉴权方案





- 在手机浏览器中打开统一登录
- · 统一登录根据User-Agent判断是手机
- 显示移动端一键登录的按钮
- 请求GuGu后端接口,拿到SUT(Single Use Token)
- 点击GuGu Logo



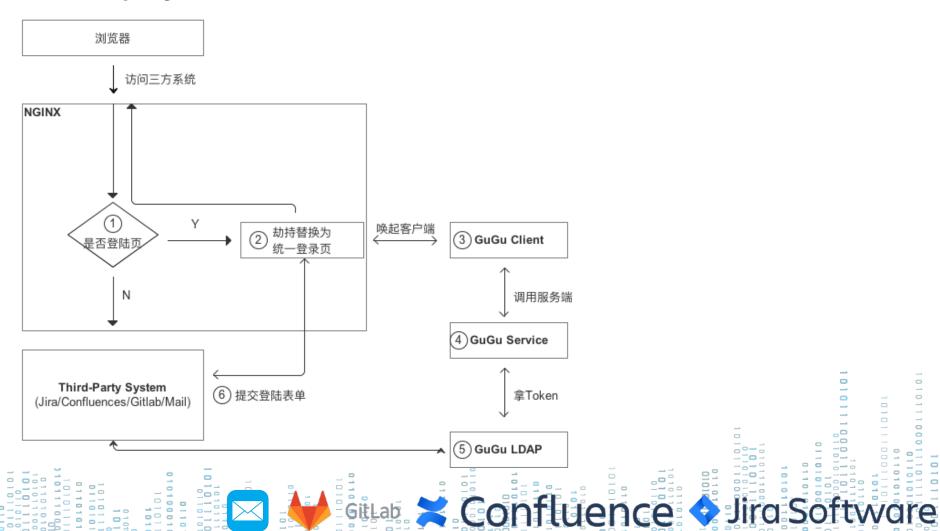
- 弹出加载中的浮层
- 通过iFrame加载Schema跳转到TeamTalk授权页
- · Schema中附带了SUT
- 向GuGu后端轮询授权状态
- 授权通过则获取LoginToken
- 拿到LoginToken走登陆流程



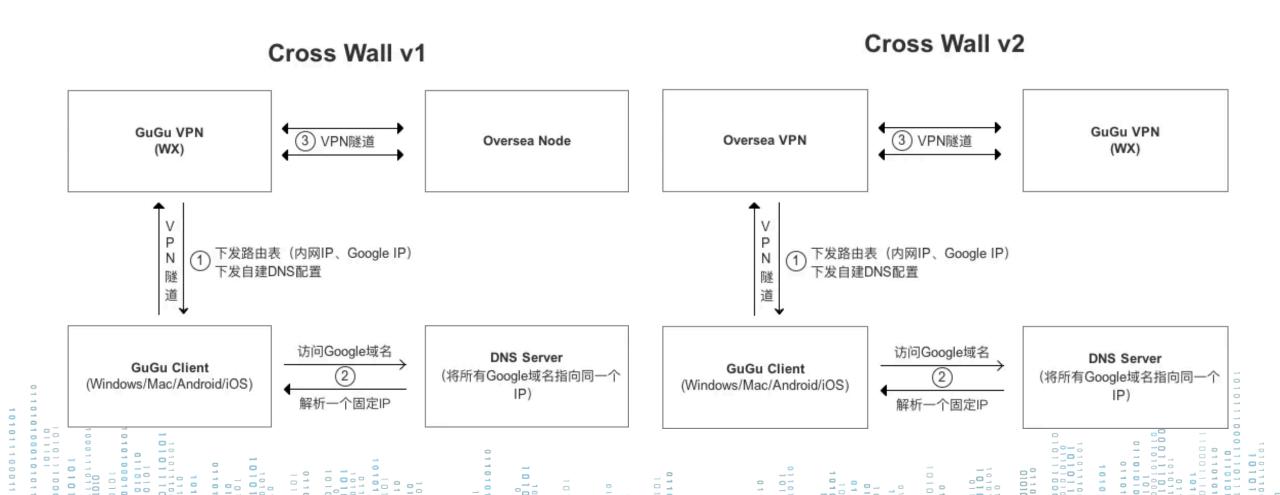
- 拿SUT找GuGu后端验证,若SUT不存在则不显示授权页
- · SUT验证成功,则拿到【业务方】和【操作】并展示授权页
- 占击通过
- 调用GuGu后端接口,发送SUT+TT Token至GuGu后端
- · GuGu后端将会向TT后端验证TT Token有效性, 授权成功
- 关闭当前授权页面
- 唤起浏览器或引导用户返回打开浏览器

Difficulty 2: No-password for Third-party

Third-party No-Password Authentication



Difficulty 3: Cross Wall



Difficulty 4: Malware



- Software Name
- Software Version
- Software MD5



- · CVE
- Exploit-DB
- Blog/Site

Difficulty 5: Linkage

- SANGFOR
- Threadbook
- · IDS
- Firewall
- Device Fingerprint
- Awareness Training

THANKS

Q&A