

Консоль

Задание 1

Команда или последовательность команд, которой удалось получить нужные логи:

Из домашней директории “/home/morty”, grep-аем рекурсивно файлы (параметр “-r”) в папке “logs/2019/12” по паттерну начинающемуся с “233.201.”

```
grep -r "^233.201." logs/2019/12/
```

Логи:

logs/2019/12/apache_2019-12-18.txt:

```
233.201.188.154 - - [18/12/2019:21:46:01 +0000] "DELETE /events HTTP/1.1" 403 3971
```

logs/2019/12/apache_2019-12-21.txt:

```
233.201.182.9 - - [21/12/2019:21:56:20 +0000] "PATCH /users HTTP/1.1" 400 4118
```

Задание 2

Команды, которые создают директории bug1 и events:

В домашней директории “/home/morty”, создаём папку “bug1” и подпапку “events” за одну команду через указание родительского параметра “-p”

```
mkdir -p bug1/events
```

Команда, которой выбираешь запросы за указанный период. Это те запросы, которыми ты отбираешь логи в файл main.txt:

Из домашней директории “/home/morty”, grep-аем логи по двум паттернам сразу через регулярное выражение с параметром “-E” (паттерны разделены “.”), далее перенаправляем вывод в файл “main.txt” в папку “bug1”:

```
grep -E '21:3[0-9]:[0-5][0-9].[45]00.....' logs/2019/12/apache_2019-12-3[01].txt > ~/bug1/main.txt
```

Команды, которыми ты кладёшь логи в файлы 400.txt и 500.txt из main.txt:

```
grep 400.....$ bug1/main.txt > bug1/events/400.txt
```

```
grep 500.....$ bug1/main.txt > bug1/events/500.txt
```

400.txt

1. apache_2019-12-30.txt:80.57.170.51 - - [30/12/2019:21:35:12 +0000] "DELETE /users HTTP/1.1" 400 3623
2. apache_2019-12-30.txt:204.235.176.118 - - [30/12/2019:21:35:13 +0000] "POST /users HTTP/1.1" 400 4704
3. apache_2019-12-30.txt:82.95.203.67 - - [30/12/2019:21:35:19 +0000] "DELETE /lists HTTP/1.1" 400 3737
4. apache_2019-12-30.txt:155.242.215.46 - - [30/12/2019:21:35:38 +0000] "POST /playbooks HTTP/1.1" 400 4450
5. apache_2019-12-30.txt:189.176.85.0 - - [30/12/2019:21:35:39 +0000] "PATCH /alerts HTTP/1.1" 400 2732

6. apache_2019-12-30.txt:13.108.71.71 -- [30/12/2019:21:35:43 +0000] "PATCH /events HTTP/1.1" 400 3410
7. apache_2019-12-30.txt:195.213.133.182 -- [30/12/2019:21:35:46 +0000] "PUT /customers HTTP/1.1" 400 3085
8. apache_2019-12-30.txt:235.243.133.78 -- [30/12/2019:21:35:47 +0000] "PATCH /customers HTTP/1.1" 400 3264
9. apache_2019-12-30.txt:192.57.115.49 -- [30/12/2019:21:35:55 +0000] "POST /parsers HTTP/1.1" 400 2457
10. apache_2019-12-30.txt:71.0.49.244 -- [30/12/2019:21:35:55 +0000] "PUT /collectors HTTP/1.1" 400 2785
11. apache_2019-12-30.txt:224.159.206.126 -- [30/12/2019:21:36:02 +0000] "DELETE /customers HTTP/1.1" 400 4569
12. apache_2019-12-30.txt:131.35.106.246 -- [30/12/2019:21:36:04 +0000] "DELETE /lists HTTP/1.1" 400 2578
13. apache_2019-12-30.txt:216.24.42.208 -- [30/12/2019:21:36:06 +0000] "GET /parsers HTTP/1.1" 400 4597
14. apache_2019-12-30.txt:123.53.150.160 -- [30/12/2019:21:37:19 +0000] "PATCH /events HTTP/1.1" 400 4379
15. apache_2019-12-30.txt:61.129.127.103 -- [30/12/2019:21:37:32 +0000] "GET /lists HTTP/1.1" 400 2575
16. apache_2019-12-30.txt:90.216.4.78 -- [30/12/2019:21:37:34 +0000] "PATCH /lists HTTP/1.1" 400 3899
17. apache_2019-12-30.txt:204.250.214.208 -- [30/12/2019:21:37:36 +0000] "PATCH /parsers HTTP/1.1" 400 4742
18. apache_2019-12-30.txt:79.214.240.98 -- [30/12/2019:21:37:37 +0000] "POST /fieldsets HTTP/1.1" 400 4441
19. apache_2019-12-30.txt:65.47.42.12 -- [30/12/2019:21:37:39 +0000] "PATCH /customers HTTP/1.1" 400 2500
20. apache_2019-12-30.txt:251.118.141.34 -- [30/12/2019:21:37:41 +0000] "POST /customers HTTP/1.1" 400 3519
21. apache_2019-12-30.txt:205.20.166.196 -- [30/12/2019:21:37:51 +0000] "POST /users HTTP/1.1" 400 4032
22. apache_2019-12-30.txt:156.217.3.46 -- [30/12/2019:21:37:52 +0000] "PATCH /parsers HTTP/1.1" 400 2020
23. apache_2019-12-30.txt:48.240.198.167 -- [30/12/2019:21:37:57 +0000] "PATCH /playbooks HTTP/1.1" 400 4100
24. apache_2019-12-30.txt:101.255.159.211 -- [30/12/2019:21:37:59 +0000] "GET /auth HTTP/1.1" 400 2324
25. apache_2019-12-30.txt:80.76.98.203 -- [30/12/2019:21:38:00 +0000] "POST /playbooks HTTP/1.1" 400 3045
26. apache_2019-12-30.txt:85.64.63.255 -- [30/12/2019:21:38:13 +0000] "PATCH /collectors HTTP/1.1" 400 2291
27. apache_2019-12-30.txt:184.79.247.161 -- [30/12/2019:21:38:13 +0000] "PUT /alerts HTTP/1.1" 400 3557
28. apache_2019-12-30.txt:93.2.134.22 -- [30/12/2019:21:39:39 +0000] "DELETE /alerts HTTP/1.1" 400 3701
29. apache_2019-12-31.txt:86.34.86.182 -- [31/12/2019:21:35:10 +0000] "POST /auth HTTP/1.1" 400 3626
30. apache_2019-12-31.txt:167.37.16.117 -- [31/12/2019:21:35:17 +0000] "PATCH /customers HTTP/1.1" 400 3294
31. apache_2019-12-31.txt:199.128.92.19 -- [31/12/2019:21:35:43 +0000] "PUT /users HTTP/1.1" 400 4180
32. apache_2019-12-31.txt:162.152.99.143 -- [31/12/2019:21:35:59 +0000] "PUT /users HTTP/1.1" 400 4606
33. apache_2019-12-31.txt:83.115.59.224 -- [31/12/2019:21:37:26 +0000] "GET /alerts HTTP/1.1" 400 3489
34. apache_2019-12-31.txt:194.10.97.226 -- [31/12/2019:21:37:31 +0000] "DELETE /lists HTTP/1.1" 400 2447
35. apache_2019-12-31.txt:180.99.214.40 -- [31/12/2019:21:37:44 +0000] "DELETE /alerts HTTP/1.1" 400 2077
36. apache_2019-12-31.txt:154.152.205.4 -- [31/12/2019:21:37:50 +0000] "GET /playbooks HTTP/1.1" 400 3324
37. apache_2019-12-31.txt:197.82.125.54 -- [31/12/2019:21:37:52 +0000] "PUT /fieldsets HTTP/1.1" 400 4365
38. apache_2019-12-31.txt:115.89.87.219 -- [31/12/2019:21:38:06 +0000] "PUT /playbooks HTTP/1.1" 400 2589
39. apache_2019-12-31.txt:100.77.15.14 -- [31/12/2019:21:38:07 +0000] "GET /fieldsets HTTP/1.1" 400 4911
40. apache_2019-12-31.txt:22.33.159.242 -- [31/12/2019:21:38:07 +0000] "GET /playbooks HTTP/1.1" 400 3955
41. apache_2019-12-31.txt:149.148.229.11 -- [31/12/2019:21:39:16 +0000] "GET /users HTTP/1.1" 400 2071
42. apache_2019-12-31.txt:236.107.64.192 -- [31/12/2019:21:39:17 +0000] "PATCH /users HTTP/1.1" 400 2791
43. apache_2019-12-31.txt:24.156.105.39 -- [31/12/2019:21:39:23 +0000] "GET /lists HTTP/1.1" 400 2902
44. apache_2019-12-31.txt:193.50.164.254 -- [31/12/2019:21:39:23 +0000] "PUT /playbooks HTTP/1.1" 400 3296
45. apache_2019-12-31.txt:18.123.104.91 -- [31/12/2019:21:39:52 +0000] "GET /collectors HTTP/1.1" 400 4372
46. apache_2019-12-31.txt:234.218.148.4 -- [31/12/2019:21:39:54 +0000] "PUT /users HTTP/1.1" 400 2509

500.txt.

1. apache_2019-12-30.txt:64.250.112.189 -- [30/12/2019:21:35:13 +0000] "PUT /parsers HTTP/1.1" 500 4639
2. apache_2019-12-30.txt:193.253.101.180 -- [30/12/2019:21:35:31 +0000] "PATCH /alerts HTTP/1.1" 500 2944
3. apache_2019-12-30.txt:197.106.117.194 -- [30/12/2019:21:35:31 +0000] "PATCH /parsers HTTP/1.1" 500 3519
4. apache_2019-12-30.txt:247.124.71.67 -- [30/12/2019:21:35:45 +0000] "PUT /alerts HTTP/1.1" 500 2746
5. apache_2019-12-30.txt:62.88.204.119 -- [30/12/2019:21:35:51 +0000] "PUT /auth HTTP/1.1" 500 2666
6. apache_2019-12-30.txt:125.156.142.26 -- [30/12/2019:21:36:01 +0000] "PATCH /events HTTP/1.1" 500 3460
7. apache_2019-12-30.txt:144.170.212.70 -- [30/12/2019:21:36:04 +0000] "DELETE /parsers HTTP/1.1" 500 2599
8. apache_2019-12-30.txt:59.39.200.252 -- [30/12/2019:21:36:05 +0000] "GET /alerts HTTP/1.1" 500 2650
9. apache_2019-12-30.txt:150.136.200.100 -- [30/12/2019:21:37:24 +0000] "POST /lists HTTP/1.1" 500 2684
10. apache_2019-12-30.txt:84.81.25.45 -- [30/12/2019:21:37:25 +0000] "POST /auth HTTP/1.1" 500 2052
11. apache_2019-12-30.txt:30.222.160.141 -- [30/12/2019:21:37:30 +0000] "PATCH /parsers HTTP/1.1" 500 2017
12. apache_2019-12-30.txt:117.87.158.36 -- [30/12/2019:21:37:34 +0000] "POST /fieldsets HTTP/1.1" 500 4056
13. apache_2019-12-30.txt:212.153.128.212 -- [30/12/2019:21:37:42 +0000] "PUT /fieldsets HTTP/1.1" 500 3259
14. apache_2019-12-30.txt:58.188.83.217 -- [30/12/2019:21:37:46 +0000] "POST /playbooks HTTP/1.1" 500 3947
15. apache_2019-12-30.txt:193.123.131.146 -- [30/12/2019:21:37:47 +0000] "PUT /lists HTTP/1.1" 500 3902
16. apache_2019-12-30.txt:182.7.179.91 -- [30/12/2019:21:37:48 +0000] "GET /users HTTP/1.1" 500 2950
17. apache_2019-12-30.txt:10.25.168.164 -- [30/12/2019:21:38:05 +0000] "PATCH /playbooks HTTP/1.1" 500 3858
18. apache_2019-12-30.txt:215.201.210.173 -- [30/12/2019:21:38:11 +0000] "PATCH /customers HTTP/1.1" 500 3277
19. apache_2019-12-30.txt:179.241.103.167 -- [30/12/2019:21:39:23 +0000] "POST /lists HTTP/1.1" 500 3669
20. apache_2019-12-30.txt:147.188.170.252 -- [30/12/2019:21:39:33 +0000] "POST /fieldsets HTTP/1.1" 500 3313
21. apache_2019-12-30.txt:1.249.123.189 -- [30/12/2019:21:39:36 +0000] "PATCH /alerts HTTP/1.1" 500 4734
22. apache_2019-12-30.txt:124.114.135.105 -- [30/12/2019:21:39:41 +0000] "PATCH /customers HTTP/1.1" 500 3348
23. apache_2019-12-30.txt:35.215.100.202 -- [30/12/2019:21:39:43 +0000] "PUT /alerts HTTP/1.1" 500 4345
24. apache_2019-12-30.txt:86.222.23.128 -- [30/12/2019:21:39:44 +0000] "PATCH /alerts HTTP/1.1" 500 2230
25. apache_2019-12-30.txt:20.161.75.95 -- [30/12/2019:21:39:48 +0000] "DELETE /users HTTP/1.1" 500 2412
26. apache_2019-12-30.txt:196.18.151.117 -- [30/12/2019:21:39:55 +0000] "PUT /events HTTP/1.1" 500 4439
27. apache_2019-12-30.txt:77.101.138.151 -- [30/12/2019:21:39:57 +0000] "PUT /lists HTTP/1.1" 500 2194
28. apache_2019-12-31.txt:208.205.133.127 -- [31/12/2019:21:35:17 +0000] "DELETE /alerts HTTP/1.1" 500 4561
29. apache_2019-12-31.txt:20.145.255.91 -- [31/12/2019:21:35:30 +0000] "GET /parsers HTTP/1.1" 500 3051
30. apache_2019-12-31.txt:91.66.134.13 -- [31/12/2019:21:35:53 +0000] "POST /lists HTTP/1.1" 500 3319

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31. apache_2019-12-31.txt:31.88.211.206 - - [31/12/2019:21:35:57 +0000] "DELETE /events HTTP/1.1" 500 2325
32. apache_2019-12-31.txt:171.37.114.114 - - [31/12/2019:21:37:39 +0000] "DELETE /fieldsets HTTP/1.1" 500 3253
33. apache_2019-12-31.txt:223.157.242.167 - - [31/12/2019:21:37:59 +0000] "POST /users HTTP/1.1" 500 2283
34. apache_2019-12-31.txt:98.181.102.34 - - [31/12/2019:21:38:06 +0000] "PATCH /fieldsets HTTP/1.1" 500 4672
35. apache_2019-12-31.txt:254.74.22.79 - - [31/12/2019:21:38:06 +0000] "PUT /lists HTTP/1.1" 500 2259
36. apache_2019-12-31.txt:103.46.238.3 - - [31/12/2019:21:38:09 +0000] "PUT /lists HTTP/1.1" 500 3992
37. apache_2019-12-31.txt:41.62.205.107 - - [31/12/2019:21:39:20 +0000] "PATCH /alerts HTTP/1.1" 500 3631
38. apache_2019-12-31.txt:22.53.105.197 - - [31/12/2019:21:39:31 +0000] "DELETE /collectors HTTP/1.1" 500 4202
39. apache_2019-12-31.txt:178.22.133.42 - - [31/12/2019:21:39:43 +0000] "PUT /alerts HTTP/1.1" 500 4648
40. apache_2019-12-31.txt:102.247.13.50 - - [31/12/2019:21:39:55 +0000] "PATCH /auth HTTP/1.1" 500 3736
```

База данных

Задание 1

Число автомобилей:

5500

Запрос, которым тебе удалось решить задачу.

SELECT

-- количество уникальных автомобилей

COUNT(DISTINCT vehicle_id)

FROM

cabs;

Задание 2

Список компаний с числом автомобилей меньше 100.

cnt	company_name
-----	--------------

-----+-----	
-------------	--

1 0118 - 42111 Godfrey S.Awir	
---------------------------------	--

1 1085 - 72312 N and W Cab Co	
---------------------------------	--

1 1469 - 64126 Omar Jada	
----------------------------	--

1 2092 - 61288 Sbeih company	
--------------------------------	--

1 2192 - 73487 Zeymane Corp	
-------------------------------	--

1 2241 - 44667 - Felman Corp, Manuel Alonso	
---	--

1 2809 - 95474 C & D Cab Co Inc.	
------------------------------------	--

1 2823 - 73307 Lee Express Inc	
----------------------------------	--

1 3011 - 66308 JBL Cab Inc.	
-------------------------------	--

1 | 3094 - 24059 G.L.B. Cab Co

1 | 3556 - 36214 RC Andrews Cab

1 | 3591 - 63480 Chuks Cab

1 | 3620 - 52292 David K. Cab Corp.

1 | 3623 - 72222 Arrington Enterprises

1 | 3721 - Santamaria Express, Alvaro Santamaria

1 | 4053 - 40193 Adwar H. Nikola

1 | 4615 - 83503 Tyrone Henderson

1 | 4623 - 27290 Jay Kim

1 | 5006 - 39261 Salifu Bawa

1 | 5062 - 34841 Sam Mestas

1 | 5074 - 54002 Ahzmi Inc

1 | 5874 - 73628 Sergey Cab Corp.

1 | 5997 - 65283 AW Services Inc.

1 | 6057 - 24657 Richard Addo

1 | 6574 - Babylon Express Inc.

1 | 6742 - 83735 Tasha ride inc

1 | 6743 - 78771 Luhak Corp

1 | Chicago Star Taxicab

1 | 2733 - 74600 Benny Jona

5 | Leonard Cab Co

7 | Setare Inc

8 | American United Taxi Affiliation

8 | Metro Jet Taxi A

14 | 5 Star Taxi

18 | Service Taxi Association

20 | Metro Group

20 | Gold Coast Taxi

34 | Norshore Cab

38 | Chicago Taxicab

48 | KOAM Taxi Association

49 | Top Cab Affiliation

53 | Chicago Medallion Leasing INC

55 | American United

60 | Checker Taxi

67 | 24 Seven Taxi

69 | Chicago Independents

80 | Chicago Medallion Management

81 | Checker Taxi Affiliation

85 | Blue Diamond

89 | Patriot Taxi Dbа Peace Taxi Associat

97 | Nova Taxi Affiliation Llc

(51 rows)

Запрос, которым тебе удалось решить задачу.

SELECT

-- Количество уникальных автомобилей

COUNT(DISTINCT vehicle_id) **AS** cnt,

-- Название компании

company_name

FROM

cabs

GROUP BY

--Группируем по компаниям

company_name

HAVING

-- Проверяем количество уникальных автомобилей

COUNT(DISTINCT vehicle_id) < 100

ORDER BY

--Сортируем в порядке возрастания cnt

cnt;

Задание 3

Таблица с данными за указанный период.

ts | weather_conditions

-----+-----

2017-11-05 00:00:00 | Good

2017-11-05 01:00:00 | Bad

2017-11-05 02:00:00 | Good

2017-11-05 03:00:00 | Good

2017-11-05 04:00:00 | Bad

2017-11-05 05:00:00 | Bad

2017-11-05 06:00:00 | Good

2017-11-05 07:00:00 | Good

2017-11-05 08:00:00 | Good

2017-11-05 09:00:00 | Good

2017-11-05 10:00:00 | Good

2017-11-05 11:00:00 | Good

2017-11-05 12:00:00 | Good

2017-11-05 13:00:00 | Good

2017-11-05 14:00:00 | Bad

2017-11-05 15:00:00 | Good

2017-11-05 16:00:00 | Bad

2017-11-05 17:00:00 | Good

2017-11-05 18:00:00 | Bad

2017-11-05 19:00:00 | Bad

2017-11-05 20:00:00 | Bad

2017-11-05 21:00:00 | Good

2017-11-05 22:00:00 | Good

2017-11-05 23:00:00 | Good

2017-11-06 00:00:00 | Good

(25 rows)

Запрос, которым удалось решить задачу.

SELECT

--Дата и время наблюдения

ts,

--Проверяем условия вхождения слов rain и storm

--И присваиваем значение 'Bad'/'Good'

CASE

WHEN description **LIKE** '%rain%' **THEN** 'Bad'

WHEN description **LIKE** '%storm%' **THEN** 'Bad'

ELSE 'Good'

END

--Алиас

AS weather_conditions

FROM

weather_records

WHERE

--Выбираем по вхождению в диапазон дат ts

ts **BETWEEN** '2017-11-05 00:00' **AND** '2017-11-06 00:00';

Задание 4

Таблица с данными за указанный период.

company_name	trips_amount
Flash Cab	19558
Taxi Affiliation Services	11422
Medallion Leasin	10367
Yellow Cab	9888

Taxi Affiliation Service Yellow		9299
Chicago Carriage Cab Corp		9181
City Service		8448
Sun Taxi		7701
Star North Management LLC		7455
Blue Ribbon Taxi Association Inc.		5953
Choice Taxi Association		5015
Globe Taxi		4383
Dispatch Taxi Affiliation		3355
Nova Taxi Affiliation Llc		3175
Patriot Taxi DbA Peace Taxi Associat		2235
Checker Taxi Affiliation		2216
Blue Diamond		2070
Chicago Medallion Management		1955
24 Seven Taxi		1775
Chicago Medallion Leasing INC		1607
Checker Taxi		1486
American United		1404
Chicago Independents		1296
KOAM Taxi Association		1259
Chicago Taxicab		1014
Top Cab Affiliation		978
Gold Coast Taxi		428
Service Taxi Association		402
5 Star Taxi		310
303 Taxi		250
Setare Inc		230
American United Taxi Affiliation		210
Leonard Cab Co		147
Metro Jet Taxi A		146
Norshore Cab		127

6742 - 83735 Tasha ride inc		39
3591 - 63480 Chuks Cab		37
1469 - 64126 Omar Jada		36
6743 - 78771 Luhak Corp		33
0118 - 42111 Godfrey S.Awir		33
6574 - Babylon Express Inc.		31
Chicago Star Taxicab		29
1085 - 72312 N and W Cab Co		29
2809 - 95474 C & D Cab Co Inc.		29
2092 - 61288 Sbeih company		27
3011 - 66308 JBL Cab Inc.		25
3620 - 52292 David K. Cab Corp.		21
4615 - 83503 Tyrone Henderson		21
3623 - 72222 Arrington Enterprises		20
5074 - 54002 Ahzmi Inc		16
2823 - 73307 Lee Express Inc		15
4623 - 27290 Jay Kim		15
3721 - Santamaria Express, Alvaro Santamaria		14
5006 - 39261 Salifu Bawa		14
2192 - 73487 Zeymane Corp		14
6057 - 24657 Richard Addo		13
5997 - 65283 AW Services Inc.		12
Metro Group		11
5062 - 34841 Sam Mestas		8
4053 - 40193 Adwar H. Nikola		7
2733 - 74600 Benny Jona		7
5874 - 73628 Sergey Cab Corp.		5
2241 - 44667 - Felman Corp, Manuel Alonso		3
3556 - 36214 RC Andrews Cab		2

(64 rows)

Запрос, которым удалось решить задачу.

SELECT

--Выбираем company_name и кол-во trip_id

cabs.company_name,

COUNT(trips.trip_id) **AS** trips_amount

FROM trips

INNER JOIN

--Объединение таблиц cabs и trips по полю cab_id

cabs **ON** cabs.cab_id = trips.cab_id

WHERE

--Выбираем по вхождению в диапазон дат trips.start_ts

trips.start_ts **BETWEEN** '2017-11-15' **AND** '2017-11-16 23:59:59'

GROUP BY

--Группируем по названию компании

cabs.company_name

ORDER BY

--Сортируем по убыванию trips_amount

trips_amount **DESC**;