

XXX company security researcher & analyst technical interview(2)

Verified Bots Global Allow List:

Mission:

we require of a global allow list to allow friendly bots traffic through xxx's network. A set of "validator" services publish list of ip addressess that should be added to global allow list. the global allow list is compiled by an intermediary service, known as the bots-directory, which receives live updates from the validators and publishes a merge list to the edge network. your mission as a system engineer is to design and code an algorithm that will consume a fressh list of verified ips from different bots and decide if new or existing ips should be created , updated or deleted from the global allow list. you will be provided a Current_state string variable which holds a formatted CSV of database rows for the current list of verirified bots ips. similarly a string variable Validator_input will contain rows from newly validated ip addresses including the bot ID.

Input: current_state:

id int --- a unique primary key bot_id int --- an integer ID for the bot owner of the IP address dddress
string --- string formatted IP address created_at timestamp --- timestamp for when the IP was
created in the DB updated_at timestamp --- timestamp for when the IP was last updated in the DB
deleted_at timestamp --- timestamp for when the IP was deleted, NULL if IP is currently active

Validator_inpute:

bot_id int --- an integer ID for the bot owner of the IP address address string --- string formatted IP
address

You will have to merge both lists and generate and output list with the following rules:

1. If an IP exists in the CURRENT_STATE but is not found in the VALIDATOR_INPUT, the IP should have STATUS-DELETE.
2. If an IP exists in the CURRENT_STATE and is found in the VALIDATOR INPUT, then the IP should have STATUS UPDATE and timestamp updated.
3. If an IP does not exist in the CURRENT_STATE and is found in VALIDATOR_INPUT, then the IP should have STATUS-CREATE and timestamp set. SSD
4. If an IP was deleted but exists In CURRENT_STATE and is found in VALIDATOR_INPUT, then the IP should have STATUS-UPDATE and timestamp set.

Output:

Have your code output a valid array of objects with the following format below. Status field can have one of the following values: CREATE, UPDATE, DELETE. Output Format [{ "id": int, "bot_id": int, "address": string, "status": string, "updated_at": timestamp }]

Enter your code here. Read input from STDIN. Print output to STDOUT

```
-----  
CURRENT_STATE=""id","bot_id","address","created_at","updated_at","deleted_at"  
272747,133,"20.191.45.212/32","2021-05-03 19:38:32.502171+00","2021-09-15  
15:55:45.463072+00", 29172,133,"50.16.241.114/32","2019-08-27 22:38:08.081476+00","2021-  
09-15 15:55:45.463074+00", 29177,133,"23.21.227.69/32","2019-08-27  
22:38:08.081476+00","2021-09-15 15:55:45.463073+00", 29178,133,"50.16.241.117/32","2019-  
08-27 22:38:08.081476+00","2021-09-15 15:55:45.463075+00",  
148244,133,"40.88.21.235/32","2020-04-16 23:52:27.942766+00","2021-09-15  
15:55:45.463073+00", 29171,133,"50.16.241.113/32","2019-08-27 22:38:08.081476+00","2021-  
09-15 15:55:45.463074+00", 29174,133,"52.204.97.54/32","2019-08-27  
22:38:08.081476+00","2021-09-15 15:55:45.463076+00", 29173,133,"50.16.247.234/32","2019-  
08-27 22:38:08.081476+00","2021-09-15 15:55:45.463075+00",  
84993,133,"54.208.102.37/32","2019-11-15 22:50:49.517137+00","2021-09-15  
15:55:45.463077+00", 29175,133,"52.5.190.19/32","2019-08-27 22:38:08.081476+00","2021-09-  
15 15:55:45.463076+00", 29176,133,"54.197.234.188/32","2019-08-27  
22:38:08.081476+00","2021-09-15 15:55:45.463077+00", 84994,133,"107.21.1.8/32","2019-11-15  
22:50:49.517137+00","2021-09-15 15:55:45.463078+00", 29179,133,"54.208.100.253/32","2019-  
08-27 22:38:08.081476+00","2021-09-15 15:55:45.463077+00",  
6368,52,"123.125.71.109/32","2019-08-14 21:37:35.58665+00","2021-09-16  
04:01:50.125878+00", 263728,52,"116.179.37.247/32","2021-04-08 23:59:17.495196+00","2021-  
09-16 04:00:12.605532+00", 6466,52,"220.181.108.102/32","2019-08-14  
21:37:35.58665+00","2021-09-16 03:59:31.217762+00", 149950,52,"116.179.32.119/32","2020-  
05-07 18:04:21.301992+00","2021-09-16 04:01:48.370977+00",  
145427,52,"116.179.32.46/32","2020-03-27 06:42:12.812022+00","2021-09-16  
04:00:52.15177+00", 263741,52,"116.179.37.9/32","2021-04-08 23:59:17.495196+00","2021-09-  
16 04:01:22.703607+00", 6232,52,"180.76.15.139/32","2019-08-14 21:37:35.58665+00","2021-09-  
16 04:01:06.410831+00", 6320,52,"111.206.221.106/32","2019-08-14 21:37:35.58665+00","2021-  
09-16 04:00:26.176573+00", 6513,52,"220.181.108.107/32","2019-08-14  
21:37:35.58665+00","2021-09-16 04:00:55.96909+00", 54178,52,"111.206.198.52/32","2019-09-  
25 14:40:32.265589+00","2021-09-16 16:07:25.277752+00",  
263773,52,"116.179.37.198/32","2021-04-08 23:59:17.495196+00","2021-09-16  
04:01:05.658682+00", 263769,52,"116.179.37.239/32","2021-04-08 23:59:17.495196+00","2021-  
09-16 16:07:32.266215+00", 6212,52,"180.76.15.135/32","2019-08-14 21:37:35.58665+00","2021-  
09-16 04:01:03.803624+00", 263737,52,"116.179.37.22/32","2021-04-08  
23:59:17.495196+00","2021-09-16 16:07:30.588774+00", 54126,52,"111.206.198.75/32","2019-  
09-25 13:34:24.457667+00","2021-09-16 04:00:49.472435+00",  
263636,52,"116.179.37.47/32","2021-04-08 23:59:17.495196+00","2021-09-16  
04:01:27.14194+00", 6452,52,"123.125.71.21/32","2019-08-14 21:37:35.58665+00","2021-09-16  
04:01:45.174752+00", 6312,52,"180.76.15.136/32","2019-08-14 21:37:35.58665+00","2021-09-16  
04:01:22.64847+00", 6408,52,"111.206.221.11/32","2019-08-14 21:37:35.58665+00","2021-09-16  
16:07:44.795285+00", 263595,52,"116.179.37.252/32","2021-04-08 23:59:17.495196+00","2021-  
09-16 16:07:45.80357+00", 263649,52,"116.179.37.8/32","2021-04-08
```

23:59:17.495196+00","2021-09-16 04:01:43.899177+00", 144908,52,"116.179.32.90/32","2020-03-26 10:33:13.76704+00","2021-09-16 16:07:52.028348+00",
144906,52,"116.179.32.75/32","2020-03-26 10:33:13.76704+00","2021-09-16
04:00:04.271396+00", 6464,52,"111.206.221.4/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:00:58.080085+00", 145010,52,"116.179.32.97/32","2020-03-27 00:28:12.7104+00","2021-09-
16 16:07:23.425877+00", 6519,52,"123.125.71.85/32","2019-08-14 21:37:35.58665+00","2021-09-
16 04:01:48.682838+00", 53546,52,"111.206.198.15/32","2019-09-25 03:45:11.687293+00","2021-
09-16 04:01:29.982874+00", 263758,52,"116.179.37.123/32","2021-04-08
23:59:17.495196+00","2021-09-16 16:07:15.479248+00", 6418,52,"111.206.221.68/32","2019-08-
14 21:37:35.58665+00","2021-09-16 04:01:18.58223+00", 145458,52,"116.179.32.239/32","2020-
03-27 06:42:12.812022+00","2021-09-16 04:01:22.281878+00", 6486,52,"180.76.15.34/32","2019-
08-14 21:37:35.58665+00","2021-09-16 04:01:48.147919+00", 6208,52,"123.125.71.18/32","2019-
08-14 21:37:35.58665+00","2021-09-16 04:01:28.845323+00",
145002,52,"116.179.32.223/32","2020-03-26 22:29:15.978035+00","2021-09-16
03:59:25.783465+00", 263608,52,"116.179.37.134/32","2021-04-08 23:59:17.495196+00","2021-
09-16 16:07:11.762382+00", 263625,52,"116.179.37.86/32","2021-04-08
23:59:17.495196+00","2021-09-16 03:59:48.028962+00", 6224,52,"111.206.221.20/32","2019-08-
14 21:37:35.58665+00","2021-09-16 16:07:52.971673+00", 6225,52,"220.181.108.111/32","2019-
08-14 21:37:35.58665+00","2021-09-16 03:59:42.573845+00",
6275,52,"220.181.108.123/32","2019-08-14 21:37:35.58665+00","2021-09-16
16:07:09.394586+00", 6370,52,"220.181.108.155/32","2019-08-14 21:37:35.58665+00","2021-09-
16 16:07:39.429889+00", 6510,52,"180.76.15.150/32","2019-08-14 21:37:35.58665+00","2021-09-
16 04:01:26.655642+00", 263730,52,"116.179.37.158/32","2021-04-08
23:59:17.495196+00","2021-09-16 03:59:38.194006+00", 145466,52,"116.179.32.199/32","2020-
03-27 06:42:12.812022+00","2021-09-16 03:59:22.008073+00",
263709,52,"116.179.37.112/32","2021-04-08 23:59:17.495196+00","2021-09-16
16:06:58.503122+00", 145447,52,"116.179.32.146/32","2020-03-27 06:42:12.812022+00","2021-
09-16 04:00:59.091437+00", 6503,52,"180.76.15.151/32","2019-08-14 21:37:35.58665+00","2021-
09-16 04:01:20.175004+00", 145442,52,"116.179.32.234/32","2020-03-27
06:42:12.812022+00","2021-09-16 03:59:58.88984+00", 145478,52,"116.179.32.215/32","2020-
03-27 07:42:03.399819+00","2021-09-16 16:08:09.509629+00",
6509,52,"111.206.221.34/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:01.269051+00", 265658,52,"116.179.37.67/32","2021-04-22 14:51:47.09902+00","2021-09-
16 03:59:45.225599+00", 6207,52,"180.76.15.25/32","2019-08-14 21:37:35.58665+00","2021-09-
16 04:01:26.968182+00", 6204,52,"220.181.108.171/32","2019-08-14 21:37:35.58665+00","2021-
09-16 16:07:41.465058+00", 263594,52,"116.179.37.81/32","2021-04-08
23:59:17.495196+00","2021-09-16 04:00:02.298895+00", 6335,52,"180.76.15.23/32","2019-08-14
21:37:35.58665+00","2021-09-16 04:01:20.557141+00", 263764,52,"116.179.37.31/32","2021-04-
08 23:59:17.495196+00","2021-09-16 16:07:59.226497+00",
144864,52,"116.179.32.87/32","2020-03-26 07:33:32.952016+00","2021-09-16
03:59:42.947418+00", 6345,52,"180.76.15.137/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:16.993934+00", 6435,52,"123.125.71.43/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:45.549721+00", 263611,52,"116.179.37.217/32","2021-04-08 23:59:17.495196+00","2021-
09-16 04:00:54.19841+00", 6379,52,"180.76.15.152/32","2019-08-14 21:37:35.58665+00","2021-
09-16 04:01:00.569123+00", 144959,52,"116.179.32.133/32","2020-03-26
13:39:29.565388+00","2021-09-16 03:59:25.425973+00", 145468,52,"116.179.32.221/32","2020-
03-27 07:42:03.399819+00","2021-09-16 16:07:51.530294+00",
6322,52,"220.181.108.143/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:00:50.934749+00", 263613,52,"116.179.37.171/32","2021-04-08 23:59:17.495196+00","2021-
09-16 03:59:22.87487+00", 53553,52,"111.206.198.126/32","2019-09-25
03:45:11.687293+00","2021-09-16 16:07:01.094277+00", 263719,52,"116.179.37.78/32","2021-
04-08 23:59:17.495196+00","2021-09-16 16:07:04.299829+00",

6511,52,"180.76.15.143/32","2019-08-14 21:37:35.58665+00","2021-09-16 04:01:13.145761+00",
6244,52,"123.125.71.98/32","2019-08-14 21:37:35.58665+00","2021-09-16 04:01:42.522799+00",
6294,52,"123.125.71.94/32","2019-08-14 21:37:35.58665+00","2021-09-16 04:01:13.136953+00",
6369,52,"123.125.71.70/32","2019-08-14 21:37:35.58665+00","2021-09-16 04:01:11.295961+00",
263654,52,"116.179.37.150/32","2021-04-08 23:59:17.495196+00","2021-09-16
03:59:07.969996+00", 6386,52,"123.125.71.20/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:33.207907+00", 6211,52,"180.76.15.158/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:50.071321+00", 6364,52,"111.206.221.76/32","2019-08-14 21:37:35.58665+00","2021-09-
16 04:01:00.313004+00", 6344,52,"111.206.221.114/32","2019-08-14 21:37:35.58665+00","2021-
09-16 16:07:49.759128+00", 265278,52,"116.179.37.0/32","2021-04-16
07:48:59.138824+00","2021-09-16 03:59:29.045004+00", 144911,52,"116.179.32.157/32","2020-
03-26 10:33:13.76704+00","2021-09-16 16:07:50.395357+00",
6349,52,"220.181.108.116/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:48.430078+00", 6524,52,"220.181.108.163/32","2019-08-14 21:37:35.58665+00","2021-09-
16 16:07:43.435179+00", 263694,52,"116.179.37.114/32","2021-04-08
23:59:17.495196+00","2021-09-16 16:06:58.395376+00", 6387,52,"180.76.15.6/32","2019-08-14
21:37:35.58665+00","2021-09-16 04:01:42.525668+00", 164478,52,"116.179.32.54/32","2020-06-
22 10:06:15.226705+00","2021-09-16 04:00:57.114927+00",
145473,52,"116.179.32.211/32","2020-03-27 07:42:03.399819+00","2021-09-16
03:59:01.134972+00", 54167,52,"111.206.198.6/32","2019-09-25 14:40:32.265589+00","2021-09-
16 16:07:28.814143+00", 265657,52,"116.179.37.93/32","2021-04-22 14:51:47.09902+00","2021-
09-16 04:00:19.222927+00", 145482,52,"116.179.32.95/32","2020-03-27
07:42:03.399819+00","2021-09-16 04:00:16.840489+00", 263766,52,"116.179.37.136/32","2021-
04-08 23:59:17.495196+00","2021-09-16 03:59:01.695391+00",
6376,52,"111.206.221.72/32","2019-08-14 21:37:35.58665+00","2021-09-16
16:07:22.409219+00", 6268,52,"111.206.221.79/32","2019-08-14 21:37:35.58665+00","2021-09-
16 04:00:52.437359+00", 6410,52,"111.206.221.18/32","2019-08-14 21:37:35.58665+00","2021-
09-16 04:00:32.273602+00", 144916,52,"116.179.32.17/32","2020-03-26
10:33:13.76704+00","2021-09-16 04:01:02.973099+00", 54181,52,"111.206.198.94/32","2019-09-
25 14:40:32.265589+00","2021-09-16 04:01:14.825956+00", 6424,52,"111.206.221.10/32","2019-
08-14 21:37:35.58665+00","2021-09-16 16:07:01.340941+00",
265645,52,"116.179.37.91/32","2021-04-22 14:51:47.09902+00","2021-09-16
03:59:25.666062+00", 144940,52,"116.179.32.207/32","2020-03-26 12:40:15.486431+00","2021-
09-16 04:01:32.143586+00", 6270,52,"180.76.15.134/32","2019-08-14 21:37:35.58665+00","2021-
09-16 04:01:21.802264+00", 6241,52,"123.125.71.81/32","2019-08-14 21:37:35.58665+00","2021-
09-16 04:01:19.738146+00", 54184,52,"111.206.198.53/32","2019-09-25
14:40:32.265589+00","2021-09-16 04:01:25.028758+00", 145464,52,"116.179.32.101/32","2020-
03-27 06:42:12.812022+00","2021-09-16 16:07:22.182629+00",
6396,52,"123.125.71.105/32","2019-08-14 21:37:35.58665+00","2021-09-16
04:01:26.269268+00", 149957,52,"116.179.32.248/32","2020-05-07 18:04:21.301992+00","2021-
09-16 04:01:14.850149+00", ""

VALIDATOR_INPUT = ""bot_id","address" 133,"20.191.45.212/32" 133,"50.16.241.114/32"
133,"23.21.227.69/32" 133,"50.16.241.117/32" 133,"40.88.21.235/32" 133,"50.16.241.113/32"
133,"52.204.97.54/32" 133,"50.16.247.234/32" 133,"54.208.102.37/32" 133,"52.5.190.21/32"
133,"54.197.234.188/32" 133,"107.21.1.3/32" 133,"54.208.100.253/32" 52,"123.125.71.109/32"
52,"116.179.37.247/32" 52,"220.181.108.102/32" 52,"116.179.32.119/32" 52,"116.179.32.46/32"
52,"116.179.37.9/32" 52,"180.76.15.139/32" 52,"111.206.221.106/32" 52,"220.181.108.107/32"
52,"111.206.198.52/32" 52,"116.179.37.198/32" 52,"116.179.37.239/32" 52,"180.76.15.135/32"
52,"116.179.37.22/32" 52,"111.206.198.75/32" 52,"116.179.37.47/32" 52,"123.125.71.21/32"

52,"180.76.15.136/32" 52,"111.206.221.11/32" 52,"116.179.37.252/32" 52,"116.179.37.8/32"
52,"116.179.32.90/32" 52,"116.179.32.75/32" 52,"111.206.221.4/32" 52,"116.179.32.97/32"
52,"123.125.71.85/32" 52,"111.206.198.15/32" 52,"116.179.37.123/32" 52,"111.206.221.68/32"
52,"116.179.32.239/32" 52,"180.76.15.34/32" 52,"123.125.71.18/32" 52,"116.179.32.223/32"
52,"116.179.37.134/32" 52,"116.179.37.86/32" 52,"111.206.221.20/32" 52,"220.181.108.111/32"
52,"220.181.108.123/32" 52,"220.181.108.155/32" 52,"180.76.15.150/32" 52,"116.179.37.158/32"
52,"116.179.32.199/32" 52,"116.179.37.112/32" 52,"116.179.32.146/32" 52,"180.76.15.151/32"
52,"116.179.32.234/32" 52,"116.179.32.215/32" 52,"111.206.221.34/32" 52,"116.179.37.67/32"
52,"180.76.15.25/32" 52,"220.181.108.171/32" 52,"116.179.37.81/32" 52,"180.76.15.23/32"
52,"116.179.37.31/32" 52,"116.179.32.87/32" 52,"180.76.15.137/32" 52,"123.125.71.43/32"
52,"116.179.37.217/32" 52,"180.76.15.152/32" 52,"116.179.32.133/32" 52,"116.179.32.221/32"
52,"220.181.108.143/32" 52,"116.179.37.171/32" 52,"111.206.198.126/32" 52,"116.179.37.78/32"
52,"180.76.15.143/32" 52,"123.125.71.98/32" 52,"123.125.71.94/32" 52,"123.125.71.70/32"
52,"116.179.37.150/32" 52,"123.125.71.20/32" 52,"180.76.15.158/32" 52,"111.206.221.76/32"
52,"111.206.221.114/32" 52,"116.179.37.0/32" 52,"116.179.32.157/32" 52,"220.181.108.116/32"
52,"220.181.108.163/32" 52,"116.179.37.114/32" 52,"180.76.15.6/32" 52,"116.179.32.54/32"
52,"116.179.32.211/32" 52,"111.206.198.6/32" 52,"116.179.37.93/32" 52,"116.179.32.95/32"
52,"116.179.37.136/32" 52,"111.206.221.72/32" 52,"111.206.221.79/32" 52,"111.206.221.18/32"
52,"116.179.32.17/32" 52,"111.206.198.94/32" 52,"111.206.221.10/32" 52,"116.179.37.91/32"
52,"116.179.32.207/32" 52,"180.76.15.134/32" 52,"123.125.71.81/32" 52,"111.206.198.53/32"
52,"116.179.32.101/32" 52,"123.125.71.105/32" 52,"116.179.32.248/32" ""
