



작성자	김서영
분석 일자	2024.05.10.
작성 일자	2024.05.11.
분석 대상	문제내용
문서 버전	1
작성자 E-mail	sykim1802@naver.com

0. 목차

1. 문제 .....3

2. 분석 도구 .....3

3. 환경 .....3

4. Write-Up.....4

5. Flag.....6

6. 별도 첨부 .....6

7. Reference .....6

### 1. 문제

URL	<a href="#">Game 19 (suninatas.com)</a>
문제 내용	<p>Cipher II : What is it?</p> <pre> 0100111001010110010000110101010001000110010001000101 0110001000000100101101000110001000000100101001001100 0100010101011010010001010101001001001011010100100100 1010001000000101001001000101010101010010000001001011 0100011001010101010100100101000000100000010110100100 1010001000000101001000100000010110000100011001000110 01010101001000000101010101001001010000001000000101 0010010001010101010100100000010100100100110001001011 0101100101000010010101100101000000100000010110100100 1010001000000100011101000011010100100101101001010101 0101010001001011010101110101101001001010010011010101 0110010010010101010000010110010101001001001001010101 </pre>
문제 파일	
문제 유형	forensics
난이도	1 / 5

### 2. 분석 도구

도구명	다운로드 링크	Version
Binary to String Converter	<a href="#">Binary to String Converter Online tool (codebeautify.org)</a>	
ROT encoder/decoder	<a href="#">ROT encoder/decoder (theblob.org)</a>	

### 3. 환경

OS
Windows11 x64

## 4. Write-Up

1. 문제내용이 이진수로 이루어져 있다.

Enter the binary text to convert Sample ↺ 📁 💾 🗑️ 📄

0100111001010110010000110101010001000110010001000101  
0110001000000100101101000110001000000100101001001100  
0100010101011010010001010101001001001011010100100100  
10100010000001010010010001010101010010000001001011  
0100011001010101010100100101000000100000010110100100  
1010001000000101001000100000010110000100011001000110  
0101010100100000010101010101001001010000001000000101

Size : **645** B, 635 Characters

☒ Auto ↕ Binary to String 📁 File.. 🔗 Load URL

The converted string: 📄

NVCTFDV KF JLEZERKRJ REU KFURP ZJ R XFFU URP REU RLKYBVP ZJ  
GCRZUTKWZJMVIPYRIU

**[사진 1] String to Binary 계산 결과**

우선 String to Binary 계산기를 통해 문자로 바꾸어 보았다.

결과값이 무슨 의미인지 모르지만, 우선 띄어쓰기가 되어있다는 점이 수상하다.

같은 알파벳들이 반복되는 것을 보아, 일정한 패턴으로 치환된 치환암호로 의심된다.

2. 치환 암호 해독

우선, 유명한 ROT13 to text 해독을 먼저 적용해보았다.

# ROT13 to Text

♥ Add to Fav

New

Save & Share

Input Text

Sample ↺ 📁 📄 🗑️ 📋

NVCTFDV KF JLEZERKRJ REU KFURP ZJ R XFFU URP REU RLKYBVP ZJ  
GCRZUTKWZJMVIPYRIU

Size : 78 B, 78 Characters

☒ Auto

↕ Text to ROT13

📁 File..

🔗 Load URL

Output Text

📋

AIPGSQI XS WYRMREXEW ERH XSHEC MW E KSSH HEC ERH EYXLOIC  
MW TPEMHGXJMWZIVCLEVH

[사진 2] Rot13 to text 변환기

Rot13이 아니라는 것을 알 수 있다.

그렇다면 ROT 변환기 사이트를 찾아 1~25 모두 적용해보았다.

- ROT-0: NVCTFDV KF JLEZERKRJ REU KFURP ZJ R XFFU URP REU RLKYBVP ZJ GCRZUTKWZJMVIPYRIU
- ROT-1: OWDUGEW LG KMFAFSLSK SFV LGVSQ AK S YGGV VSQ SFV SMLZCWQ AK HDSAVULXAKNWJQZSJV
- ROT-2: PXEVHFX MH LNGBGTMTL TGW MHWTR BL T ZHHW WTR TGW TNMADXR BL IETBWVMYBLOXKRATKW
- ROT-3: QYFWIGY NI MOHCHUNUM UHX NIXUS CM U AIIX XUS UHX UONBEYS CM JFUCXWNZCMPYLSBULX
- ROT-4: RZGXJHZ OJ NPIDIVOVN VIY OJYVT DN V BJYI YVT VIY VPOCFZT DN KGV DYXOADNQZMTCVMY
- ROT-5: SAHYKIA PK OQJEW PWO WJZ PKZ WU EO W CKKZ ZWU WJZ WQPDGAU EO LHWEZY PBEORANUDWNZ
- ROT-6: TBIZLJB QL PRKFKXQXP XKA QLAXV FP X DLLA AXV XKA XRQEH BV FP MIXFAZQC FPSBOVEXOA
- ROT-7: UCJAMKC RM QSLGLYRYQ YLB RMBYW GQ Y EMMB BYW YLB YSRFICW GQ NJYGBARDGQTCPW FYPB
- ROT-8: VDKBNLD SN RTMHMZSZR ZMC SNCZX HR Z FNNC CZX ZMC ZTSGJDX HR OKZHC BSEHRUDQXGZQC
- ROT-9: WELCOME TO SUNINATAS AND TODAY IS A GOOD DAY AND AUTHKEY IS PLAIDCTFISVERYHARD
- ROT-10: XFMDPNF UP TVOJOBUBT BOE UPEBZ JT B HPPE EBZ BOE BVUILFZ JT QMBJEDUGJTWF SZIBSE
- ROT-11: YGNEQOG VQ UWP KPCVCU CPF VQFCA KU C IQQF FCA CPF CWVJMGA KU RNCKFEVHKUXGTAJCTF
- ROT-12: ZHOFRPH WR VXQLQDWDV DQG WRGDB LV D JRRG GDB DQG DXWKNHB LV SODLGF WILVYHUBKDUG
- ROT-13: AIPGSQI XS WYRMREXEW ERH XSHEC MW E KSSH HEC ERH EYXLOIC MW TPEMHGXJMWZIVCLEVH
- ROT-14: BJQHTRJ YT XZSNSFYFX FSI YTIFD NX F LTTI IFD FSI FZYMPJD NX UQFNIHYKNXAJWDMFWI
- ROT-15: CKRIUSK ZU YATOTGZGY GTJ ZUJGE OY G MUUJ JGE GTJ GAZNQKE OY VRGOJIZLOYBKXENGXJ
- ROT-16: DLSJVTL AV ZBUPUHAHZ HUK AVKHF PZ H NVVK KHF HUK HBAORLF PZ WSHPKJAMPZC LYFOHYK
- ROT-17: EMTKWUM BW ACVQVIBIA IVL BWLIG QA I OWWL LIG IVL ICBPSMG QA XTIQLKBNQADMZGP IZL
- ROT-18: FNULXVN CX BDWRWJCJB JWM CXMJH RB J PXXM MJH JWM JDCQTNH RB YUJRMLCORBENAHQJAM
- ROT-19: GOVMYWO DY CEXS XKDKC KXN DYNKI SC K QYYN NKI KXN KEDRUOI SC ZVKS NM DPSCFOBIRKBN
- ROT-20: HPWNZXP EZ DFYTYLELD LYO EZOLJ TD L RZZO OLJ LYO LFESVPJ TD AWLTONEQTDGPCJSLCO
- ROT-21: IQXOAYQ FA EGZUZMFME MZP FAPMK UE M SAAP PMK MZP MGFTWQK UE BXMUPOFRUEHQDKTMDP
- ROT-22: JRPBZR GB FHAVANGNF NAQ GBQNL VF N TBBQ QNL NAQ NHGUXRL VF CYNVQPGSVFIRELUNEQ
- ROT-23: KSZQCAS HC GIBWBOHOG OBR HCROM WG O UCCR ROM OBR OIHVYSM WG DZOWRQHTW GJSFMVOFR
- ROT-24: LTARDBT ID HJCXCPIPH PCS IDSPN XH P VDDS SPN PCS PIJWZTN XH EAPXSRIUXHKTGNWPGS
- ROT-25: MUBSECU JE IKDYDQJQI QDT JETQO YI Q WEET TQO QDT QKJXAUO YI FBQYTSJWYILUHOXQHT

[사진 3] ROT encoder/decoder 적용 결과(ROT encoder/decoder (theblob.org))

ROT-9로 해독 결과 key는 PLAIDCTFISVERYHARD임을 찾았다.

## 5. Flag

Flag = PLAIDCTFISVERYHARD

## 6. 별도 첨부

## 7. Reference