

Hourly Wangiri/SPAM check

This is a hourly basis check for Wangiri fraud. Wangiri fraud, also known as the Wangiri scam or one-ring scam, is a type of telephone fraud where scammers trick individuals into calling back high rate destination numbers, resulting in charges to the victim. Below is the script used to check suspicious numbers and the respective steps for the analysis.

Script:

```

/***** SPAM CALLS CHECKING *****/

SELECT TRUNC(A.DETECTION_DATE) DATE_DETECTION, A.*
FROM TBL_ED_SPAM_DETECTION A
WHERE A.DETECTION_DATE >= TRUNC (TRUNC (SYSDATE, 'MM') - 1, 'MM')
AND A.DETECTION_DATE < TRUNC (SYSDATE, 'MM') ORDER BY 1 ASC;

SELECT *
FROM ( SELECT call_type,
             msisdn dial_code,
             country,
             TRANSLATED_NUMBER bnumber,
             COUNT (date_code) total_calls,
             COUNT (DISTINCT anumber) distinct_anumber,
             ROUND (COUNT (DISTINCT anumber) / COUNT (date_code), 2)
             diversity,
             ROUND (SUM (CHARGEABLEDURATION / 60), 2) duration
FROM ( SELECT date_code,
             TO_DATE (date_code || time_code,
'yyyymmddhh24miss')
             DATE_OF_CHARGE,
             call_type,
             -- INCOMING_TKGP,
             OUTGOINGROUTE,
             callingpartynumber anumber,
             -- bnumber,
             TRANSLATED_NUMBER,
             ORIGINATINGLOCATIONNUMBER,
             CHARGEABLEDURATION,
             CHARGEABLEDURATION / 60 DUR_MINUTES,
             -- OUTGOING_TKGP,
             vendor,
             -- GSMCALLREFERENCENUMBER,
             networkcallreference,
             node msc_id,
             c.msisdn,
             c.LENGTH_s LENGTH,
             c.country_s country
FROM CDRMSC.ST_CDRMSC_IMPORT@exae b,
high_risk_dial_codes_new c
WHERE date_code >= TO_CHAR (SYSDATE-1, 'YYYYMMDD')
AND SUBSTR (b.translated_number, 1, c.LENGTH_s)
=
c.msisdn
```

```
AND b.translated_number NOT LIKE '%37000000'
AND OUTGOINGROUTE IN ('DHSMI2I',
                      'DHSMIAI',
                      'DHORANI',
                      'DHSNY2I',
                      'TRILO1I',
                      'TRILO2I',
                      'TRILO3I',
                      'DHSNYTI',
                      'HACCNYI',
                      'HCA2MII',
                      'HCA2NYI',
                      'HCA3MII',
                      'HCA3NYI',
                      'HCA5MII',
                      'HCA5NYI',
                      'DHSNXTI',
                      'DHSNY3I',
                      'SBCMIXI',
                      'SBCNYI',
                      'DHSNYTO',
                      'DHORANO',
                      'HCA5NYO',
                      'HCA3NYO',
                      'DHSNY3O',
                      'HACCMII',
                      'HACCNYO',
                      'DHSMI2O',
                      'TRILO2O',
                      'TRILO3O',
                      'HCA3MIO',
                      'HCA2NYO',
                      'HCA5MIO',
                      'DHSNY2O',
                      'HCA2MIO',
                      'DHSMIAO',
                      'HACCMIO',
                      'TRILO1O',
                      'SBCMIAI',
                      'SBCMIAO',
                      'SBCNYO',
                      'SBCMIXO',
                      'SBCNYKO',
                      'SBCNYKI',
                      'SBCNYO',
                      'SBCNYI',
                      'TRILO3I',
                      'HACCMII',
                      'DHSNYTO',
                      'DHSNYTI',
                      'SBCMIXO',
                      'SBCMIXI',
                      'SBCNY1O',
                      'SBCNY1I',
                      'SBC2MO',
                      'SBCMI',
                      'SBCNYI',
```

```

        'SBCNY1I',
        'SBC2MI',
        'SBCNYKI',
        'SBCMO',
        'SBC2NYO',
        'SBC2NYI')
    )
GROUP BY call_type,
         msisdn,
         country,
         TRANSLATED_NUMBER-- HAVING COUNT (distinct anumber) > 5
WHERE    -- bnumber like '233%'
         bnumber IN (
            '1'
        )
AND distinct_anumber >= 1
ORDER BY 6 DESC;

```

NB: Wangiri is one of the tactic used in IRSF fraud.

Steps :

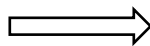
- 1- Copy the number in the list from the latest hourly email alert. Check them in the above query
- 2- Copy and paste the result in the sheet “SPAM BNUMBERS” of the “SPAM_CHECK” excel file.

The screenshot shows an Excel spreadsheet titled "SPAM_CHECK - Saved". The active sheet is "SPAM BNUMBERS". The table contains the following data:

CALL_TYPE	DIAL_CODE	COUNTRY	BNUMBER	TOTAL_CALLS	DISTINCT_ANUMBER	DIVERSITY	DURATION	SUSPICIOUS	ranges	Column1	Column2	Column3
MOBTRAN	226	Burkina Faso-PSN	22679218808	12	1	0.08	25.72	NO	226792188	'226'	'22679218808'	Burkina Fa
MOBTRAN	226	Burkina Faso-PSN	22679218809	12	1	0.08	25.98	NO	226792188	'226'	'22679218809'	Burkina Fa
MOBTRAN	226	Burkina Faso-PSN	22679218820	3	1	0.33	4.62	NO	226792188	'226'	'22679218820'	Burkina Fa
MOBTRAN	3774	Monaco-MOBILE	37744112119	16	1	0.06	320.77	NO	377441121	'3774'	'37744112119'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744112141	29	2	0.07	587.45	NO	377441121	'3774'	'37744112141'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744112142	24	1	0.04	368.72	NO	377441121	'3774'	'37744112142'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744112147	26	1	0.04	548.87	NO	377441121	'3774'	'37744112147'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744112148	29	1	0.03	579.52	NO	377441121	'3774'	'37744112148'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115805	14	2	0.14	252.5	NO	377441158	'3774'	'37744115805'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115806	26	2	0.08	431.7	NO	377441158	'3774'	'37744115806'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115807	5	1	0.2	83.57	NO	377441158	'3774'	'37744115807'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115808	8	1	0.13	131.65	NO	377441158	'3774'	'37744115808'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115809	15	1	0.07	264.63	NO	377441158	'3774'	'37744115809'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115815	15	1	0.07	256.77	NO	377441158	'3774'	'37744115815'	Monaco-Mi
MOBTRAN	3774	Monaco-MOBILE	37744115818	13	2	0.15	213.05	NO	377441158	'3774'	'37744115818'	Monaco-Mi
MOBTRAN	375	Belarus-PSN	375444203435	14	13	0.93	1.75	YES	375444203	'375'	'375444203435'	Belarus-PS
MOBTRAN	375	Belarus-PSN	375444203445	11	11	1	0.78	YES	375444203	'375'	'375444203445'	Belarus-PS

- 3- Filter to select only High Destination rate numbers.
 - Check diversity for BNumber (many distinct local numbers are calling High destination).
 - Check for range on Bnumber. (if there is range being called no need for high diversity. This is automatically Wangiri)
- 4- For BNumber ranges pick the summary of calls from all numbers calling the range with the range followed by the % sign. If there is no range or numbers in the range being called are less than 3 or for, just take the Bnumber and the total of calls received. See example below:

NUMBER/RANGE	COUNT
32467422040	6
32467422044	7
32467422173	7
32467427082	6
212619035098	24
212619042295	19



NUMBER/RANGE	COUNT
32467422%	26
212619035098	24
212619042295	19

NB: Sometimes the ranges can be too large to be blocked if the total of calls from calling numbers and the amount of numbers detected in the range are low.

- 5- Send Email to Intl Team to block (in/out) calls for the High Rate Destination numbers or ranges