base64 隐写，python解码工具

原创

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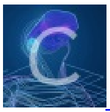 技巧 专栏收录该内容

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flag.txt

```
Q2V0dGUgbnVpdCwK
SW50ZW5hYmxlIGluc29tbmllLAp=
TGEgZm9saWUgbWUgZ3VldHRlLAo=
SmUgc3VpcyBjZSBxdWUgamUgZnVpcwp=
SmUgc3ViaXMsCt==
Q2V0dGUgY2Fjb3Bob25pZSwK
UXVpIG1lIHNjaWUgbGEgdOmUmnRlLAp=
QXNzb21tYW50ZSBoYXJtb25pZSwK
RWxsZSBtZSBkaXQsCo==
VHUgcGFpZXJhcyB0ZXMgZGVsaXRzLAp=
UXVvaSBxdSdpbCBhZHZpZW5uZSwK
T24gdHJh5Y2vbmUgc2VzIGNoYWNr25lcywK
U2VzIHBlaW5lcywK
SmUgdm91ZSBtZXMgbnVpdHMsCm==
QSBsJ2Fzc2FzeW1waG9uaWUsCl==
QXV4IHJlcXVpZW1zLAr=
VHVhbnQgcGFyIGRlcGl0LAq=
Q2UgcXVlIGplIHNlbWUsCt==
SmUgdm91ZSBtZXMgbnVpdHMsCp==
QSBsJ2Fzc2FzeW1waG9uaWUsCp==
RXQgYXV4IGJsYXNwaGVtZXMsCo==
Sidhdm91ZSBqZSBtYXVkaXMsCl==
VG91cyBjZXV4IHF1aSBzJ2FpbWVudCwK
TCdlbm5lbWksCu==
VGFwaSBkYW5zIG1vbiBlc3ByaXQsCp==
RumUmnRlIG1lcyBkZWZhaXRlcywK
U2FucyByZXBpdCBtZSBkZWZpZSwK
SmUgcmVuaWUsCq==
TGEgZmF0YWxlIGhlcmVzaWUsCh==
UXVpIHJvbmdlIG1vbiDplJp0cmUsCo==
SmUgdmV1eCByZW5h5Y2vdHJlLAp=
UmVuYWNr3RyZSwK
SmUgdm91ZSBtZXMgbnVpdHMsCn==
QSBsJ2Fzc2FzeW1waG9uaWUsCq==
QXV4IHJlcXVpZW1zLAp=
VHVhbnQgcGFyIGRlcGl0LAq=
Q2UgcXVlIGplIHNlbWUsCo==
SmUgdm91ZSBtZXMgbnVpdHMsCm==
QSBsJ2Fzc2FzeW1waG9uaWUsCl==
RXQgYXV4IGJsYXNwaGVtZXMsCm==
Sidhdm91ZSBqZSBtYXVkaXMsCu==
VG91cyBjZXV4IHF1aSBzJ2FpbWVudCwK
UGxldXJlbnQgbGVzIHZpb2xvbnMgZGUgbWEgdmllLAp=
TGEgdmlvbGVuY2UgZGUgbWVzIGVudmllcywK
U2lwaG9ubmVlIHN5bXBob25pZSwK
RGVjb25jZXJ0YW50IGNvbmNlcnRvLAq=
SmUgam91ZSBzYW5zIHRvdWNoZXIgbGUgRG8sCo==
TW9uIHRhbGVudCBzb25uZSBmYXV4LAp=
SmUgbm9pZSBtb24gZW5udWksCo==
RGFucyBsYSBtZWxvbWFuaWUsCl==
SmUgdHVlIG1lcyBwaG9iaWVzLAq=
RGFucyBsYSBkZXNoYXJtb25pZSwK
SmUgdm91ZSBtZXMgbnVpdHMsCv==
QSBsJ2Fzc2FzeW1waG9uaWUsCn==
QXV4IHJlcXVpZW1zLAp=
VHVhbnQgcGFyIGRlcGl0LAo=
Q2UgcXVlIGplIHNlbWUsCm==
SmUgdm91ZSBtZXMgbnVpdHMsCp==
QSBsJ2Fzc2FzeW1waG9uaWUsCm==
RXQgYXV4IGJsYXNwaGVtZXMsCu==
Sidhdm91ZSBqZSBtYXVkaXMsCm==
VG91cyBjZXV4IHF1aSBzJ2FpbWVudCwK
SmUgdm91ZSBtZXMgbnVpdHMsCn==
QSBsJ2Fzc2FzeW1waG9uaWUgKGwnYXNzYXN5bXBob25pZSksCn==
Sidhdm91ZSBqZSBtYXVkaXMsCt==
VG91cyBjZXV4IHF1aSBzJ2FpbWVudA==
```

```
import  base64
import  re
a=''
b64chars = 'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/'
with open('flag.txt','rb') as f:
    txt=f.read().splitlines()
for each in txt:
    wiredword=re.findall('(\w)={1,2}', each)
    if wiredword:
        stegoline=each
        offset=b64chars.index(wiredword[0])
        print (each,base64.b64encode(base64.b64decode(each)),bin(offset))
        if '==' in stegoline:
            a+=bin(offset)[-4:]
        elif '=' in stegoline:
            a += bin(offset)[-2:]
print (a)
print([chr(int(a[i:i + 8], 2)) for i in range(0, len(a), 8)])

['G', 'X', 'Y', '{', 'f', 'a', 'z', 'h', 'a', 'z', 'h', 'e', 'n', 'h', 'a', 'o', 't', 'i', 'n', 'g', '}', '
```

核心思想是base64隐写将信息写入了被补0的尾部，也就是字符串含有等号的前一个字母。

隐写字符串，'SW50ZW5hYmxlIGluc29tbmllLAp='，p=是用隐藏信息填充后获得的结果

解码并重新编码后的字符串，'SW50ZW5hYmxlIGluc29tbmllLAo='，o=是用0正常填充的后得到的结果

base64填充存在两种情况：

一个等号，填充了2个bit

两个等号，填充了4个bit

首先定位等号前字母在base64码表中的位置，将10进制的位置转为二进制，在一个等号下取后两位，在两个等号下取后四位，将所有取出的bit连接成字符串，并按每8位一组转为ascii码。

需要注意的是，即使解码再编码后的字符串和原字符串相等，也要把最后补充的bit信息（也称padding）提取出来