

# GET OUT OF JAIL "FREE" CARDS



Tips and quick fixes to get you out of sticky situations with servers, websites and APIs

@dave1010 @tweetingsherry

# GET OUT OF JAIL "FREE" CARDS



Tips and quick fixes to get you out of sticky situations with servers, websites and APIs

HELLO 

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# Get Out Of Jail Free Cards



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# THIS TALK

✨ Perfect world

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# THIS TALK

✨ Perfect world

😱 Dilemma

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# THIS TALK

✨ Perfect world

😱 Dilemma

😌 Recovery

# THIS TALK

✨ Perfect world

😱 Dilemma

😌 Recovery

⚠ Caution

# THIS TALK

✨ Perfect world

😱 Dilemma

😌 Recovery

⚠ Caution

💯 Long Term

# TRAFFIC SPIKES

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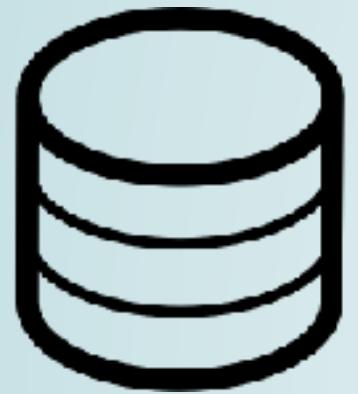
# TRAFFIC SPIKES



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# CACHING LAYERS



Database



Application



Webserver

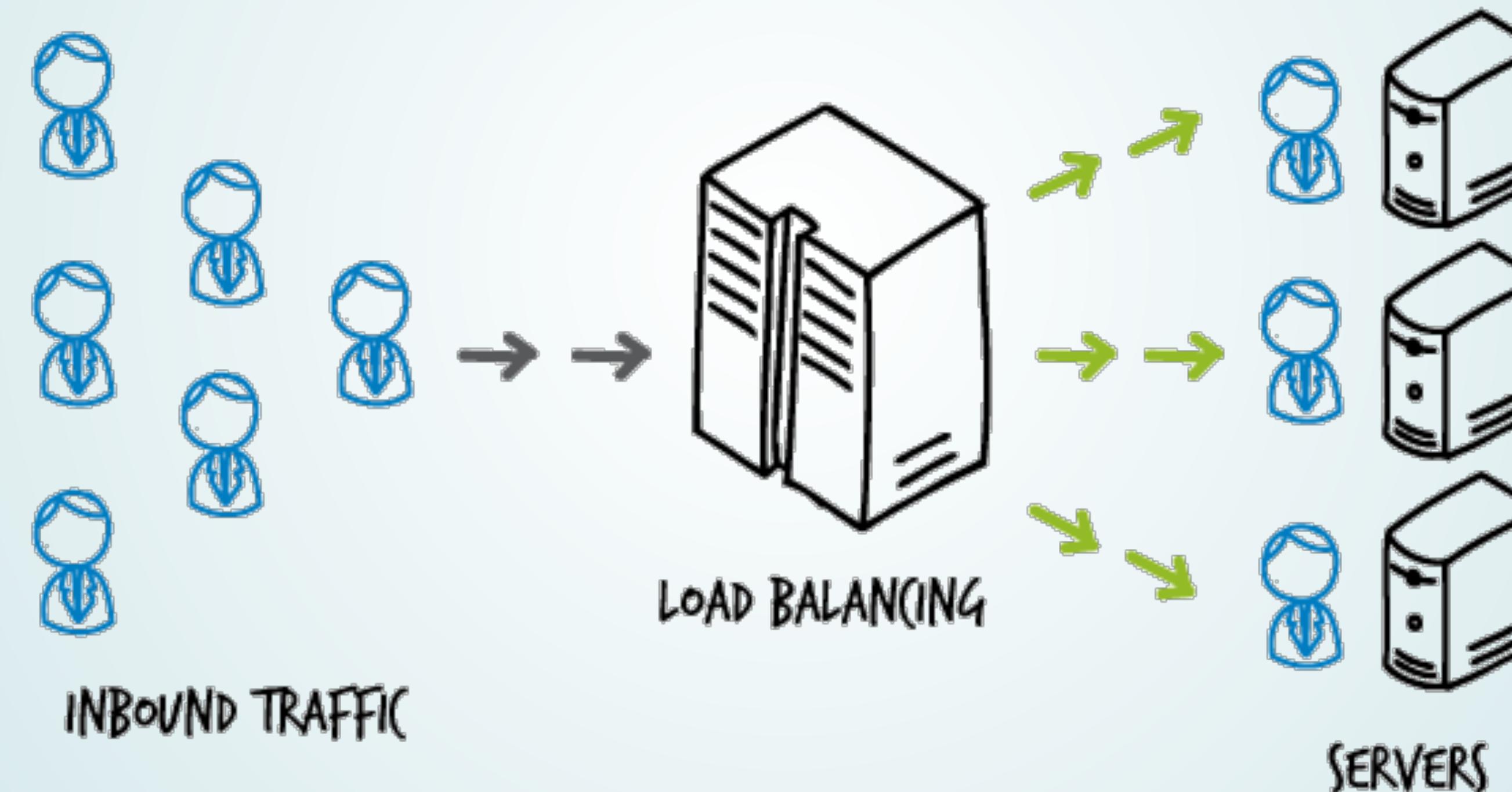


DNS



Client Side

# CACHING LAYERS



# Traffic Spikes > 😱 Dilemma

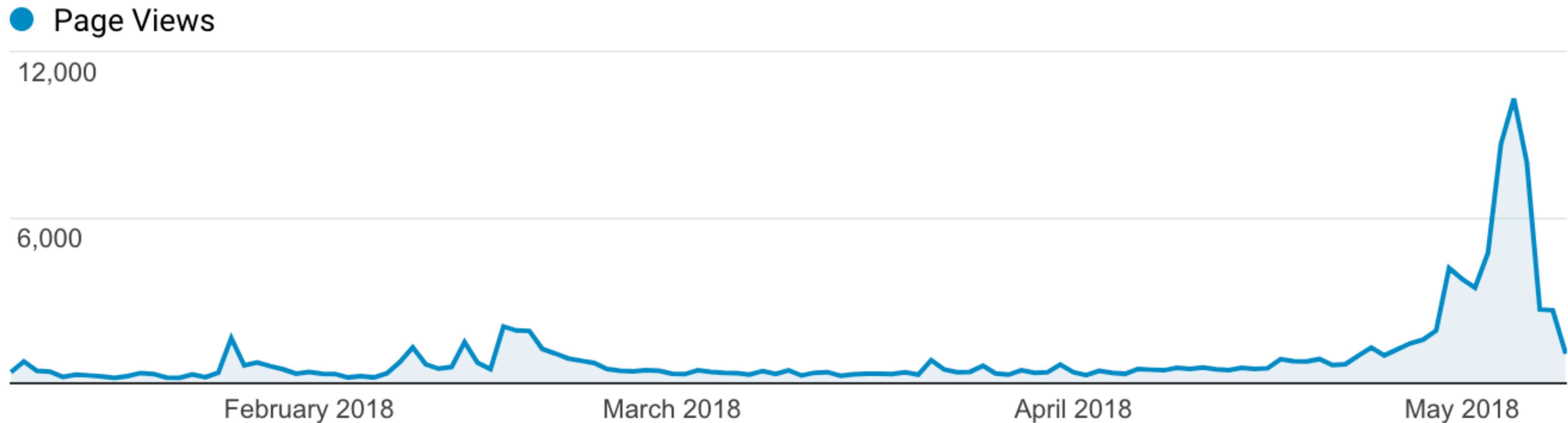
.

• 💧 Wartortle		💧	...
Image	 Ubuntu LEMP on 16.04	Region	LON1
Size	1 vCPUs 0.5GB / 20GB Disk (\$5/mo) <a href="#">Resize</a>	IPv4	46.101.36.189
		IPv6	Enable
		Private IP	Enable

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# Traffic Spikes > 😱 Dilemma



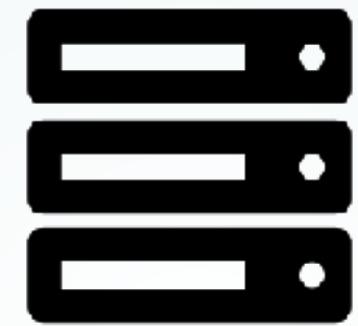
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# CACHING LAYERS



Application



Webserver

HTTP cache

Headers, CDNs,  
Reverse proxies



DNS

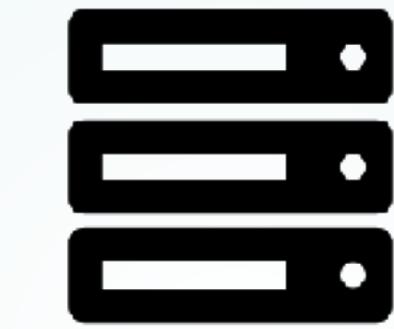


Client Side

# CACHING LAYERS



Application



Webserver

HTTP cache

Headers, CDNs,

Reverse proxies

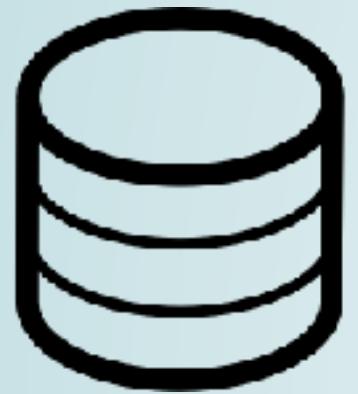


DNS



Client Side

# CACHING LAYERS



Database



Application



DNS



Client Side

# Traffic Spikes > 😅 Recovery

Contact Sales: +44 20 3514 6970 English ▾



Products

Solutions

Resources

Developers

Pricing

Support

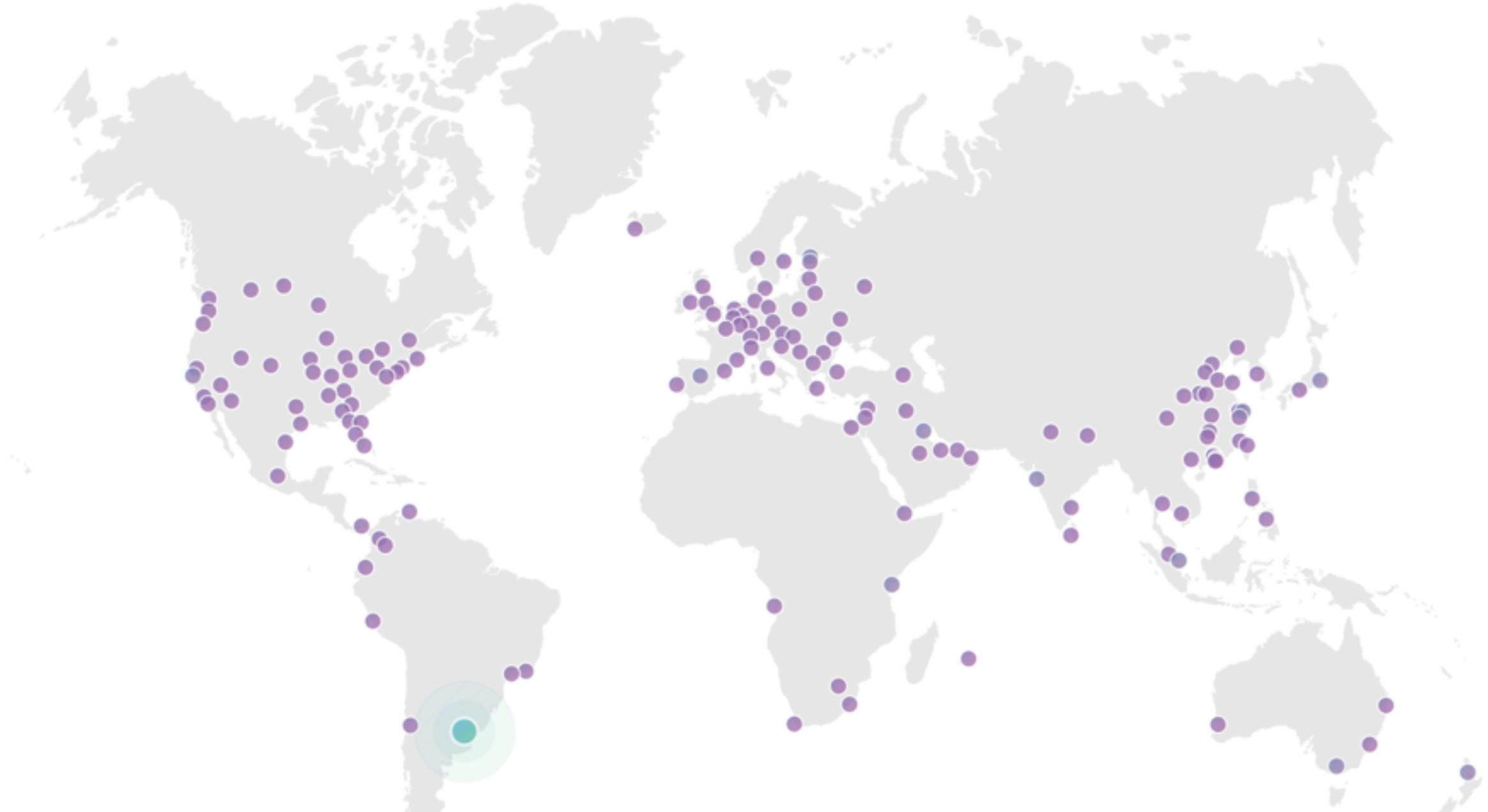
Log In

Sign Up

Under Attack?

## A Growing Global Network Built for Scale

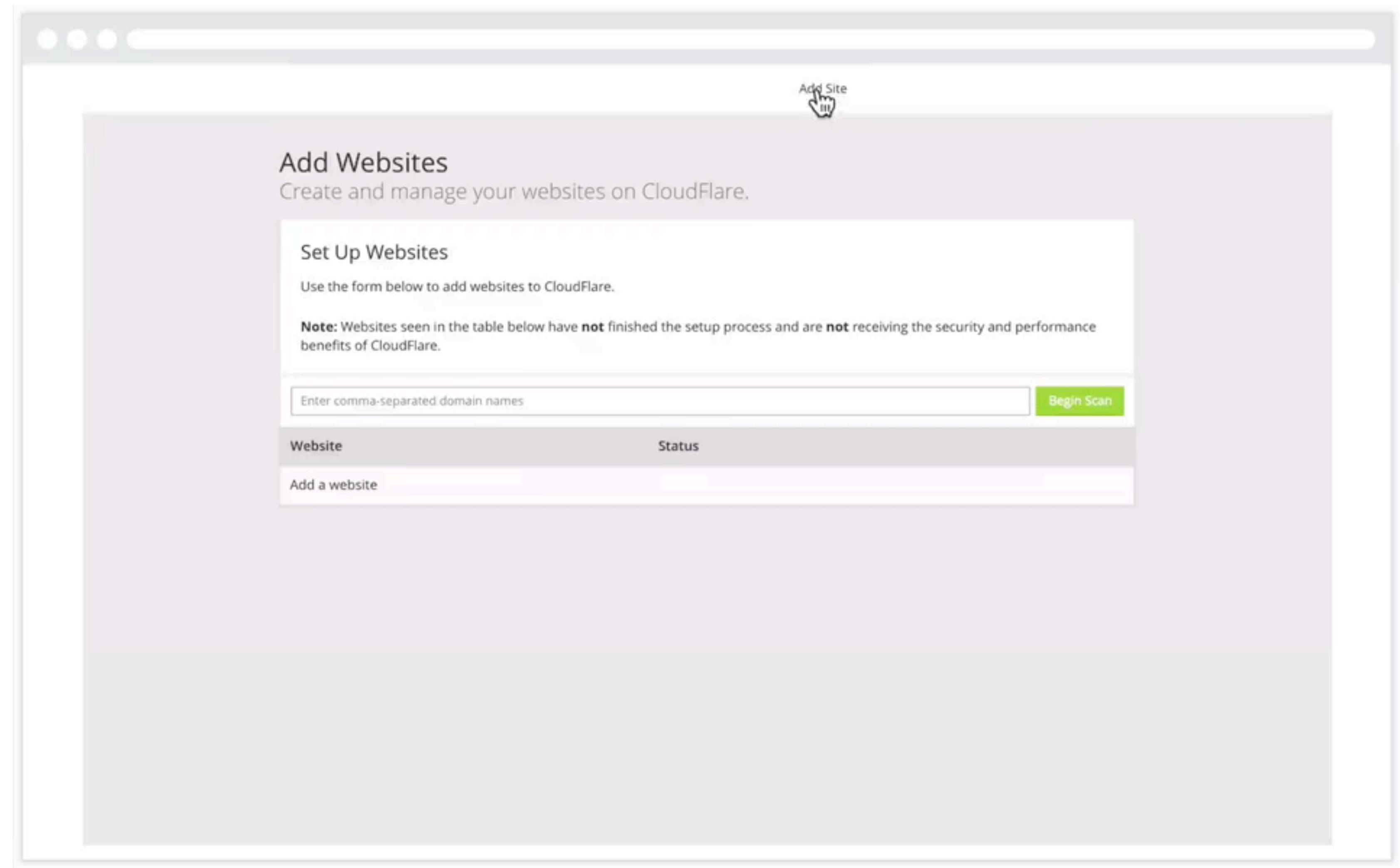
15 Tbps Capacity and 151 Data Center Global Footprint



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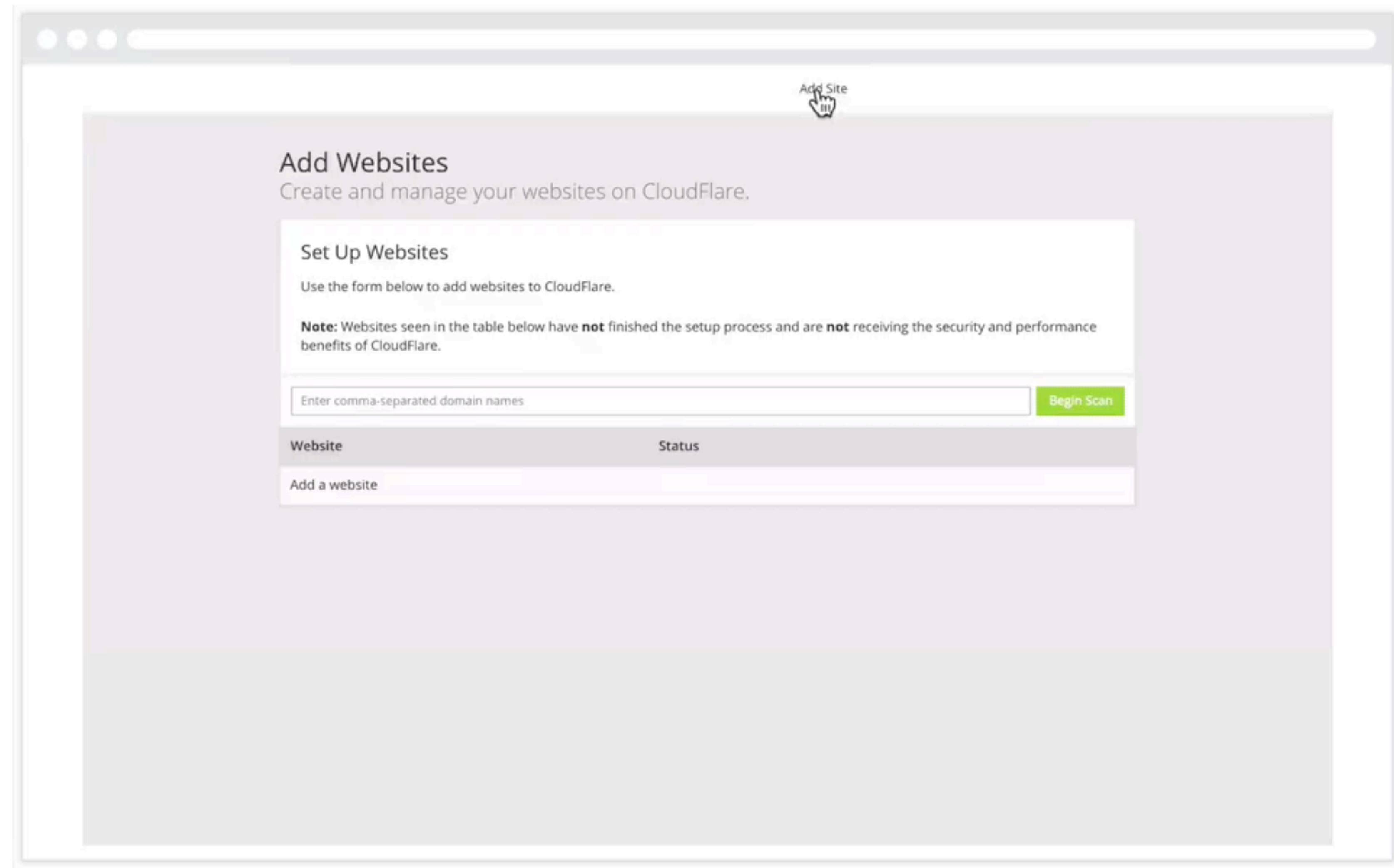
# Traffic Spikes > 😅 Recovery



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# Traffic Spikes > 😅 Recovery



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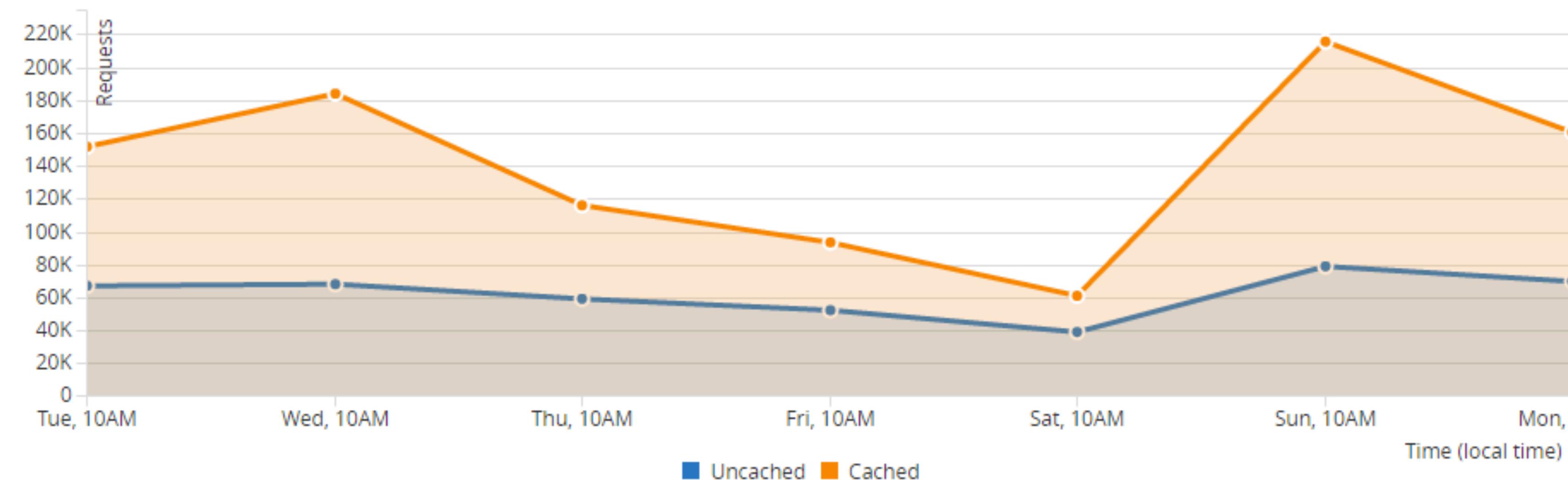


# Traffic Spikes > 😅 Recovery

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## Requests Through CloudFlare

Total Requests	Cached Requests	Uncached Requests
Last Week	Last Week	Last Week
1,414,185	980,962	433,223



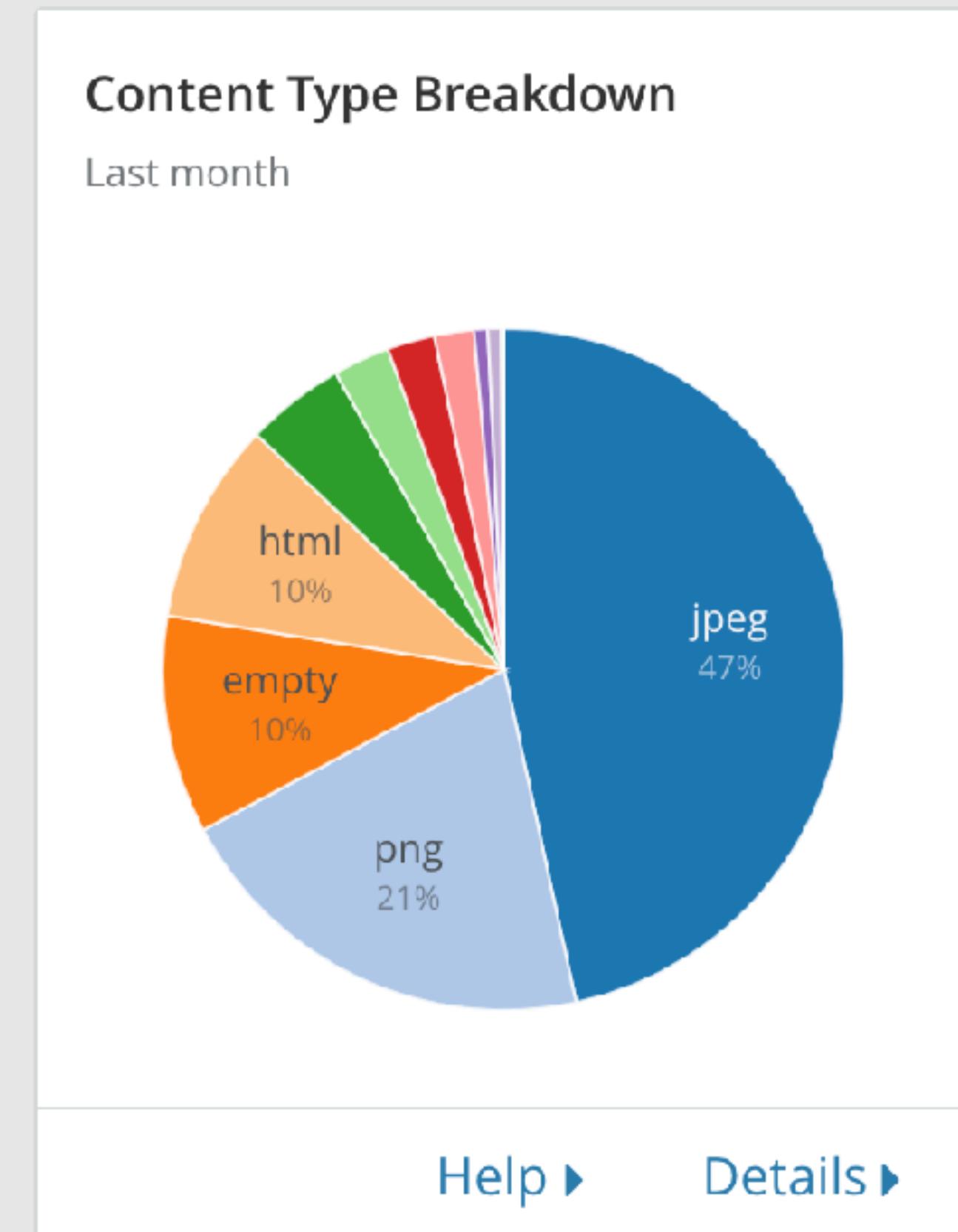
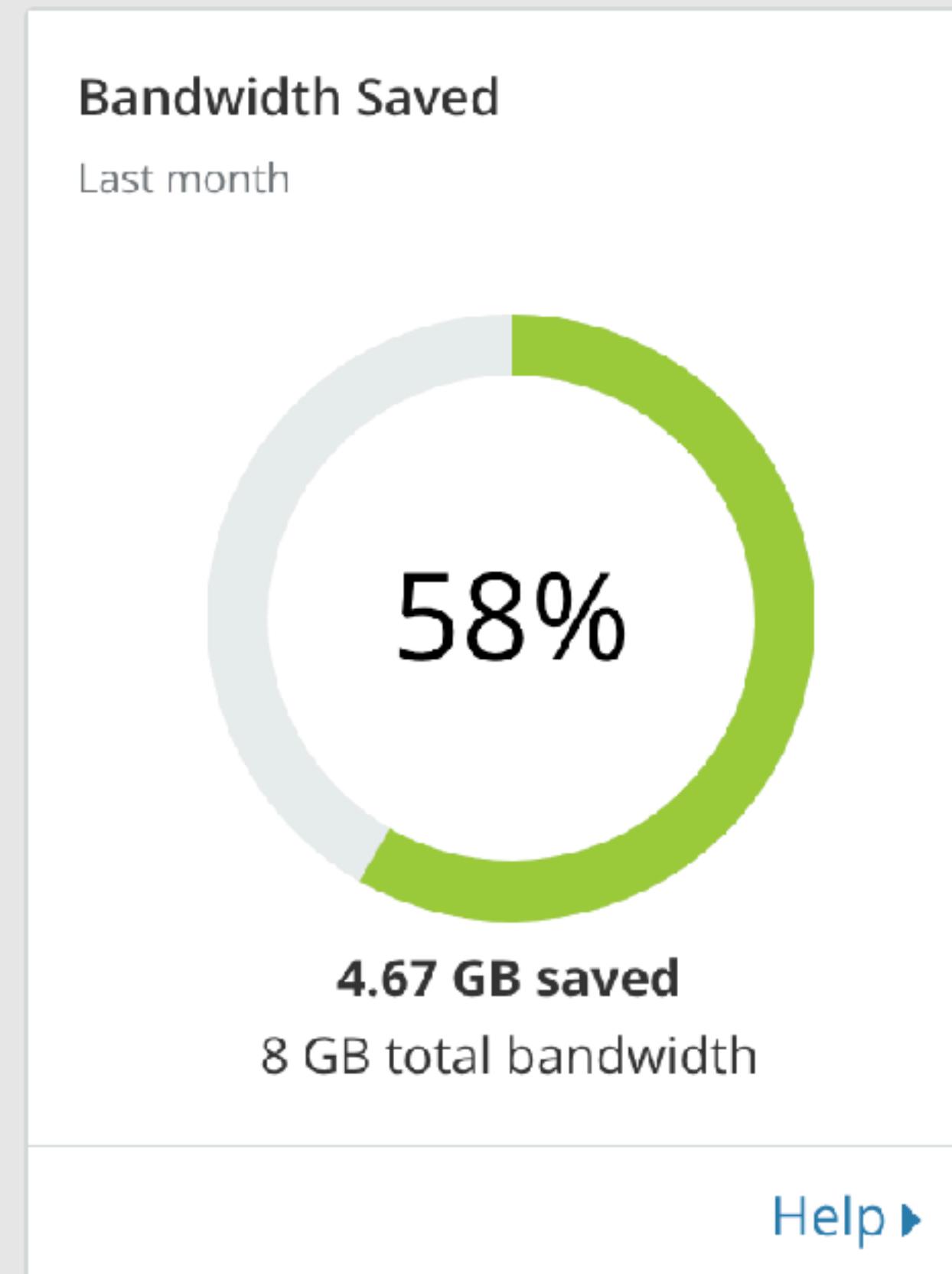
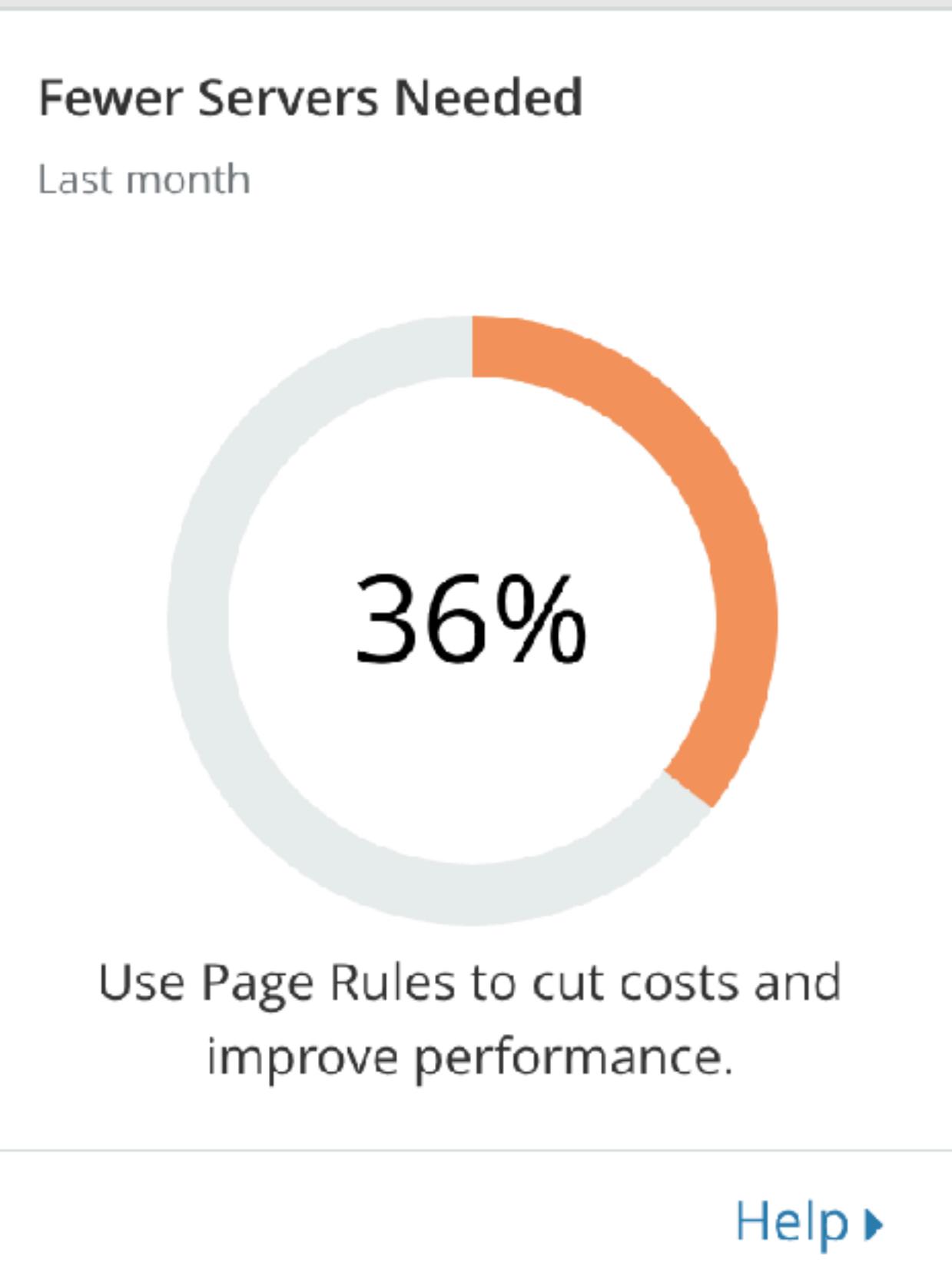
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# Traffic Spikes > 😅 Recovery

## Performance

Last month ▾



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# Traffic Spikes > 😅 Recovery



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# Traffic Spikes > ! Caution

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## Cloudflare Nameservers

To use Cloudflare, you need to change your domain's authoritative DNS servers, which are also referred to as nameservers. For your reference, here are the Cloudflare nameservers you've been assigned.

Type	Value
NS	lily.ns.cloudflare.com
NS	merlin.ns.cloudflare.com

[Help ▶](#)

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## Traffic Spikes > Long Term

```
<?php
```

```
// don't cache  
header("Cache-Control: no-cache, must-revalidate");  
header("Pragma: no-cache"); //HTTP 1.0  
header("Expires: Sat, 26 Jul 1997 05:00:00 GMT");
```

```
// do cache  
header("Cache-Control: max-age=2592000");
```

```
?>
```

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## Traffic Spikes > Long Term

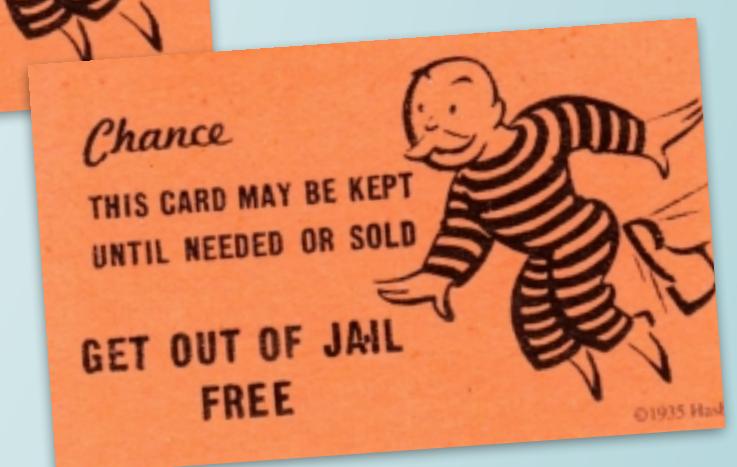
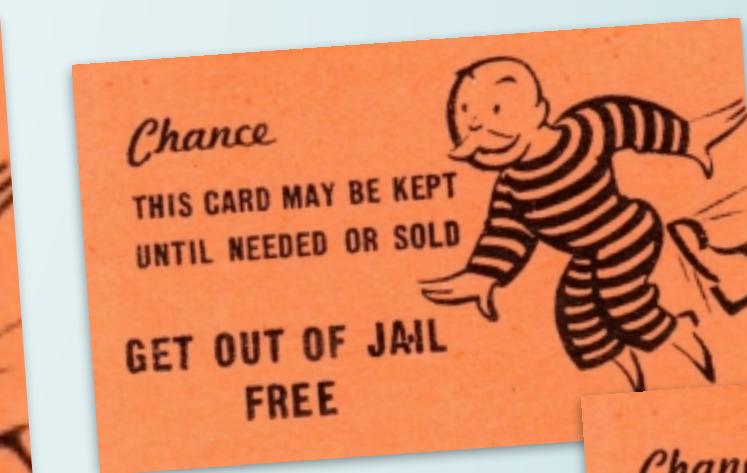
```
suse1:~ # netstat -tu
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address                   Foreign Address             State
tcp      0      0 192.168.198.128:46642          ocsp.lax2.veri:www- http TIME_WAIT
tcp      0      0 192.168.198.128:45698          fra07s31-in-f25.1:https TIME_WAIT
tcp      0      0 192.168.198.128:46640          ocsp.lax2.veri:www- http TIME_WAIT
tcp      0      0 192.168.198.128:48415          ec2-54-194-121-24:https TIME_WAIT
tcp      0      0 192.168.198.128:40846          cache.google.c:www- http TIME_WAIT
tcp      0      0 192.168.198.128:40845          cache.google.c:www- http TIME_WAIT
tcp      0      0 192.168.198.128:33949          130.57.66.10:https        TIME_WAIT
tcp      0      0 192.168.198.128:33958          130.57.66.10:https        TIME_WAIT
tcp      0      0 192.168.198.128:33959          130.57.66.10:https        TIME_WAIT
tcp      0      0 192.168.198.128:33965          130.57.66.10:https        TIME_WAIT
tcp      0      0 192.168.198.128:46408          we-in-f95.le100.n:https  TIME_WAIT
```

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# Get Out Of Jail Free Cards

**CONTENT  
DELIVERY  
NETWORK**



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ssl

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# SSL



Not Secure

http://www.example.com

Your connection to this site is not secure

You should not enter any sensitive information on this site (for example, passwords or credit cards), because it could be stolen by attackers.

[Details](#)

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100

# SSL > ✨ Perfect World

Search domain names...  Filter Export CSV

DOMAIN EXPIRY Auto-renew  
EXPIRY Enabled

DOMAIN	EXPIRY	Actions	More info
<a href="#">chrissberry.co.uk</a>	Expiry: 13th May 2019		DNS Contacts
<a href="#">outofnowhereimprov.co.uk</a>	Expiry: 2nd Aug 2018		DNS Contacts
		<input type="button" value="Update name servers"/> <input type="button" value="Apply"/>	

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# SSL > ✨ Perfect World

Search domain names...  Filter Export CSV

DOMAIN EXPIRY Auto-renew  
EXPIRY Enabled

DOMAIN	EXPIRY	Auto-renew	Update name servers	Apply
<a href="#">chrissberry.co.uk</a>	Expiry: 13th May 2019		<a href="#">DNS</a> <a href="#">Contacts</a>	
<a href="#">outofnowhereimprov.co.uk</a>	Expiry: 2nd Aug 2018		<a href="#">DNS</a> <a href="#">Contacts</a>	
			<a href="#">Update name servers</a>	Apply

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## SSL > 😱 Dilemma



There is a problem with this website's security certificate.

The security certificate presented by this website has expired or is not yet valid.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

**We recommend that you close this webpage and do not continue to this website.**

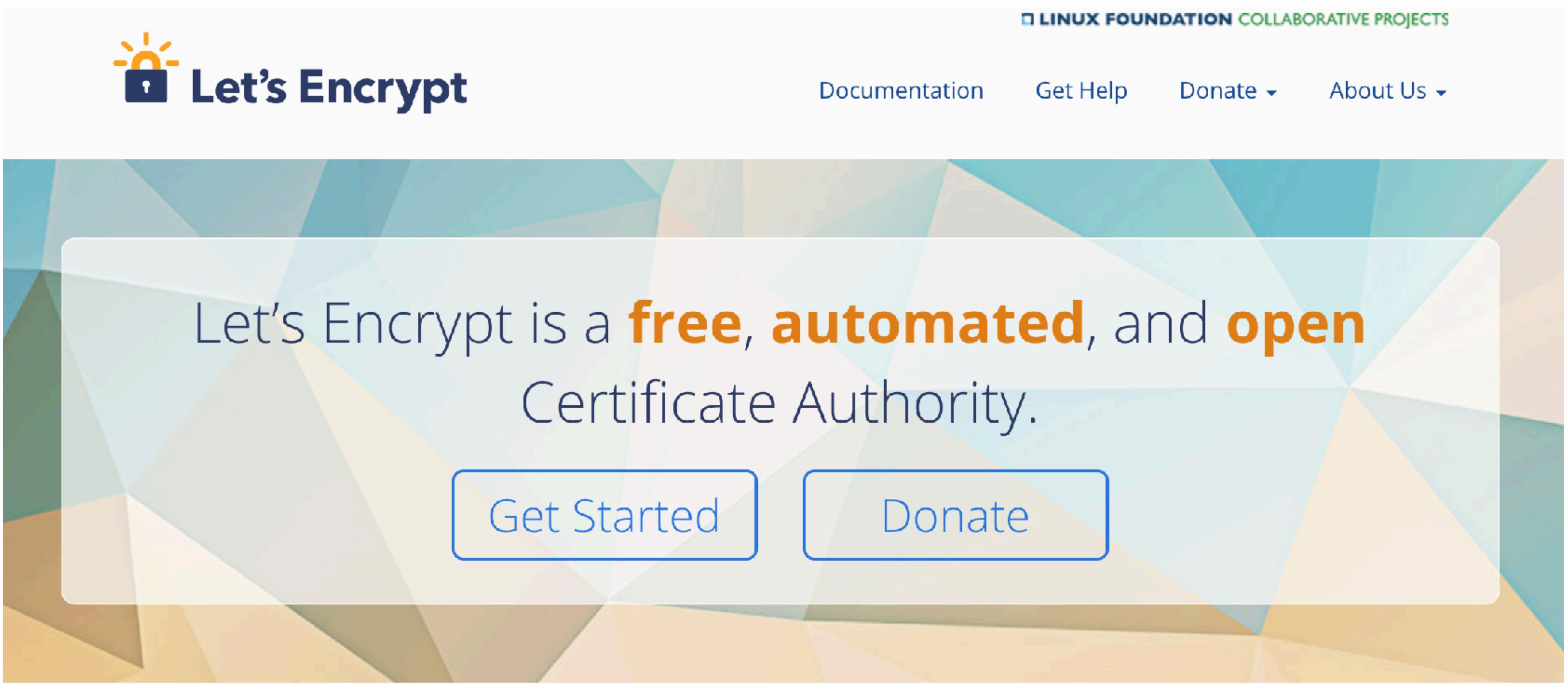
✓ [Click here to close this webpage.](#)

✗ [Continue to this website \(not recommended\).](#)

▼ [More information](#)

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The image shows the Let's Encrypt homepage. At the top left is the Let's Encrypt logo (a lock with orange rays). At the top right are links for Documentation, Get Help, Donate, and About Us. The main banner features a geometric background of triangles in shades of blue, green, and yellow. The text reads: "Let's Encrypt is a **free, automated**, and **open** Certificate Authority." Below the text are two buttons: "Get Started" and "Donate".

LINUX FOUNDATION COLLABORATIVE PROJECTS

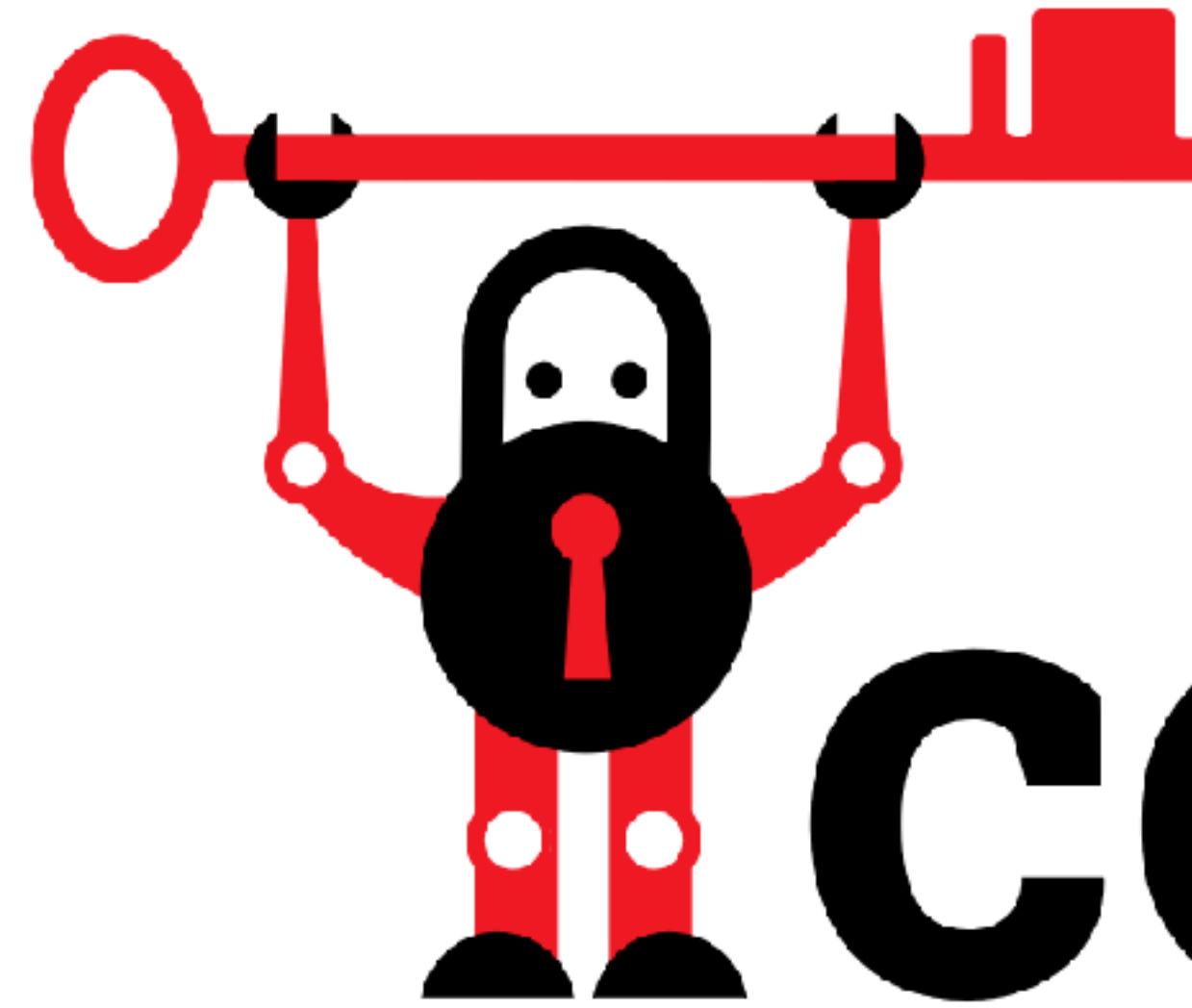
Documentation   Get Help   Donate ▾   About Us ▾

Let's Encrypt is a **free, automated**, and **open** Certificate Authority.

Get Started   Donate

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# certbot

Automatically enable HTTPS on your website with EFF's Certbot,  
deploying [Let's Encrypt](#) certificates.

I'm using

Nginx

on

Ubuntu 16.04 (xenial)

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## SSL > 😅 Recovery

```
$ sudo apt-get update  
$ sudo apt-get install software-properties-common  
$ sudo add-apt-repository ppa:certbot/certbot  
$ sudo apt-get update  
$ sudo apt-get install python-certbot-nginx
```

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## SSL > 😅 Recovery

```
$ sudo apt-get update  
$ sudo apt-get install software-properties-common  
$ sudo add-apt-repository ppa:certbot/certbot  
$ sudo apt-get update  
$ sudo apt-get install python-certbot-nginx
```

```
$ sudo certbot --nginx
```

OR

```
$ sudo certbot --nginx certonly
```

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## Cloudflare One-Click SSL

**258,233,738,125,334**

Encrypted requests served in the last day

Encrypting as much web traffic as possible to prevent data theft and other tampering is a critical step toward building a safer, better Internet. We're proud to be the first Internet performance and security company to offer SSL protection free of charge.

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# SSL > 😅 Recovery

## Flexible SSL



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# SSL > ! Caution



This site can't provide a secure connection

**project.dev** sent an invalid response.

[Try running Network Diagnostics.](#)

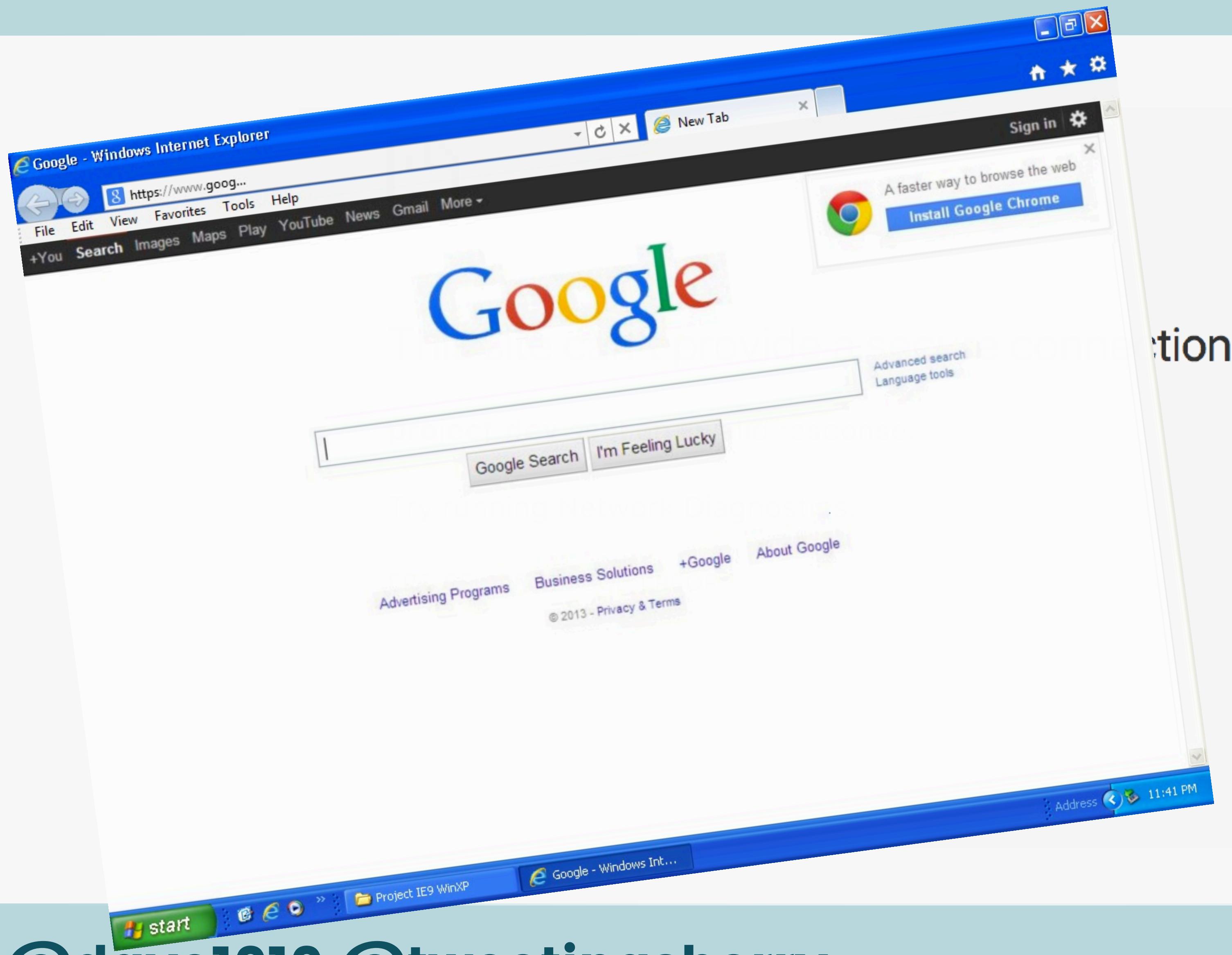
ERR\_SSL\_PROTOCOL\_ERROR

Reload

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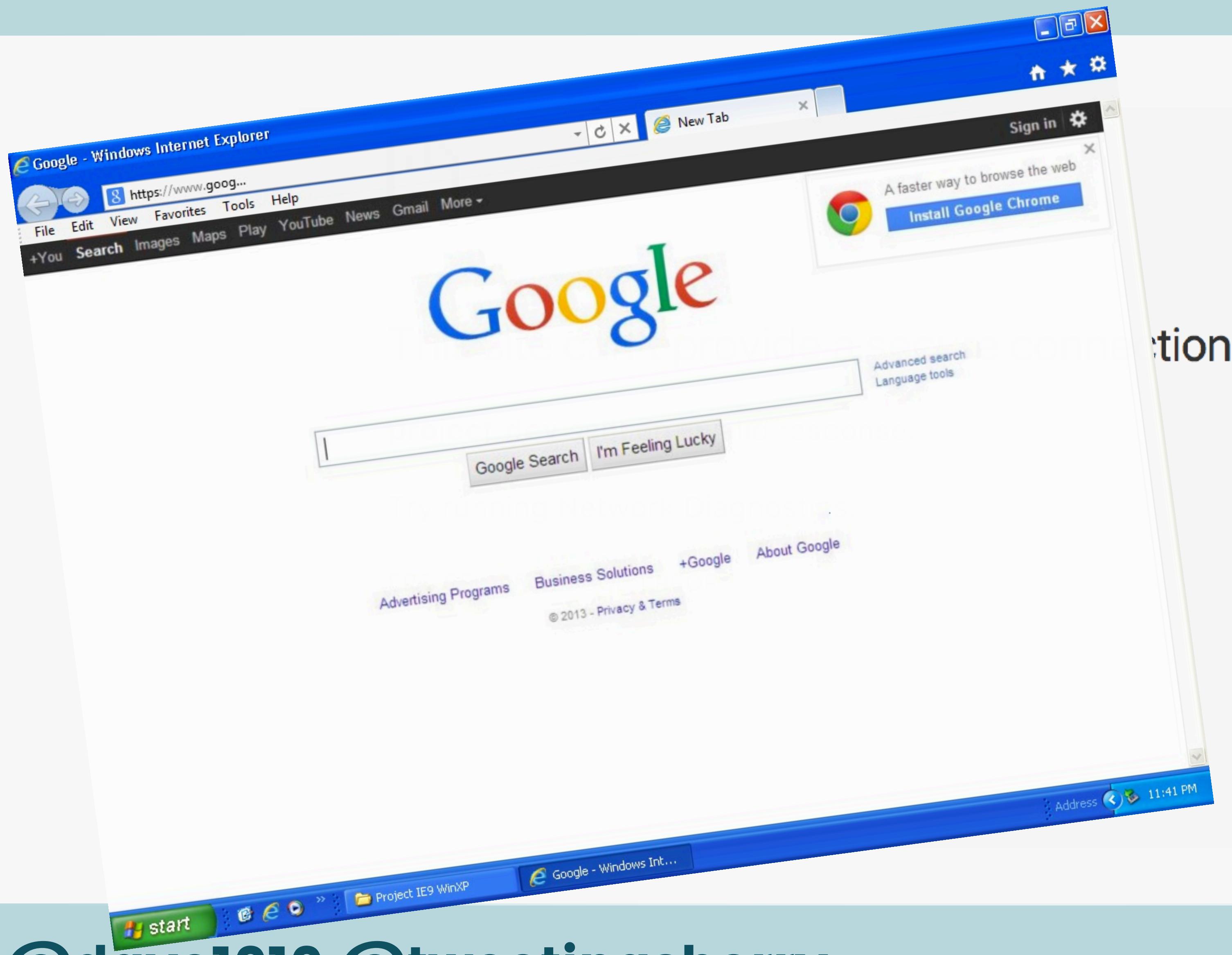
# SSL > ! Caution



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# SSL > ! Caution



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Reload



# SSL > 💯 Long Term

.

## Flexible SSL



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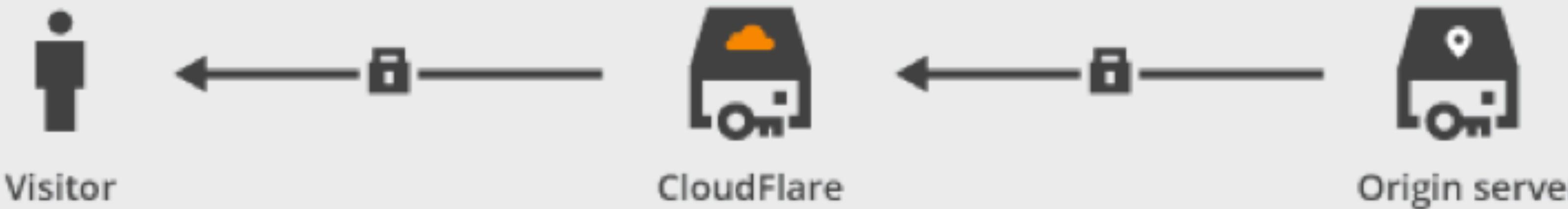
# SSL > 💯 Long Term

## Flexible SSL



## Full SSL

Requires SSL on your host



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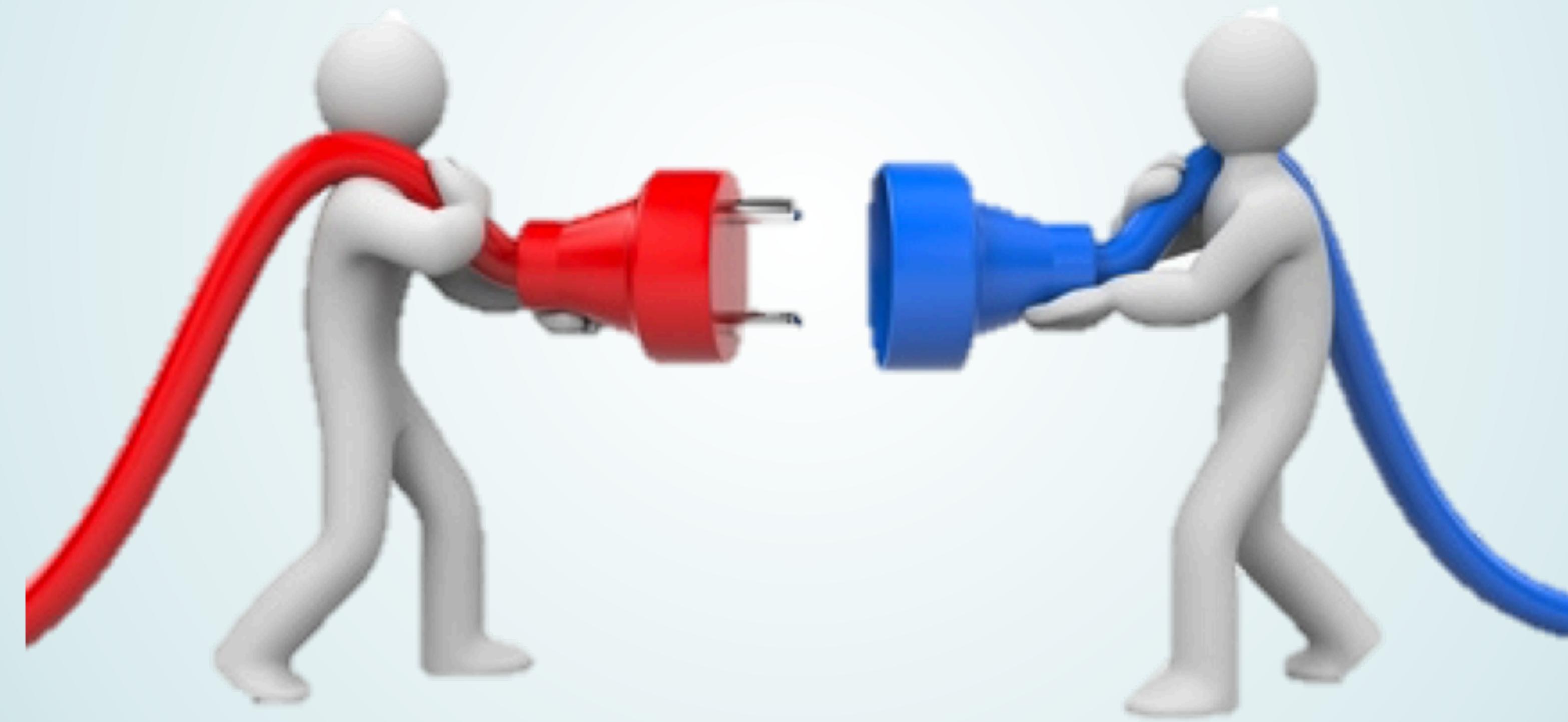
# Get Out Of Jail Free Cards



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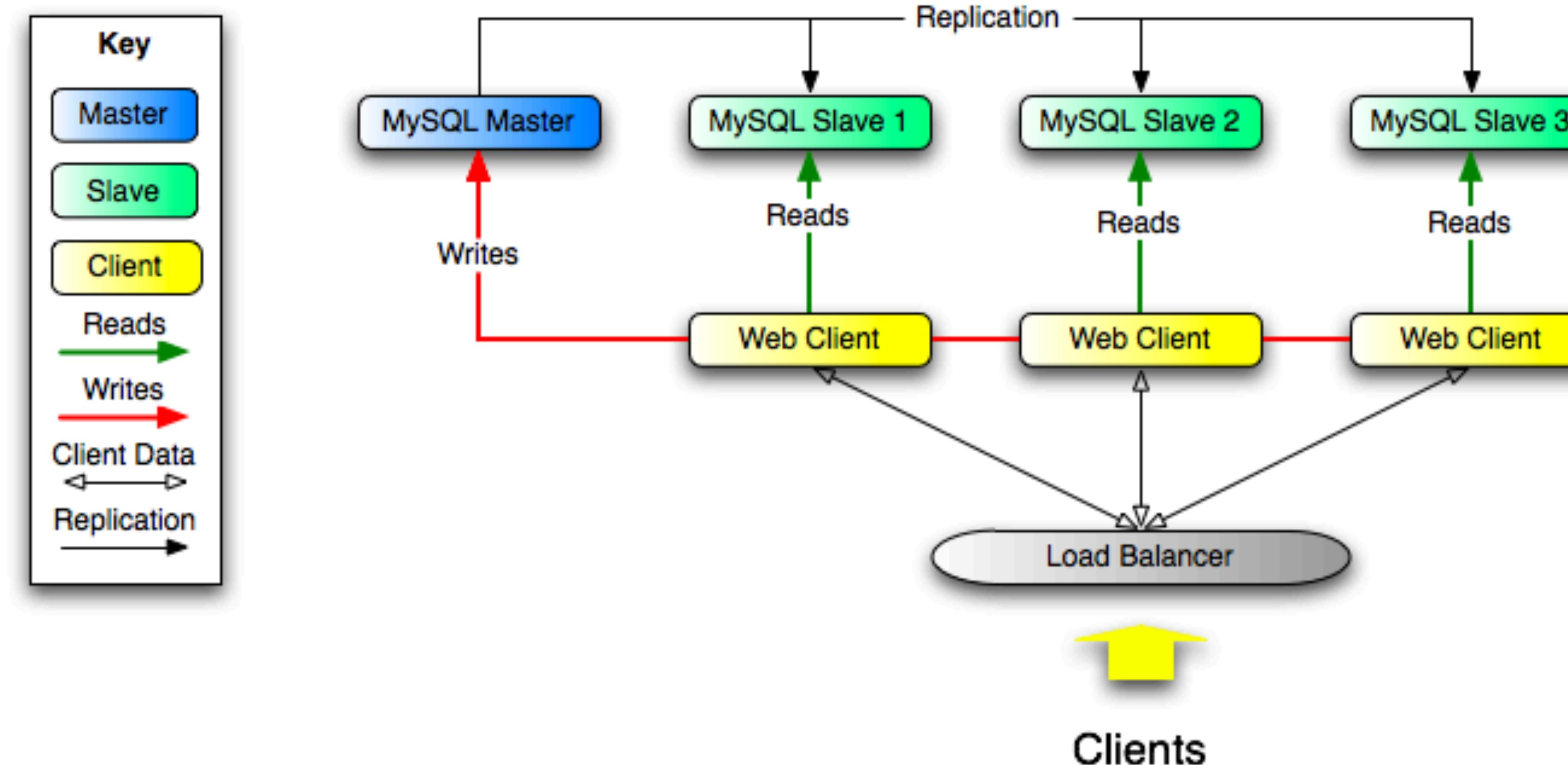
# DATABASE CONNECTIONS



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# Database Connections > ✨ Perfect World



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✨ 😱 😅 ! 💯

**Warning:** mysqli\_real\_connect(): (08004/1040): Too many connections in `/var/www/html/wp-includes/wp-db.php` on line **1488**

**Deprecated:** mysql\_connect(): The mysql extension is deprecated and will be removed in the future: use mysqli or PDO instead in `/var/www/html/wp-includes/wp-db.php` on line **1518**

**Warning:** mysql\_connect(): Too many connections in `/var/www/html/wp-includes/wp-db.php` on line **1518**

## Error establishing a database connection

This either means that the username and password information in your `wp-config.php` file is incorrect or we can't contact the database server at `localhost`. This could mean your host's database server is down.

- Are you sure you have the correct username and password?
- Are you sure that you have typed the correct hostname?

Are you sure that the database server is running?

## Database Connections > 😅 Recovery

```
[MariaDB [(none)]> show variables like "max_connections";
+-----+-----+
| Variable_name | Value |
+-----+-----+
| max_connections | 151   |
+-----+-----+
1 row in set (0.00 sec)
```

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## Database Connections > 😅 Recovery

```
MariaDB [(none)]> set global max_connections = 200;  
ERROR 1227 (42000): Access denied; you need (at least one  
of) the SUPER privilege(s) for this operation  
MariaDB [(none)]> Bye
```

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## Database Connections > 😅 Recovery

```
$ vim /etc/mysql/my.cnf|
```

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## Database Connections > 😅 Recovery

```
$ vim /etc/mysql/conf.d/mysql.cnf
```

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## Database Connections > 😅 Recovery

```
$ vim /etc/mysql/conf.d/mysql.cnf
```

```
[mysql]
```

```
max_connections = 200
```

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## Database Connections > ⚠ Caution



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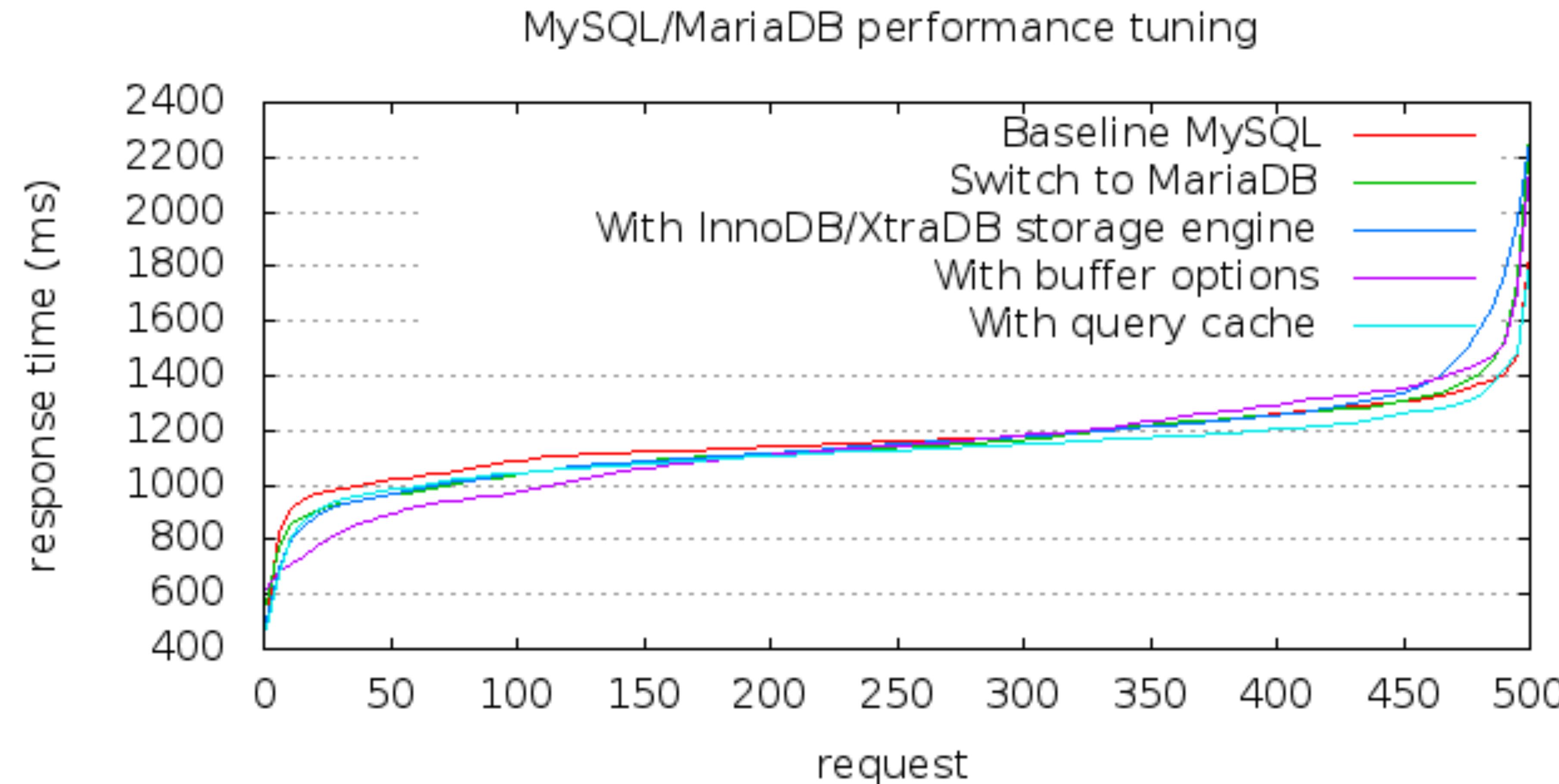
## Database Connections > ⚠ Caution



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# Database Connections > 💯 Long Term



<https://www.percona.com/blog/2015/08/07/mysql-query-cache-worst-enemy-best-friend/>

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## 4.5.8 **mysqlslap** — Load Emulation Client

**mysqlslap** is a diagnostic program designed to emulate client load for a MySQL server and to report the timing of each stage. It works as if multiple clients are accessing the server.

Invoke **mysqlslap** like this:

```
1 shell> mysqlslap [options]
```

Some options such as `--create` or `--query` enable you to specify a string containing an SQL statement or a file containing statements. If you specify a file, by default it must contain one statement per line. (That is, the implicit statement delimiter is the newline character.) Use the `--delimiter` option to specify a different delimiter, which enables you to specify statements that span multiple lines or place multiple statements on a single line. You cannot include comments in a file; **mysqlslap** does not understand them.

**mysqlslap** runs in three stages:

1. Create schema, table, and optionally any stored programs or data to use for the test. This stage uses a single client connection.

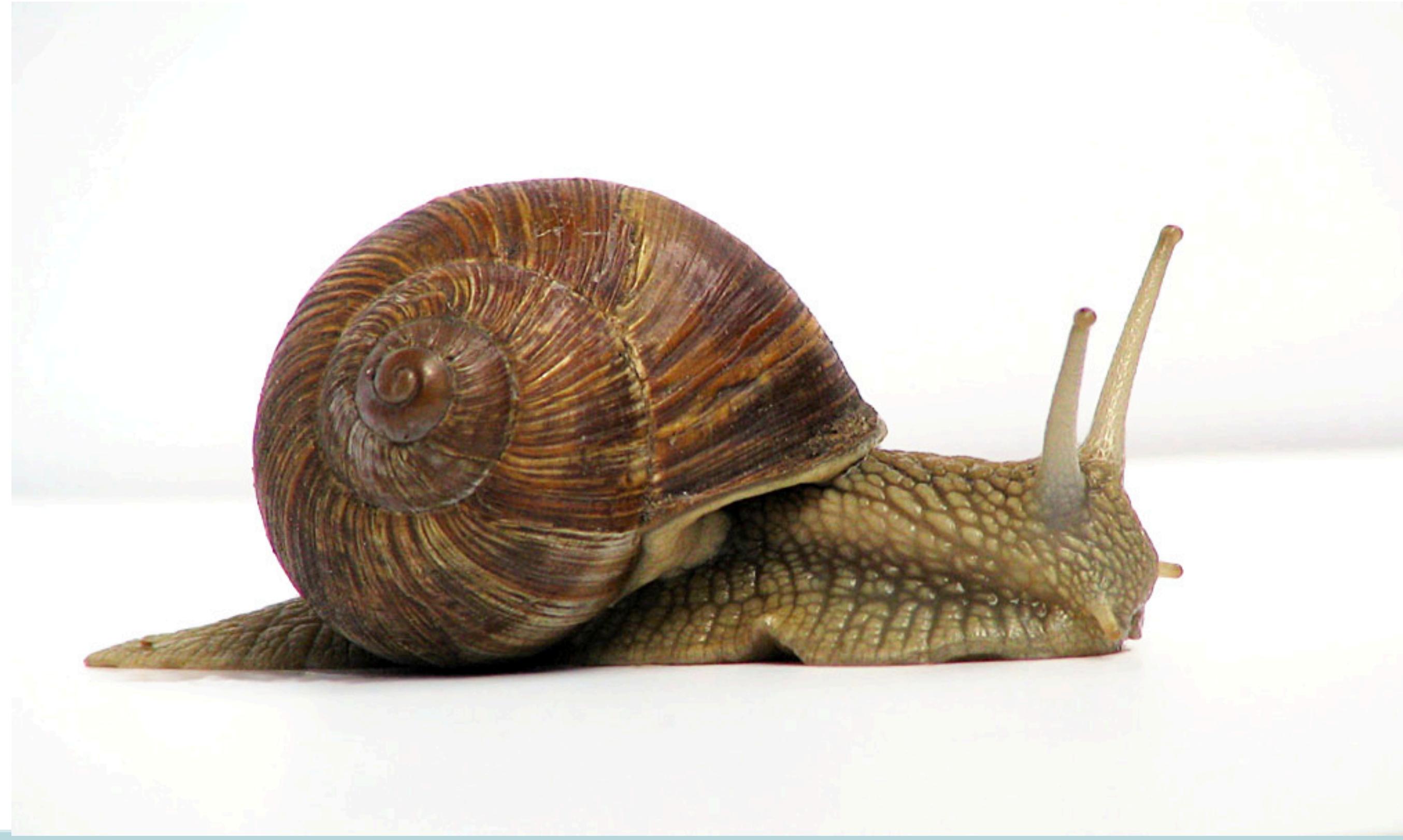
# Get Out Of Jail Free Cards



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# SLOW DATABASE QUERIES



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# INDEXES

```
|mysql> desc users;
```

Field	Type	Null	Key	Default	Extra
id	int(10) unsigned	NO	PRI	NULL	auto_increment
email	varchar(255)	NO	UNI	NULL	
facebook_id	varchar(255)	YES	UNI	NULL	
password	varchar(255)	YES		NULL	
status	tinyint(3) unsigned	NO		1	
password_updated_at	datetime	YES		NULL	
confirmation_code	varchar(255)	NO		NULL	
confirmed	tinyint(1)	NO		0	

# INDEXES

```
|mysql> desc users;
```

Field	Type	Null	Key	Default	Extra
<code>id</code>	<code>int(10) unsigned</code>	<code>NO</code>	<code>PRI</code>	<code>NULL</code>	<code>auto_increment</code>
<code>email</code>	<code>varchar(255)</code>	<code>NO</code>	<code>UNI</code>	<code>NULL</code>	
<code>facebook_id</code>	<code>varchar(255)</code>	<code>YES</code>	<code>UNI</code>	<code>NULL</code>	
<code>password</code>	<code>varchar(255)</code>	<code>YES</code>		<code>NULL</code>	
<code>status</code>	<code>tinyint(3) unsigned</code>	<code>NO</code>		<code>1</code>	
<code>password_updated_at</code>	<code>datetime</code>	<code>YES</code>		<code>NULL</code>	
<code>confirmation_code</code>	<code>varchar(255)</code>	<code>NO</code>		<code>NULL</code>	
<code>confirmed</code>	<code>tinyint(1)</code>	<code>NO</code>		<code>0</code>	

# CARDINALITY

```
mysql> show index from users;
+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name           | Seq_in_index | Column_name | Collation | Cardinality |
+-----+-----+-----+-----+-----+-----+
| users |          0 | PRIMARY            |            1 | id          | A          |        410 |
| users |          0 | users_email_unique |            1 | email       | A          |        410 |
| users |          0 | users_facebook_id_unique |            1 | facebook_id | A          |         1 |
| users |          1 | users_deleted_at_index |            1 | deleted_at  | A          |         1 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

# CARDINALITY

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality
users	0	PRIMARY	1	id	A	410
users	0	users_email_unique	1	email	A	410
users	0	users_facebook_id_unique	1	facebook_id	A	1
users	1	users_deleted_at_index	1	deleted_at	A	1
4 rows in set (0.00 sec)						

# QUERY ORDER

```
mysql> explain select first_name from user_profiles where date_of_birth < "2018-01-01" and first_name like "chris%";
```

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	user_profiles	NULL	range	user_profiles_first_name_index, user_profiles_first_name_last_name_index, first_name_search user_profiles_first_name_index		1022	NULL	297	33.33	Using index condition; Using where

```
~  
~
```

# QUERY ORDER

```
mysql> explain select first_name from user_profiles where date_of_birth < "2018-01-01" and first_name like "chris%";
```

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	user_profiles	NULL	range	user_profiles_first_name_index, user_profiles_first_name_last_name_index, first_name_search user_profiles_first_name_index		1022	NULL	297	33.33	Using index condition; Using where

Slow Database Queries > 😱 Dilemma



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✨ 😱 😅 ! 💯

## Error establishing a database connection

---

This either means that the username and password information in your `wp-config.php` file is incorrect or we can't contact the database server at `localhost`. This could mean your host's database server is down.

- Are you sure you have the correct username and password?
- Are you sure that you have typed the correct hostname?
- Are you sure that the database server is running?

# Slow Database Queries > 😅 Recovery



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# MYSQL SLOW QUERY LOG

```
mysql> SET GLOBAL slow_query_log = 'ON';
```

# MYSQL SLOW QUERY LOG

```
mysql> SET GLOBAL slow_query_log = 'ON';
```



**DO NOT LEAVE RUNNING!**

# MYSQL SLOW QUERY LOG

```
/usr/sbin/mysqld, Version: 10.0.34-MariaDB-0ubuntu0.16.04.1 (Ubuntu 16.04). started with:  
Tcp port: 3306 Unix socket: /var/run/mysqld/mysqld.sock  
Time           Id  Command   Argument  
# Time: 180701 17:34:27  
# User@Host: root[root] @ localhost []  
# Thread_id: 33  Schema: QC_hit: No  
# Query_time: 10.000791  Lock_time: 0.000000  Rows_sent: 1  Rows_examined: 0  
SET timestamp=1530466467;  
select sleep(10);  
/var/lib/mysql/3sidedcube-slow.log (END)
```

# MYSQL SLOW QUERY LOG

```
/usr/sbin/mysqld, Version: 10.0.34-MariaDB-0ubuntu0.16.04.1 (Ubuntu 16.04). started with:  
Tcp port: 3306 Unix socket: /var/run/mysqld/mysqld.sock  
Time           Id  Command   Argument  
# Time: 180701 17:34:27  
# User@Host: root[root] @ localhost []  
# Thread_id: 33  Schema: QC_hit: No  
# Query_time: 10.000791  Lock_time: 0.000000  Rows_sent: 1  Rows_examined: 0  
SET timestamp=1530466467;  
select sleep(10);  
/var/lib/mysql/3sidedcube-slow.log (END)
```

# MYSQL SLOW QUERY LOG

```
mysql> SET GLOBAL log_queries_not_using_indexes="ON"█
```

# mysqldumpslow

```
[root@3sidedcube:/home/vagrant# mysqlslow

Reading mysql slow query log from /var/lib/mysql/3sidedcube-slow.log
Count: 1  Time=10.00s (10s)  Lock=0.00s (0s)  Rows_sent=1.0 (1), Rows_examined=0.0 (0),
root[root]@localhost
      select sleep(N)
```

# INDEX ALL THE THINGS



# Slow Database Queries > 💯 Long Term

database/migrations/2017\_10\_12\_133656\_add\_missing\_user\_indexes.php **ADDED**

```
1 +<?php
2 +
3 +use Illuminate\Support\Facades\Schema;
4 +use Illuminate\Database\Schema\Blueprint;
5 +use Illuminate\Database\Migrations\Migration;
6 +
7 +class AddMissingUserIndexes extends Migration
8 +{
9 +    /**
10 +     * Run the migrations.
11 +     *
12 +     * @return void
13 +     */
14 +    public function up()
15 +    {
16 +        Schema::table('user_profiles', function (Blueprint $table) {
17 +            $table->index(['first_name', 'last_name']);
18 +        });
19 +
20 +        Schema::table('users', function (Blueprint $table) {
21 +            $table->index(['deleted_at']);
22 +        });
23 +    }
24 +}
```

@dave1010 @tweetingsherry



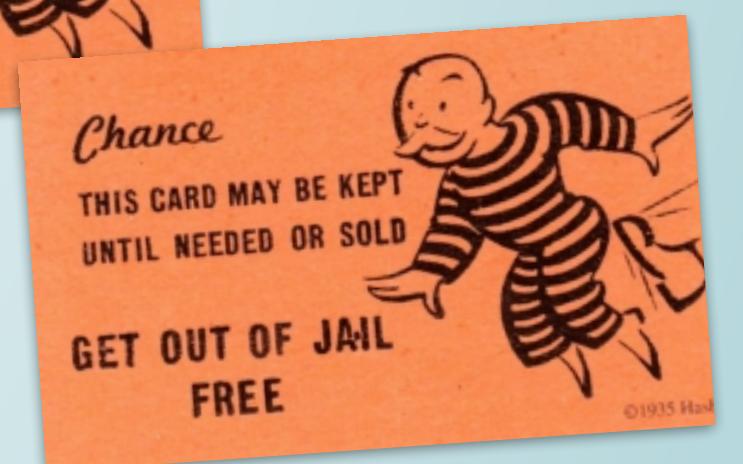
# Get Out Of Jail Free Cards

CONTENT  
DELIVERY  
NETWORK

INSTANT  
SLL

INCREASE  
CONNECTION  
LIMIT

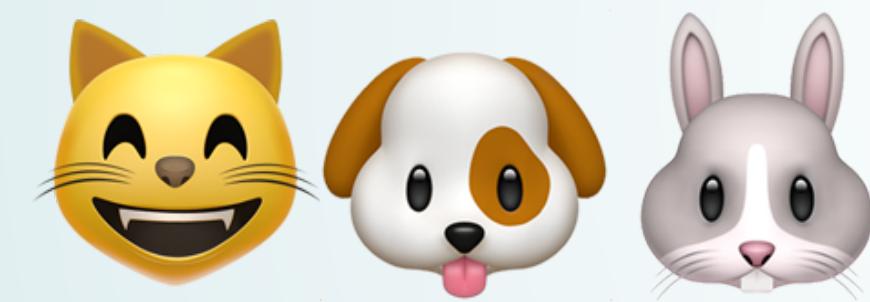
SLOW QUERY  
LOG



@dave1010 @tweetingsherry



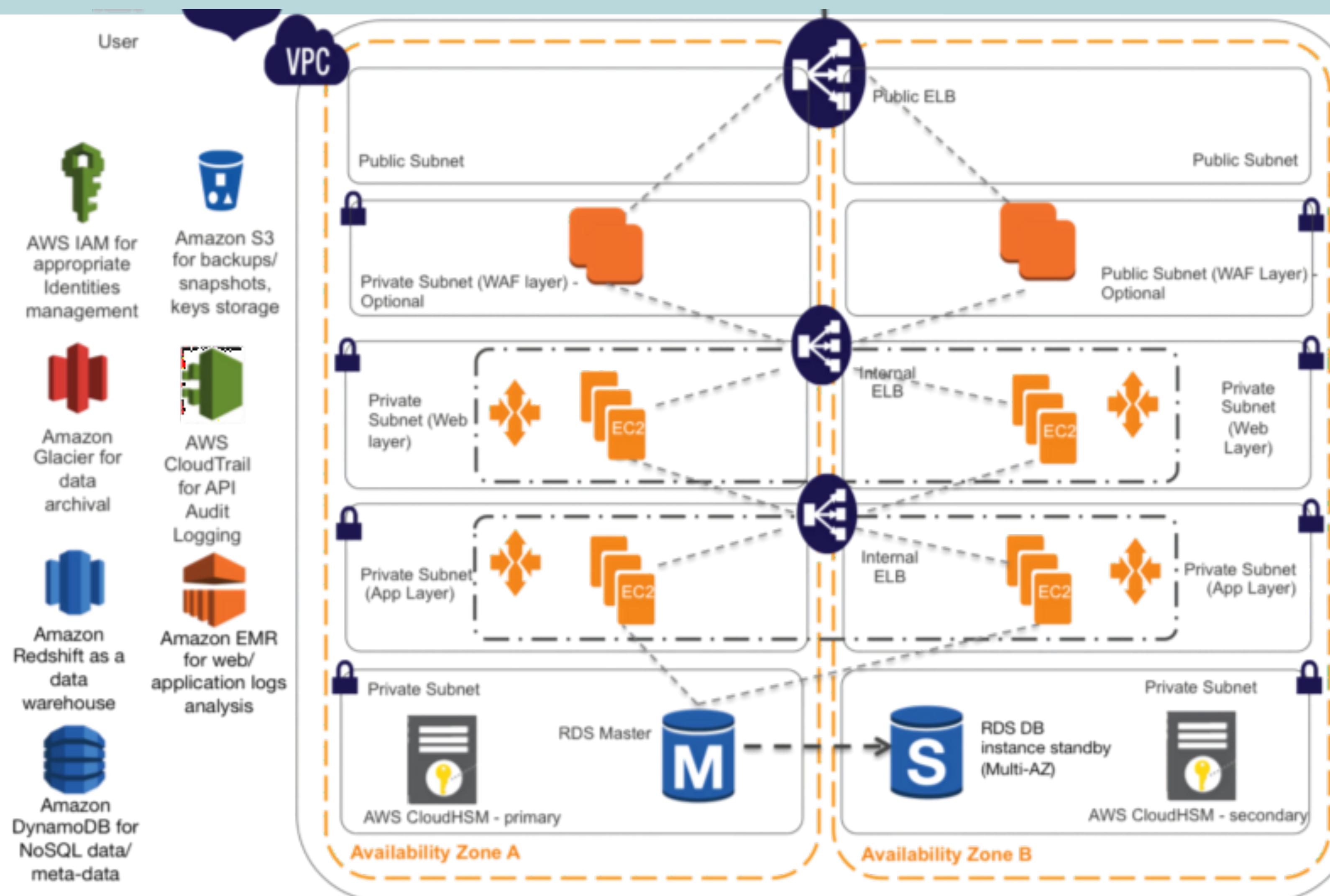
# PETS AND PANDAS



@dave1010 @tweetingsherry



# Pets and Pandas > ✨ Perfect World



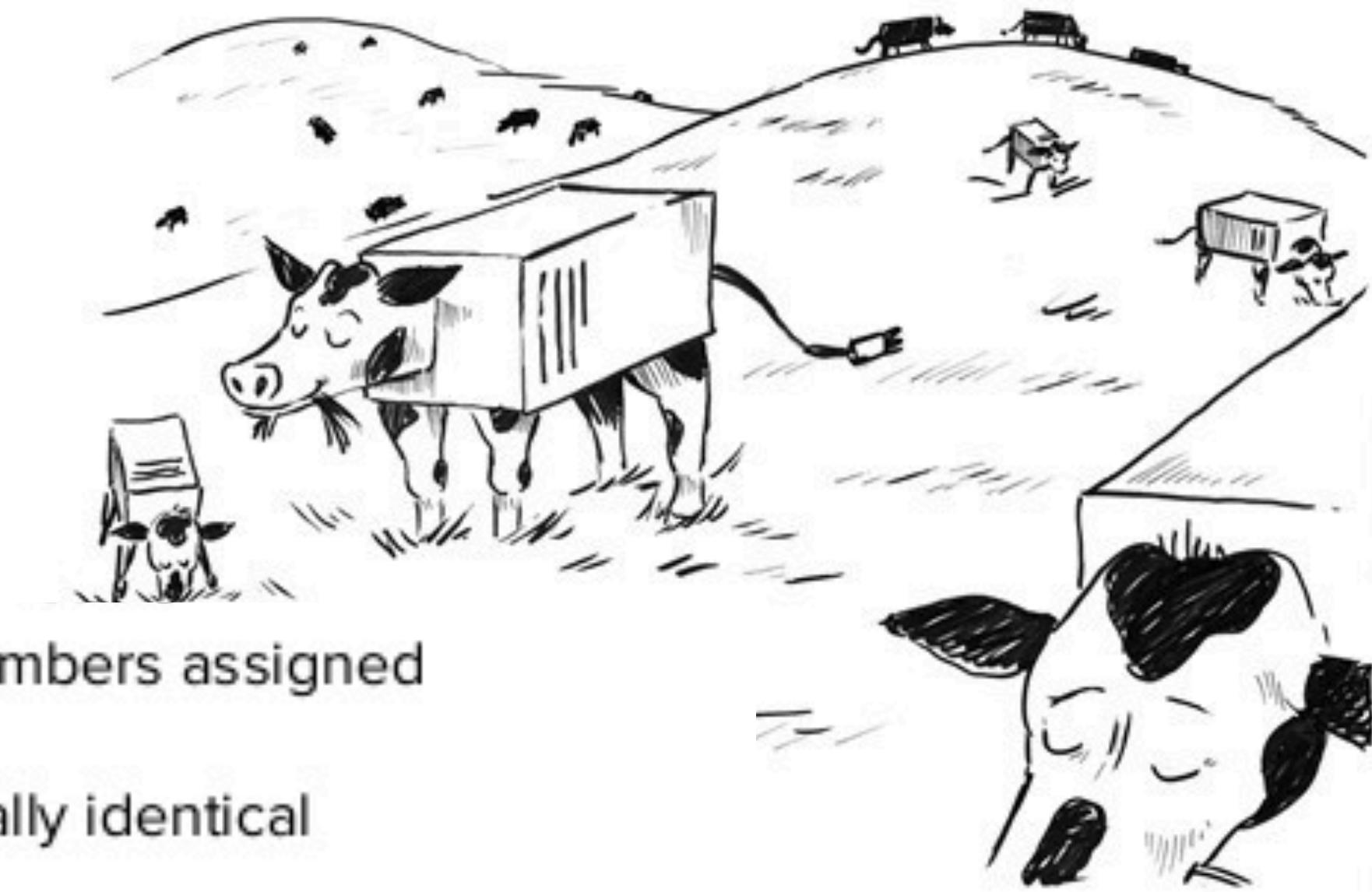
@dave1010 @tweetingsherry



# PETS VS CATTLE

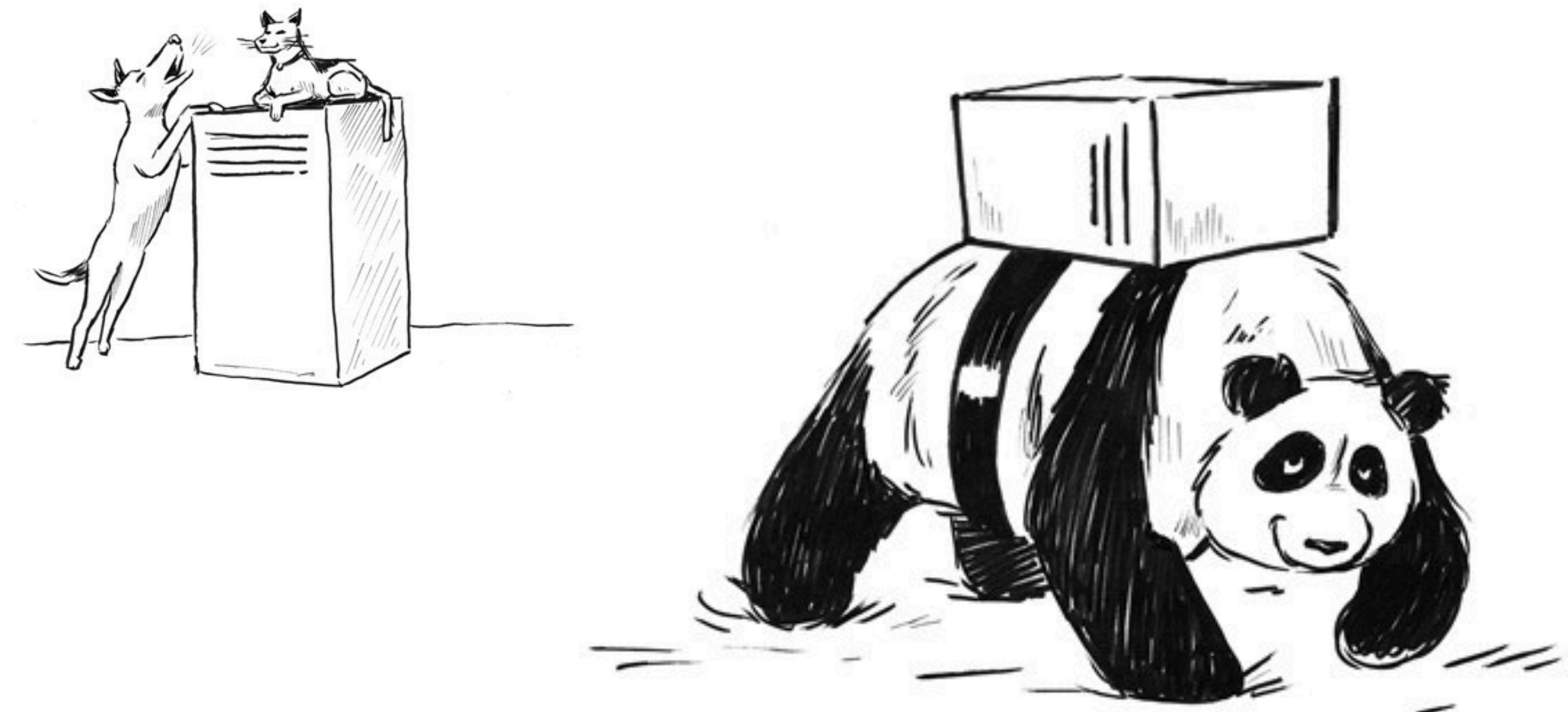


- Has a personalized name
- Unique, special & cared for
- Taken care of when ill



- Have numbers assigned
- Are usually identical
- Replaced when not in good health
- You need more, you buy more

# PANDAS

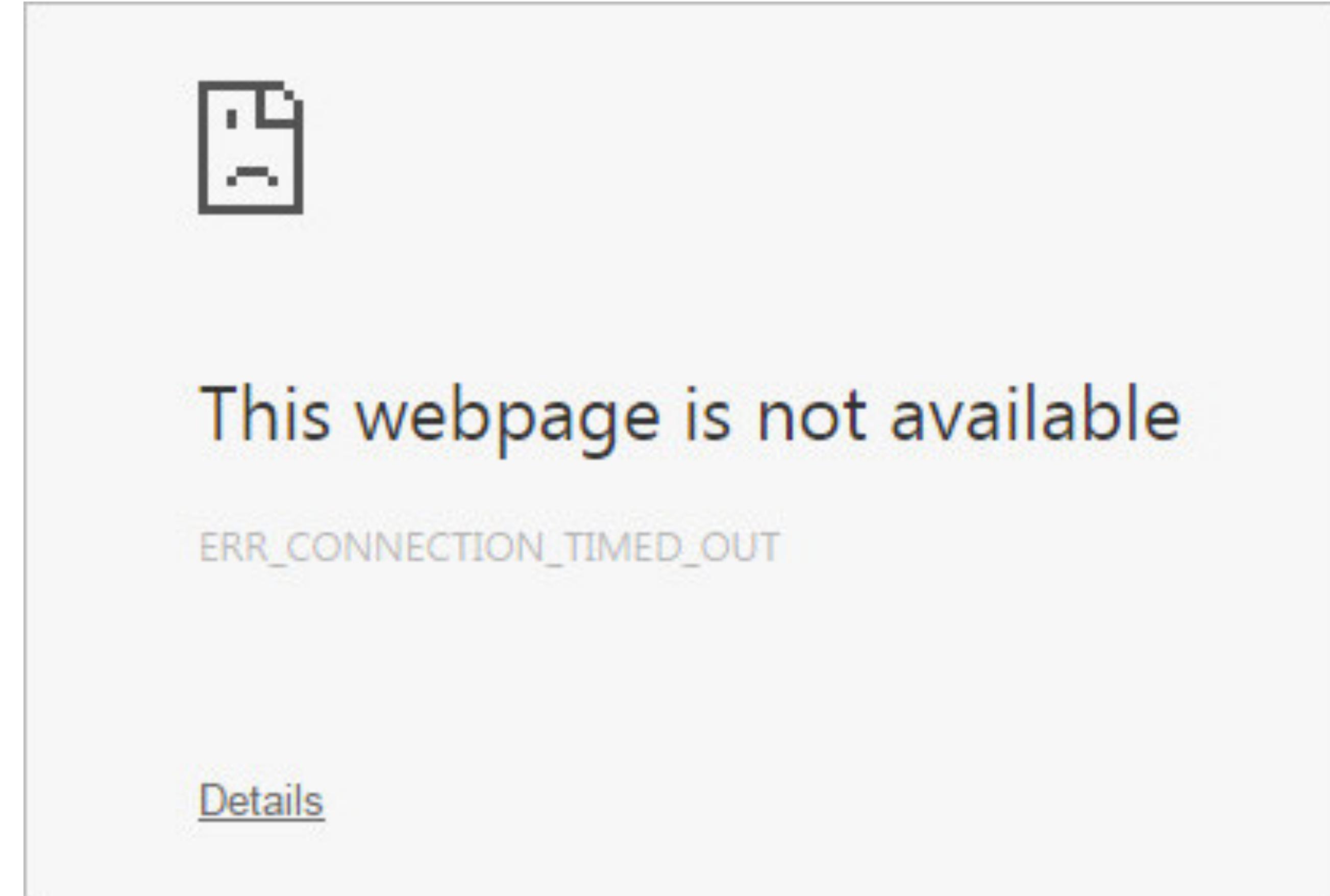


[https://medium.com/@Jay\\_Jamison/pets-cattle-and-pandas-30aad4a0cdea](https://medium.com/@Jay_Jamison/pets-cattle-and-pandas-30aad4a0cdea)

@dave1010 @tweetingsherry

✨ 😱 😅 ! 💯

## Pets and Pandas > 😱 Dilemma



@dave1010 @tweetingsherry



## Pets and Pandas > 😅 Recovery

```
$ ping  
$ curl -vvvvvvvv  
$ nmap  
$ ssh -vvvvvvvv
```

@dave1010 @tweetingsherry



```
$ sudo service --status-all  
$ sudo service nginx restart  
$ sudo service php6-fpm restart
```

Pets and Pandas > ! Caution

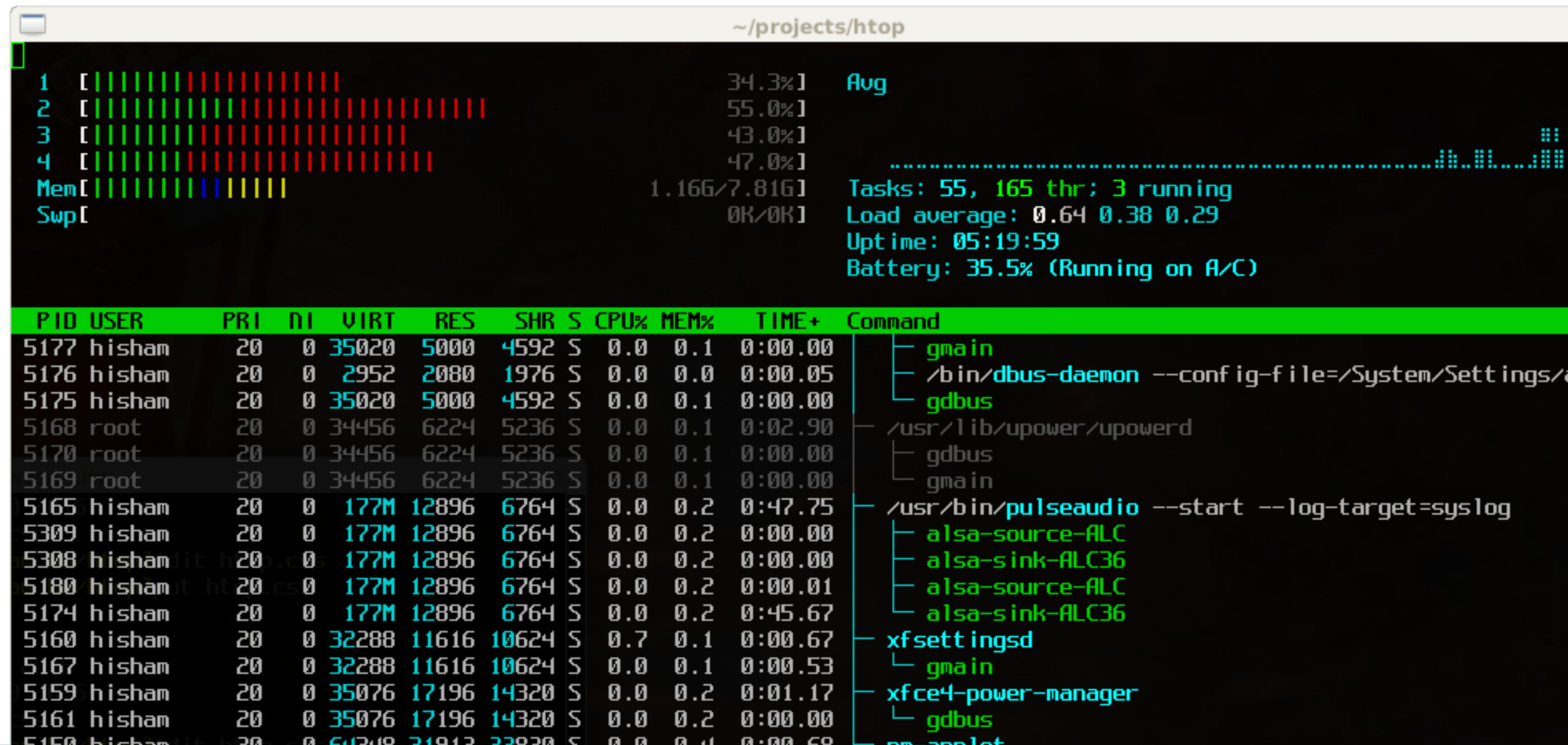


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✨ 😱 😅 ! 💯

# Pets and Pandas > 😅 Recovery

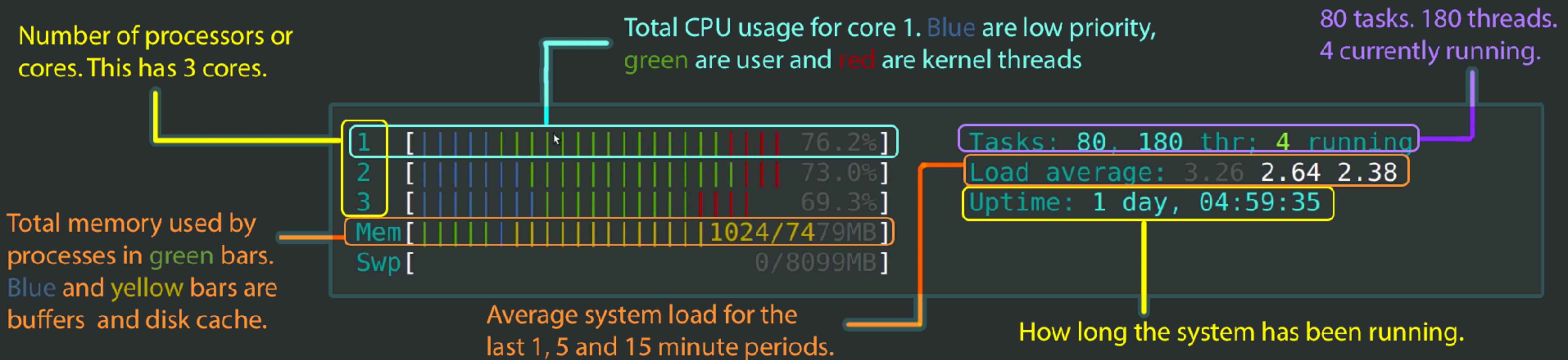
\$ top  
\$ htop



@dave1010 @tweetingsherry



# Pets and Pandas > 😅 Recovery



<https://codeahoy.com/2017/01/20/htop-explained-visually/>

@dave1010 @tweetingsherry



## Pets and Pandas > 😅 Recovery

\$ lsof

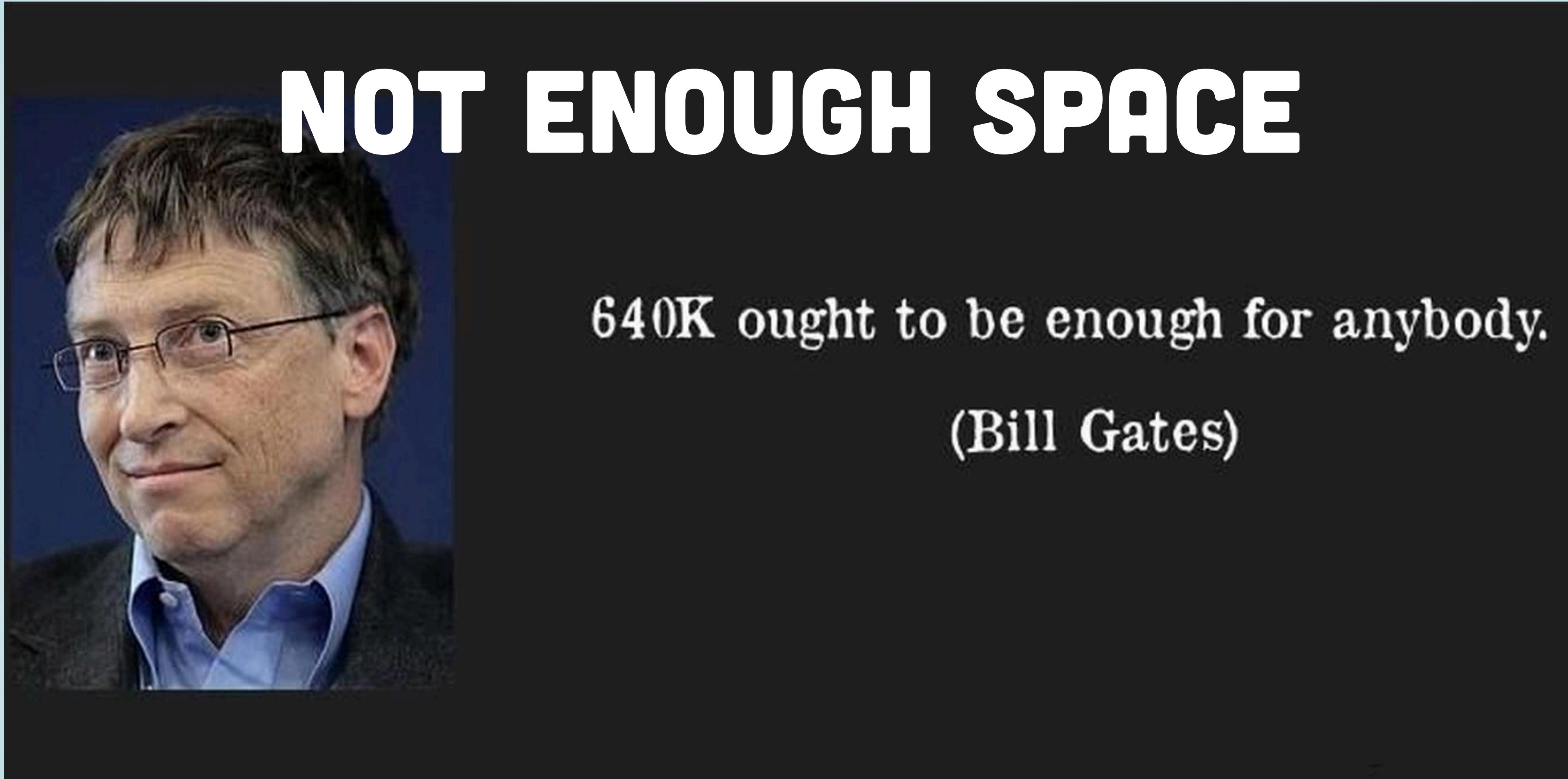
sshd	985	root	6u	TCP *:22 (LISTEN)
mongod	988	mongodb	6u	TCP 127.0.0.1:27017 (LISTEN)
php-fpm7.	10546	root	8u	TCP 127.0.0.1:9000 (LISTEN)
nginx	20304	root	8u	TCP *:80 (LISTEN)
nginx	20304	root	9u	TCP *:443 (LISTEN)



[lmgtfy.com/?linux+lsof](https://lmgtfy.com/?linux+lsof)

@dave1010 @tweetingsherry





## Pets and Pandas > 😅 Recovery

```
$ df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
udev	487M	4.0K	487M	1%	/dev
tmpfs	100M	376K	100M	1%	/run
/dev/vda1	30G	6.1G	22G	22%	/

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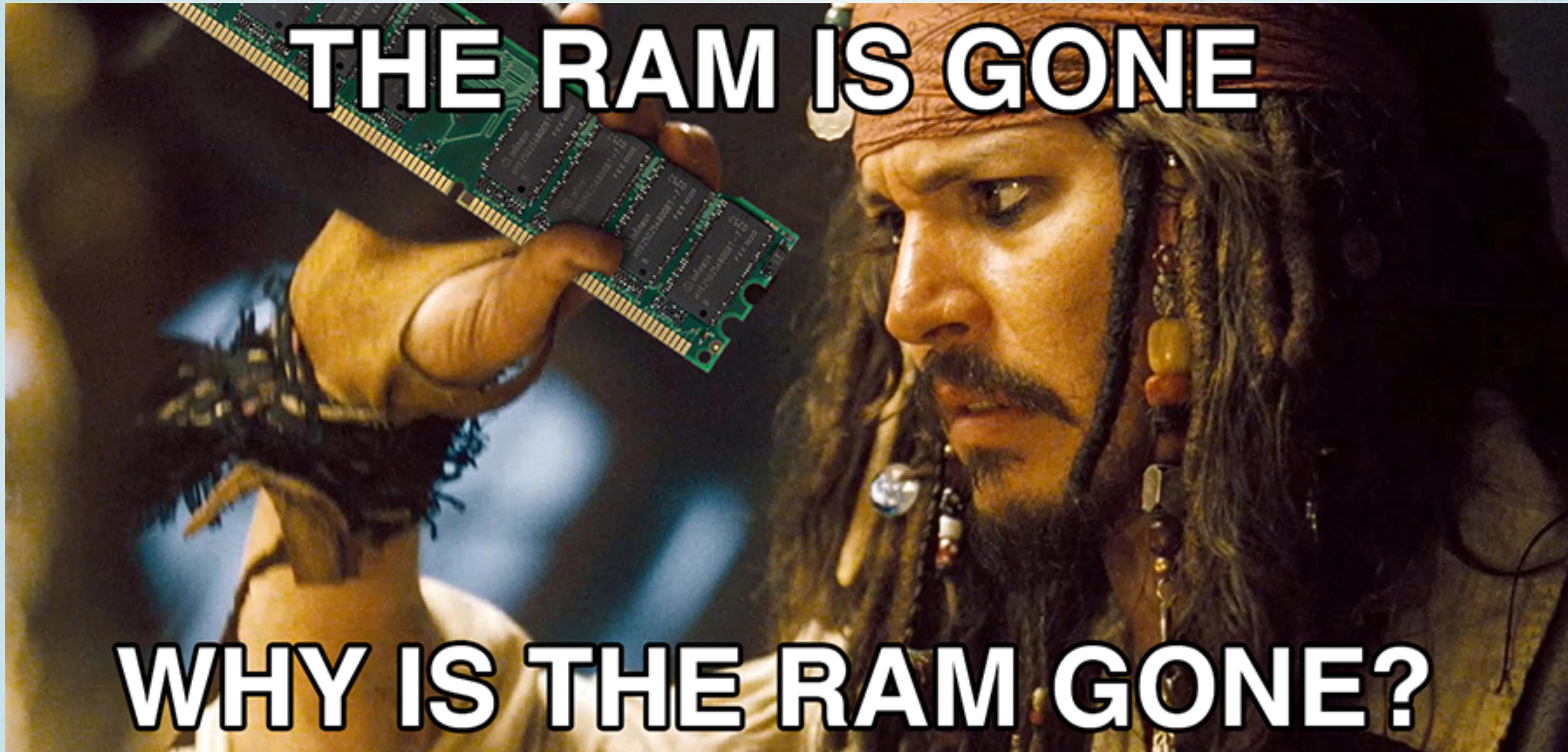
## Pets and Pandas > 😅 Recovery

```
$ df -h  
/dev/vda1      30G  30G  4.0K  100%  /
```

```
$ rm -rf /var/cache/apt/archives  
$ rm -rf /var/cache  
$ ls -l /tmp  
$ ls -l /var/log
```

@dave1010 @tweetingsherry





@dave1010 @tweetingsherry

✨ 😱 😅 ! 💯

## Pets and Pandas > 😅 Recovery

```
$ fallocate -l 4G /swapfile  
$ chmod 600 /swapfile  
$ mkswap /swapfile  
$ swapon /swapfile
```

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# Pets and Pandas > 💯 Long Term

New Relic. APM BROWSER SYNTHETICS MOBILE PLUGINS INSIGHTS

MOBILE APPLICATIONS Data Nerd App

TIME PICKER Last 1 month ending now VERSIONS All versions (32)

APP Overview Interactions Devices OS versions Version trends

CRASHES Crash analysis New

NETWORK Map HTTP requests

Crash occurrences

Apr 12 Apr 19 Apr 26

1.5.3 (iOS) 1.6 (iOS) 1.6.9 (iOS) 1.6.2 (iOS) Other ver:

App launches

Apr 12 Apr 19 Apr 26

API Tests

SORT BY Failures First TIMEFRAME Last Day STYLE Cards

3 SIDED CUBE ARC - Weather & Maps API Tests

Hurricane Maps (Origin: Storm Ireland)

All Environments OLDEST (10h) MOST RECENT

Passed — Just Now US Virginia Test Settings

98.92% SUCCESS RATE -0.04% AVG. RESPONSE TIME -918ms

Hurricane Maps

All Environments OLDEST (10h) MOST RECENT

Passed — 3m ago US Virginia Test Settings

100.00% SUCCESS RATE -- AVG. RESPONSE TIME -135ms

Weather Endpoint

All Environments OLDEST (10h) MOST RECENT

Passed — 10m ago US Virginia Test Settings

100.00% SUCCESS RATE -- AVG. RESPONSE TIME -10ms

Earthquake Maps

All Environments OLDEST (10h) MOST RECENT

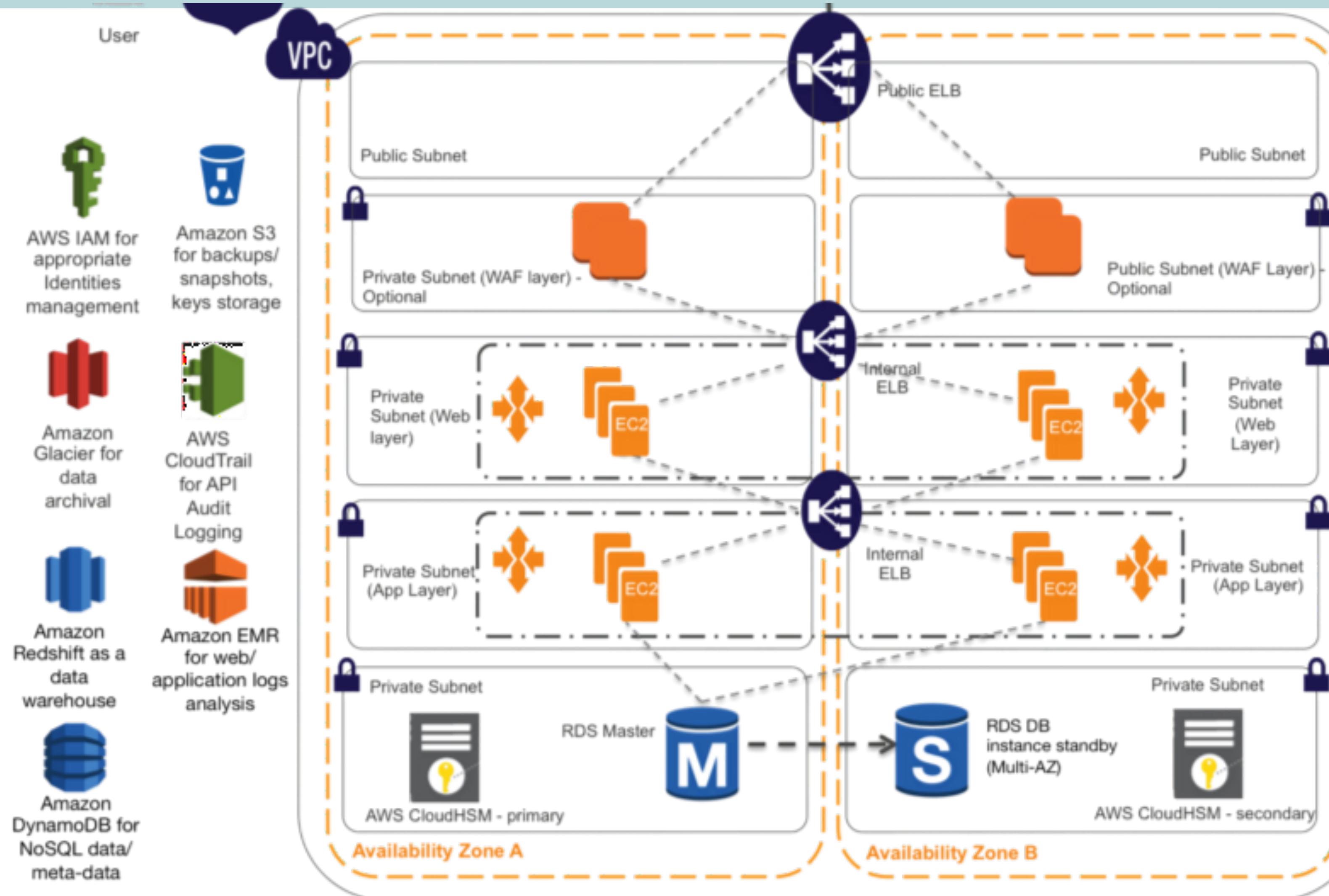
Passed — 15m ago US Virginia Test Settings

100.00% SUCCESS RATE -- AVG. RESPONSE TIME -9ms

@dave1010 @tweetingsherry



# Pets and Pandas > 💯 Long Term



@dave1010 @tweetingsherry



# Get Out Of Jail Free Cards

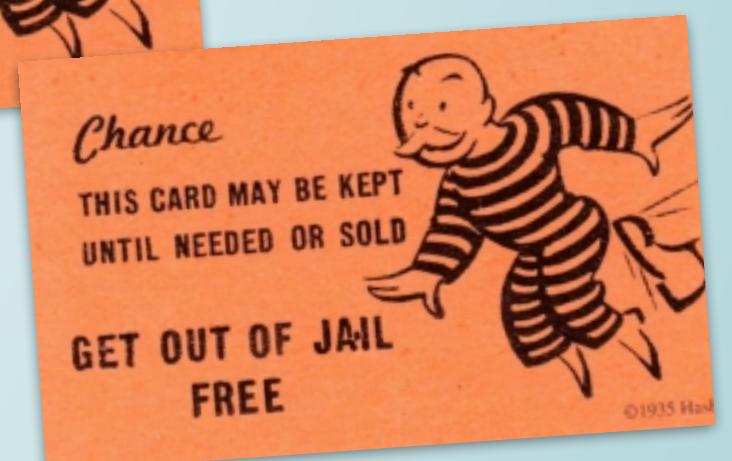
CONTENT  
DELIVERY  
NETWORK

INSTANT  
SLL

INCREASE  
CONNECTION  
LIMIT

SLOW QUERY  
LOG

RESTART  
SERVICES



@dave1010 @tweetingsherry



# THE UNDISCOVERED COUNTRY



@dave1010 @tweetingsherry



# The Undiscovered Country > ✨ Perfect World



@dave1010 @tweetingsherry

✨ 😱 😅 ! 💯

# 500 Internal Server Error

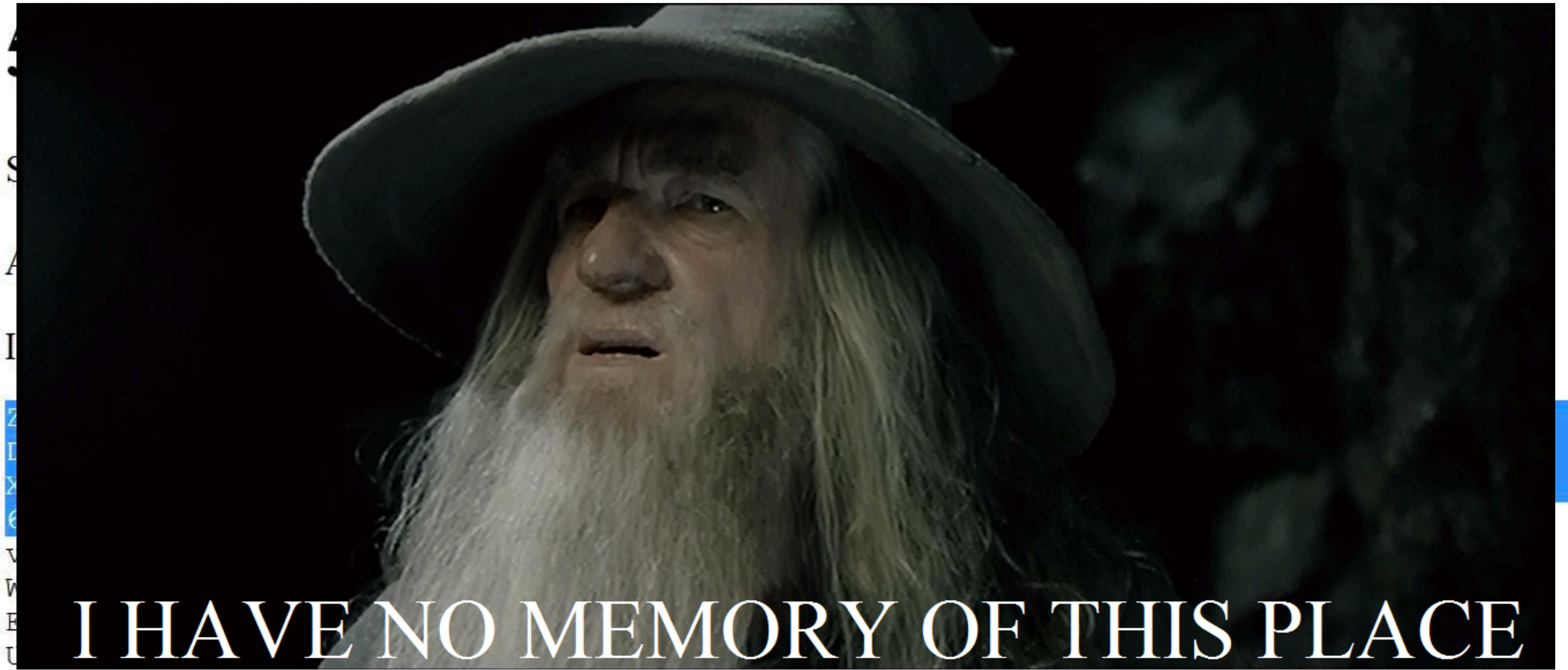
Sorry, something went wrong.

A team of highly trained monkeys has been dispatched to deal with this situation.

If you see them, show them this information:

```
ZS_J8CaN450Joaf5KdgKt-aS38hH1mtN6X0CBqXWFHA4tiXbTi9h6FZv3fV6
Du21Rhphi2rmJjwvcsmfoCLYknhs9tjScft5noLsf1khkV_y069Q-VixOVdW
XFgycNk71kC4YLX5X7c9ynhaKglsMv1DVAVi9RN2yXKX3rHhYhFbz2devRnn
6303kh9UzWBQ9FwWaC-J6cH4-GRK15HpVBY_zQGYCS825g23Hp84j_pWrroA
vFn2WNzvxK9ZSsu8SGksOxMOLsMk0dpVShh6A8jnNn46JQH2GsRC2O8IKNZy
WfrrpXSGth_PggCzo5ExD46IZPHEQ3jnyHk0dFDKQInowdDYADVUsj1BST5S
EkuIVVVoIzMAdtt0GhcMXwTa6H7hqo9zuBAXr6qFrLtDlcFl0LsVDkRaHCir
U_67GARS0xC5a9TWlwIhJzSbhnlI7T0khSXBqCQ5faB0XG9ETfhNRNO23p8U
```

# The Undiscovered Country > 😱 Dilemma



I HAVE NO MEMORY OF THIS PLACE

@dave1010 @tweetingsherry

✨ 😱 😅 ! 💯

# The Undiscovered Country > 😅 Recovery

\$ history|less

```
177 cd /etc/nginx/sites-enabled/  
178 ll  
179 cd ..  
180 cd sites-available/  
181 ll  
182 vim ~/.ssh/authorized_keys  
183 cat /root/.ssh/  
184 cat /root/.ssh/authorized_keys  
185 history|less
```



[lmgtfy .com/?q=linux+less](https://lmgtfy.com/?q=linux+less)

@dave1010 @tweetingsherry



# The Undiscovered Country > 😅 Recovery

```
$ history|less
```

```
93  service nginx restart  
94  service php7.0-fpm  
95  service php7.0-fpm restart
```

```
102 vim /etc/nginx/sites-enabled/blog.conf
```

```
151 tail -f /var/log/nginx/access.log
```

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# The Undiscovered Country > 😅 Recovery

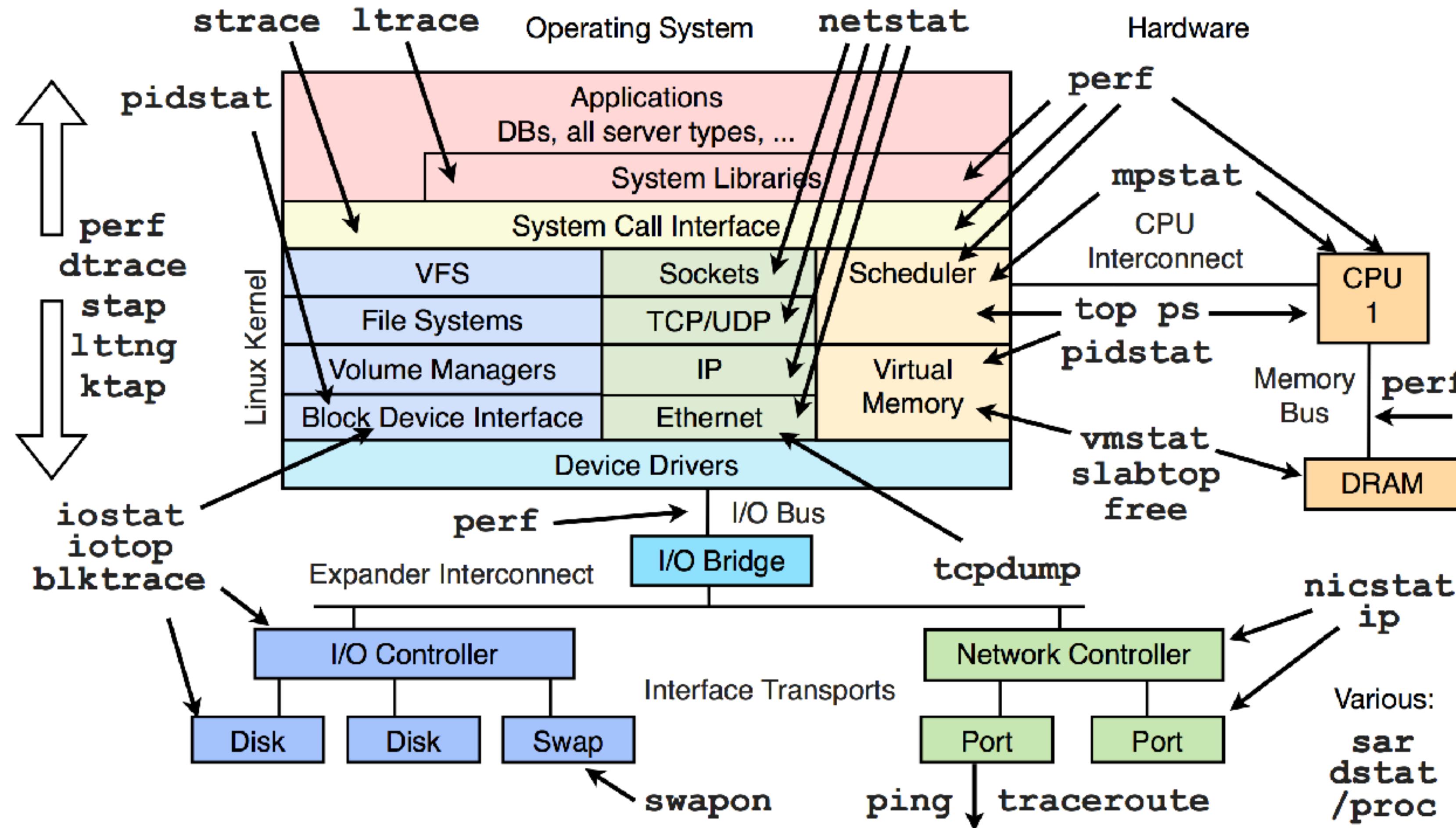
\$ history

\$ ls /home

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# The Undiscovered Country > 😅 Recovery

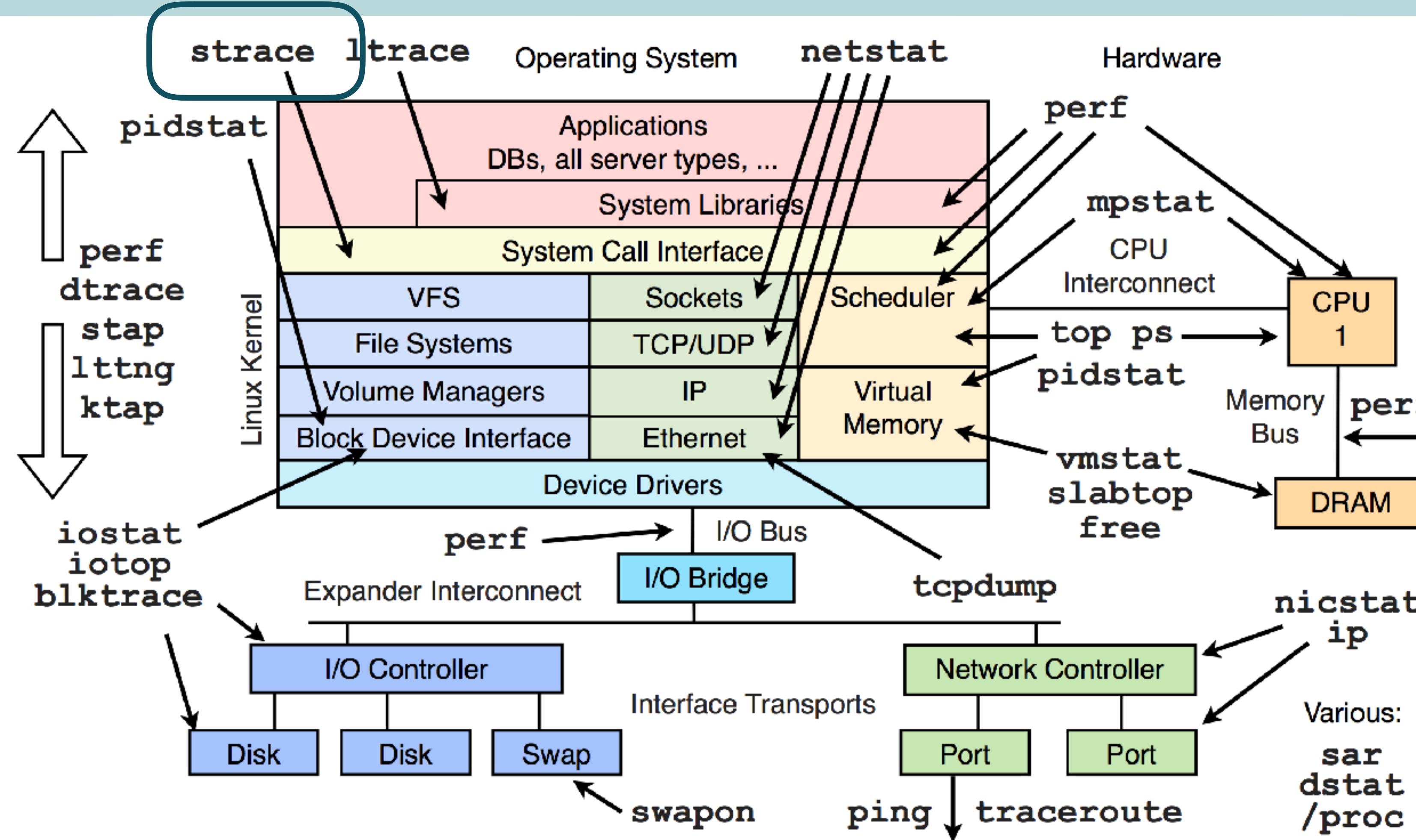


<https://medium.com/@adminstoolbox/debugging-using-strace-efda7d65be1d>

@dave1010 @tweetingsherry



# The Undiscovered Country > Recovery



<https://medium.com/@adminstoolbox/debugging-using-strace-efda7d65be1d>

**@dave1010 @tweetingsherry**



# The Undiscovered Country > 😅 Recovery

```
$ pidof nginx  
20306 20304
```

```
$ strace -p 20304 -p 20306 -f
```

```
inet_addr("81.27.88.19")  
"GET / HTTP/1.1\r\n  
stat("/var/www/bunker/current/web/index.php"  
writev(4, [{"HTTP/1.1 301 Moved Permanently\r\n"
```



[lmgtfy.com/?q=strace](https://lmgtfy.com/?q=strace)

@dave1010 @tweetingsherry



# The Undiscovered Country > 😅 Recovery

```
$ pidof php-fpm
```

```
$ strace -p ... -f
```

```
access("/var/www/config/prod.php", F_OK) = 0
```

```
access("/var/www/config/clients/demo.php", F_OK) = -1 ENOENT (No  
such file or directory)
```



[lmgtfy.com/?q=strace](https://lmgtfy.com/?q=strace)

@dave1010 @tweetingsherry



# The Undiscovered Country > 😅 Recovery



[lmgtfy.com/?q=strace](https://lmgtfy.com/?q=strace)

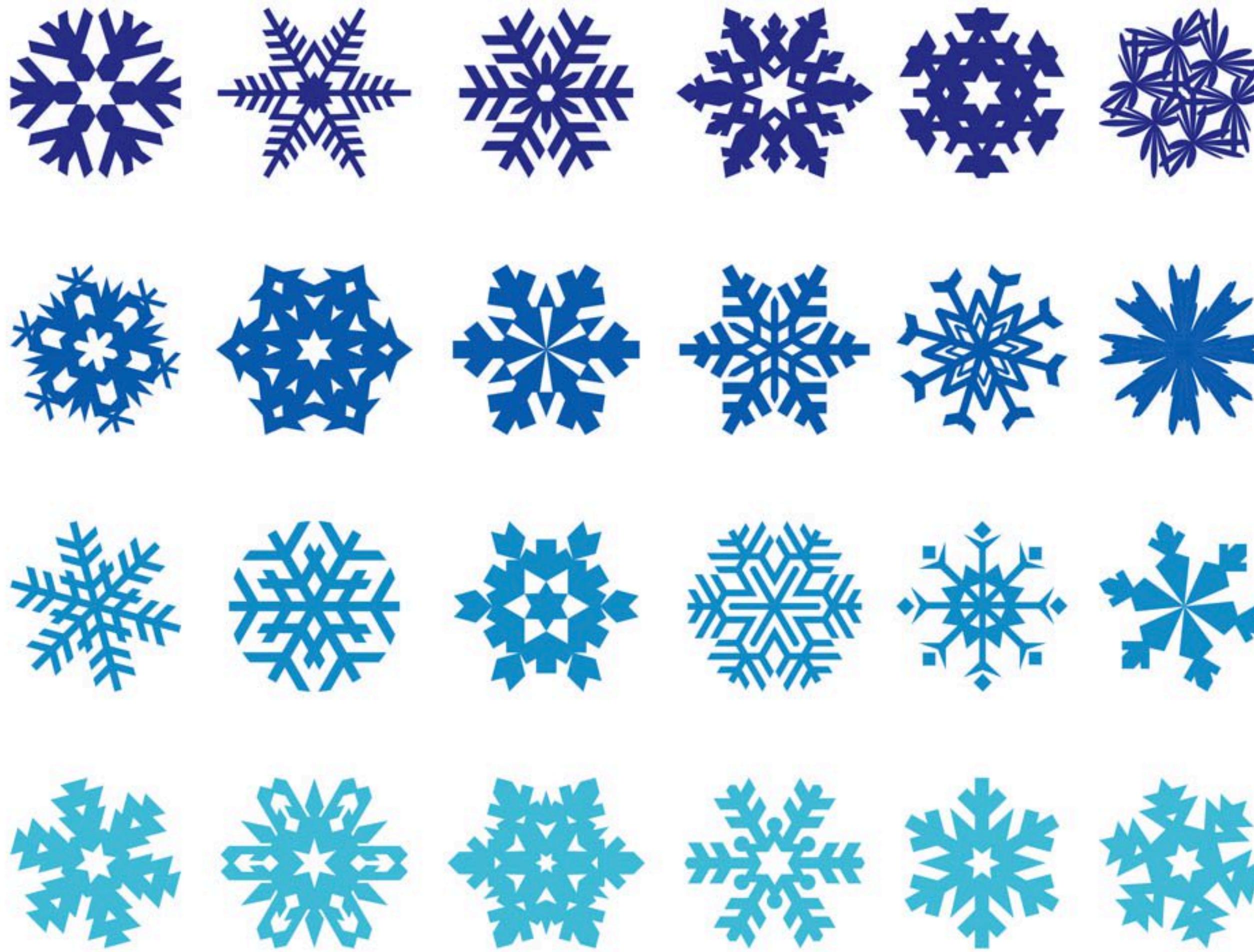
```
$ strace php cron.php
```

```
open("/etc/php/7.0/cli/php.ini", O_RDONLY) = 3
open("/etc/php/7.0/cli/conf.d/10-pdo.ini", O_RDONLY) = 3
open("/var/log/newrelic/php_agent.log", O_WRONLY|O_CREAT|O_APPEND,
0666) = 3
connect(4, {sa_family=AF_LOCAL, sun_path="/tmp/.newrelic.sock"}, 22) = 0
```

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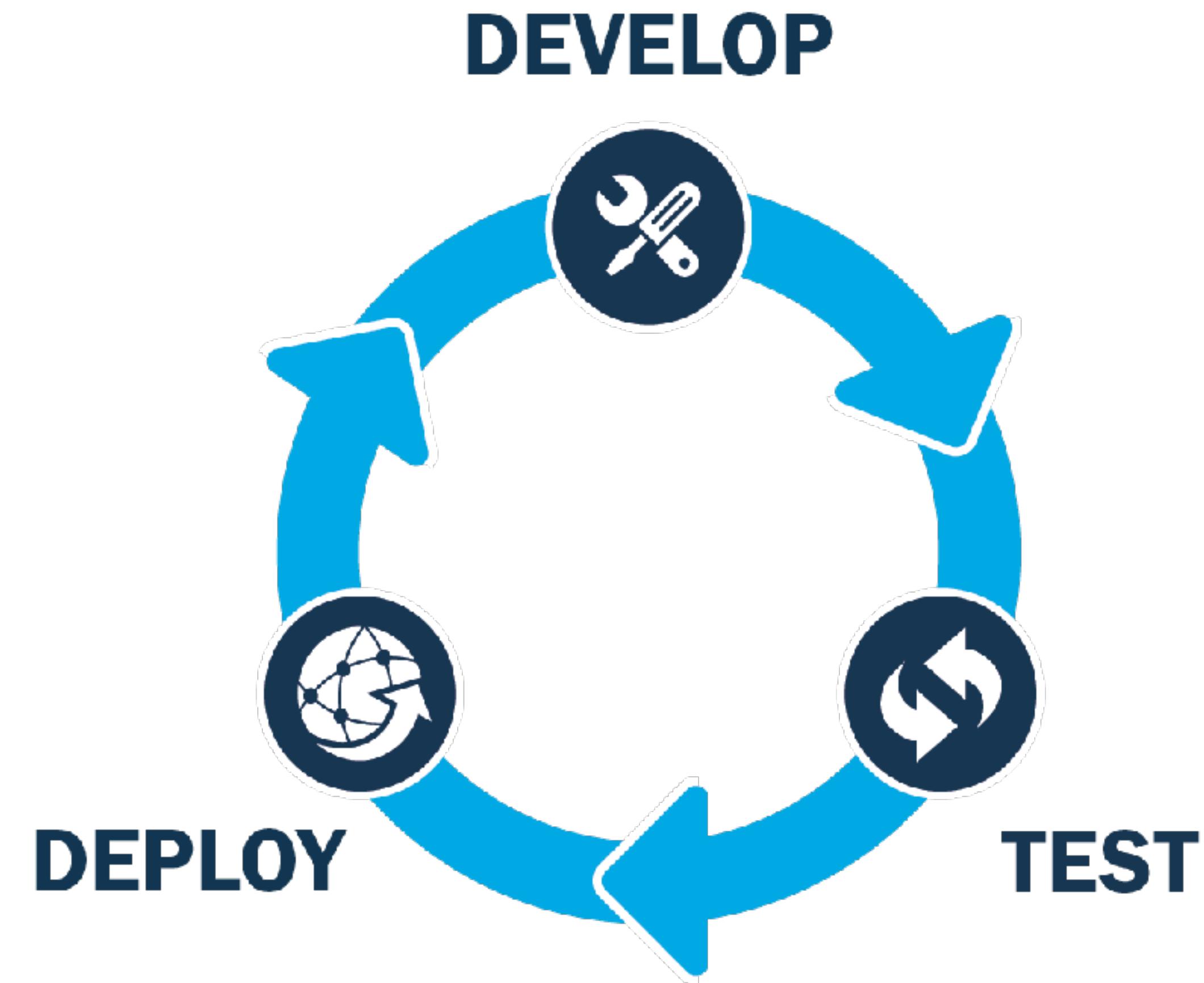
# The Undiscovered Country > ⚠ Caution



@dave1010 @tweetingsherry



# The Undiscovered Country > ~~100~~ Long Term



@dave1010 @tweetingsherry



# Get Out Of Jail Free Cards

CONTENT  
DELIVERY  
NETWORK

INSTANT  
SLL

INCREASE  
CONNECTION  
LIMIT

SLOW QUERY  
LOG

RESTART  
SERVICES

HISTORY &  
STRACE



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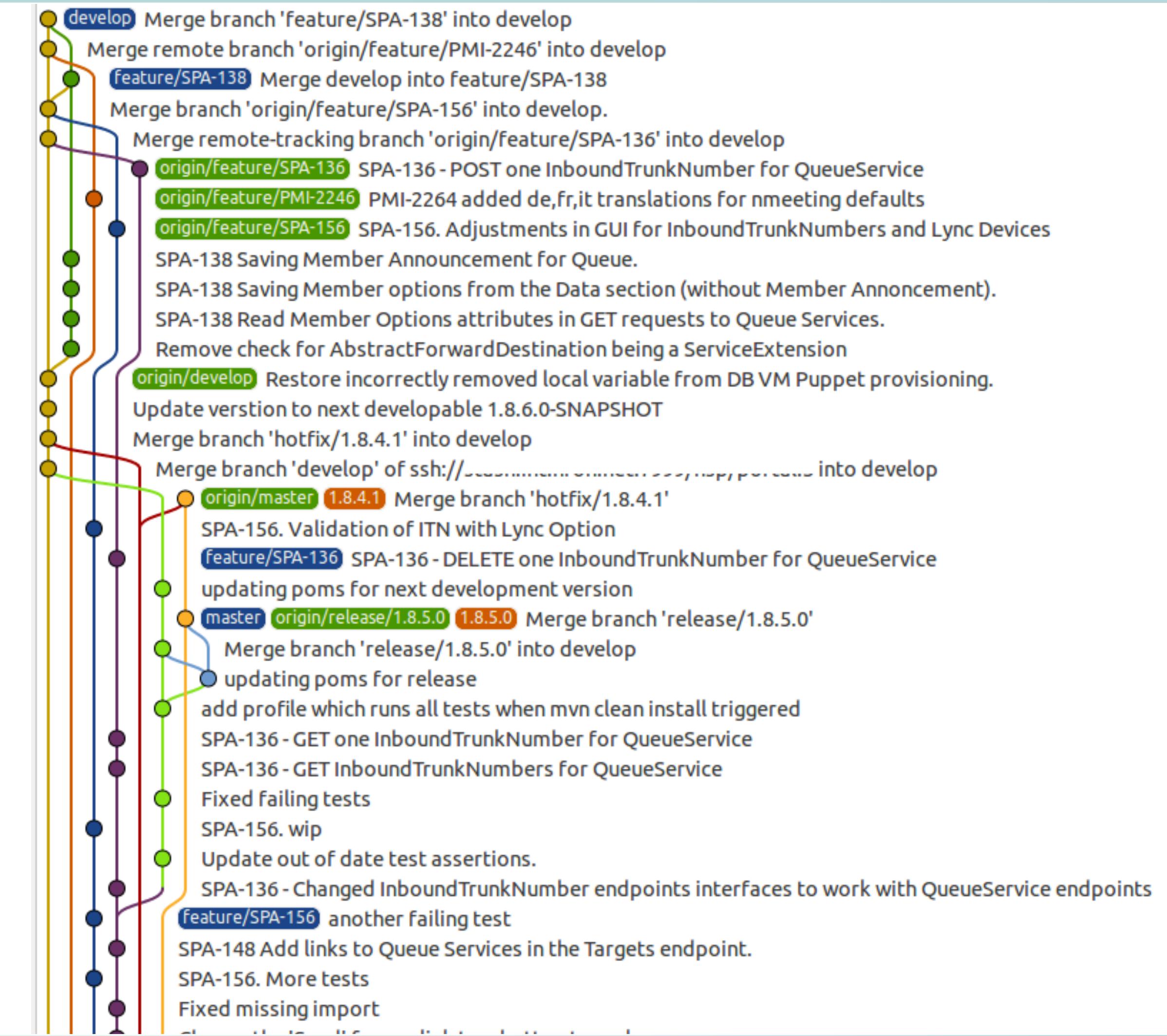
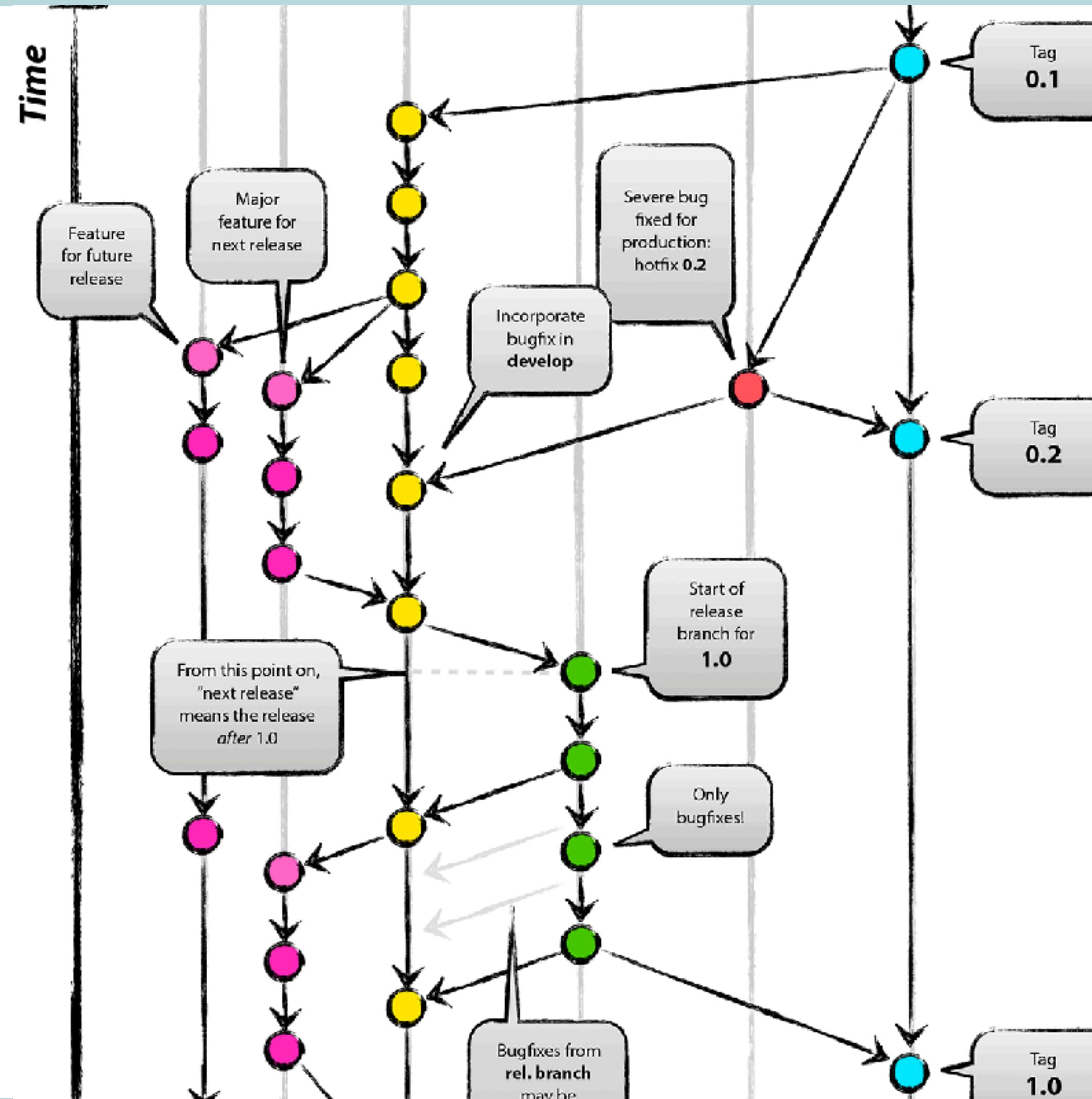


# GIT VERSION CONTROL

@dave1010 @tweetingsherry



# Git Version Control > ✨ Perfect World



@dave1010 @tweetingsherry



# Git Version Control > ✨ Perfect World



@dave1010 @tweetingsherry



# Git Version Control > ✨ Perfect World

```
CHRIS:git-testing chris$ gl
```

@dave1010 @tweetingsherry



# Git Version Control > ✨ Perfect World

```
CHRIS:git-testing chris$ gl
```

@dave1010 @tweetingsherry



# Git Version Control > ✨ Perfect World

.

Branch	Access type	Users and groups	Custom settings	
master	Write access	Everybody	Deleting this branch is not allowed Rewriting branch history is not allowed	 
	Merge via pull request	Everybody		

@dave1010 @tweetingsherry



# Git Version Control > 😱 Dilemma

```
CHRIS:git-testing chris$ gb
```

@dave1010 @tweetingsherry



# Git Version Control > 😱 Dilemma

```
CHRIS:git-testing chris$ gb
```

@dave1010 @tweetingsherry



# Git Version Control > 😱 Dilemma

.



@dave1010 @tweetingsherry



# Git Version Control > 😱 Dilemma



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## Git Version Control > 😱 Dilemma

```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ ]
```

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## Git Version Control > 😱 Dilemma

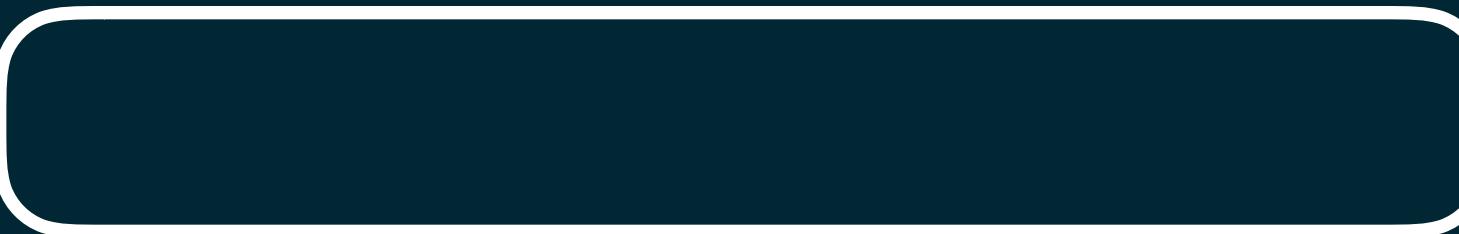
```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ ]
```

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## Git Version Control > 😱 Dilemma

```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ ]
```



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## Git Version Control > 😱 Dilemma

```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ ]
```

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## Git Version Control > 😱 Dilemma

.

git reset –hard ~100

git branch -D feature/work-in-progress

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# Git Version Control > 😅 Recovery

```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
[CHRIS:git-testing chris$ git rebase -i master
Successfully rebased and updated refs/heads/feature/work-in-progress.
[CHRIS:git-testing chris$ gl
* 5d13572 - (HEAD -> feature/work-in-progress, master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ █
```

@dave1010 @tweetingsherry



# Git Version Control > 😅 Recovery

```
[CHRIS:git-testing chris$ gb
* [1] feature/work-in-progress
[2] master
[CHRIS:git-testing chris$ gl
* 4c9cc18 - (HEAD -> feature/work-in-progress) Add a new feature (48 seconds ago) <Chris Sherry>
* 5d13572 - (master) Initial Commit (4 hours ago) <Chris Sherry>
[CHRIS:git-testing chris$ git rebase -i master
Successfully rebased and updated refs/heads/feature/work-in-progress.
[CHRIS:git-testing chris$ gl
* 5d13572 - (HEAD -> feature/work-in-progress, master) Initial Commit (4 hours ago) <Chris Sherry>
CHRIS:git-testing chris$ ]
```

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# Git Version Control > ⚠ Caution

```
CHRIS:git-testing chris$ git
```

@dave1010 @tweetingsherry



# Git Version Control > ⚠ Caution

```
CHRIS:git-testing chris$ git
```

@dave1010 @tweetingsherry



Git Version Control >  Long Term

# GIT HABITS

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# GIT HABITS

`git commit -am "message"`

# GIT HABITS

`git commit -am "message"`

`git add .`

# GIT HABITS

`git commit -am "message"`  
`git add .`

`git commit`

# GIT HABITS

**git commit -am “message”**  
**git add .**

**git commit**  
**git add -p (--pick)**

# GIT HABITS

**git commit -am “message”  
git add .**

**git commit  
git add -p (--pick)**

**git push --force-with-lease**

# GIT HABITS

**git commit -am “message”**  
**git add .**

**git commit**  
**git add -p (--pick)**

**git push --force-with-lease**  
**git merge --no-commit**

# Get Out Of Jail Free Cards

CONTENT  
DELIVERY  
NETWORK

INSTANT  
SLL

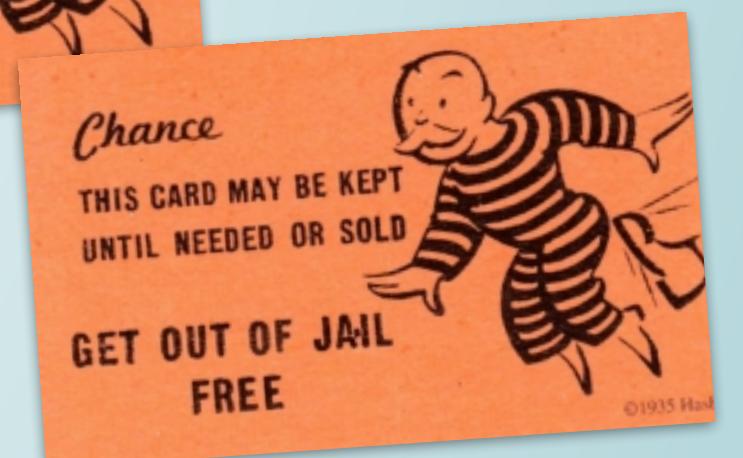
INCREASE  
CONNECTION  
LIMIT

SLOW QUERY  
LOG

RESTART  
SERVICES

HISTORY &  
STRACE

GIT REFLOG



@dave1010 @tweetingsherry



# EXTRAS

⚠ Caution

@dave1010 @tweetingsherry



# EXTRAS

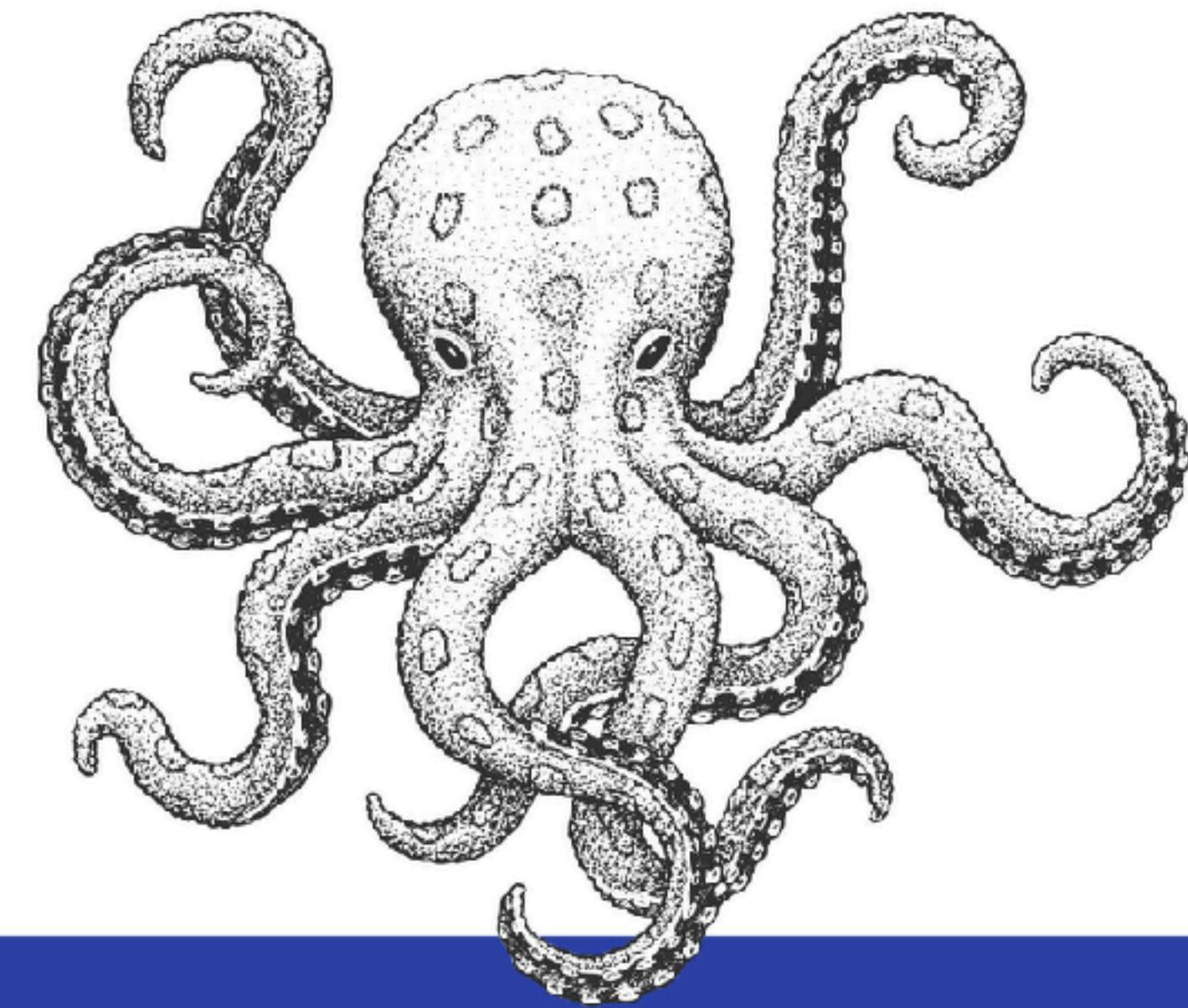
⚠ Caution

😅 Prevention

@dave1010 @tweetingsherry



*Just memorize these fourteen contextually dependant instructions*



## Exiting Vim

*Eventually*

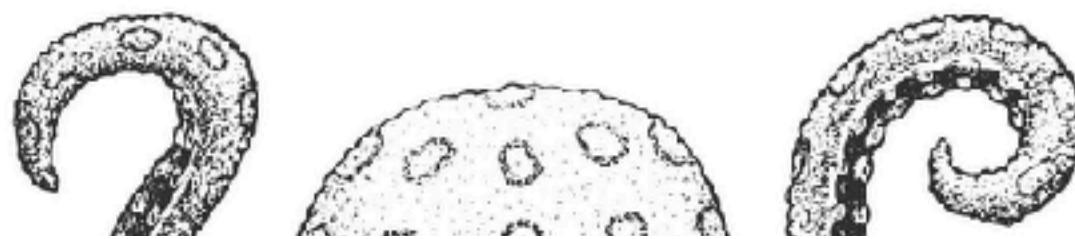
O RLY?

@ThePracticalDev

@dave1010 @tweetingsherry



*Just memorize these fourteen contextually dependant instructions*



**I Am Developer**

@iamdevloper

Following

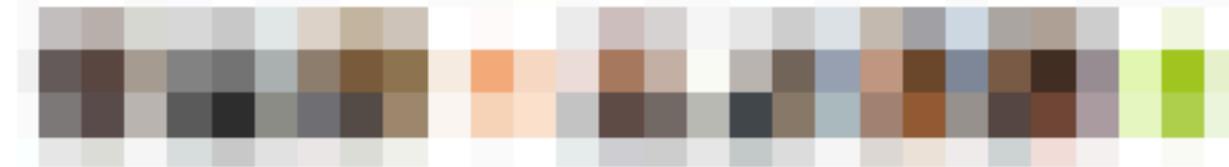
I've been using Vim for about 2 years now,  
mostly because I can't figure out how to exit it.

RETWEETS

**14,083**

LIKES

**8,154**



3:26 PM - 17 Feb 2014

314

14K

8.2K



*Eventually*

O RLY?

@ThePracticalDev

**@dave1010 @tweetingsherry**



# Exiting VIM > ! Caution

Ask Question

## How to exit the Vim editor?

▲ I'm stuck and cannot escape. It says:

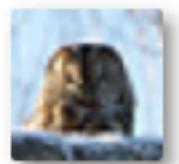
2654 "type :quit<Enter> to quit VIM"

▼ But when I type that it simply appears in the object body.

vim vi

675 share improve this question

edited Nov 3 '16 at 20:26



Peter Mortensen  
12.7k ● 19 ● 82 ● 110

asked 5 years, 11 months ago

viewed 1,604,768 times

active 2 days ago

asked Aug 6 '12 at 12:25



jclancy  
12.6k ● 5 ● 20 ● 28

@dave1010 @tweetingsherry



# Exiting VIM > ! Caution

Ask Question

## How to exit the Vim editor?

▲ I'm stuck and cannot escape. It says:

2654 "type :quit<Enter> to quit VIM"

asked 5 years, 11 months ago

viewed 1,604,768 times

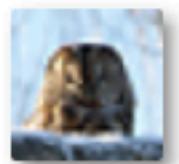
active 2 days ago

▼ But when I type that it simply appears in the object body.



675 share improve this question

edited Nov 3 '16 at 20:26



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12.7k • 19 • 82 • 110

asked Aug 6 '12 at 12:25



jclancy  
12.6k • 5 • 20 • 28

@dave1010 @tweetingsherry



## Exiting VIM > ⚠ Caution

:q!

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## Exiting VIM > ⚠ Caution

|

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
```

-- INSERT --

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## Exiting VIM > 😅 Prevention

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:cq!

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# CHANGING THE LOCKS



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## Changing The Locks > ⚠ Caution

```
vagrant@3sidedcube:~/.ssh$ ls -la
total 20
drwx----- 2 vagrant root      4096 Mar  7 14:51 .
drwxr-xr-x 10 vagrant vagrant 4096 Jul  7 12:32 ..
-rw----- 1 vagrant vagrant    389 Mar  7 14:34 authorized_keys
-rw----- 1 vagrant vagrant 1675 Mar  7 14:51 id_rsa
-rw-r--r-- 1 vagrant vagrant   413 Mar  7 14:51 id_rsa.pub
vagrant@3sidedcube:~/.ssh$ vim authorized_keys |
```

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# Changing The Locks > ⚠ Caution

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# Changing The Locks > 😅 Prevention

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vagrant@3sidedcube:~/.ssh$ vim authorized_keys █
```

```
Welcome to Ubuntu 16.04.1 LTS (GNU/Linux 4.4.0-31-generic x86_64)
```

- \* Documentation: <https://help.ubuntu.com>
- \* Management: <https://landscape.canonical.com>
- \* Support: <https://ubuntu.com/advantage>

```
Last login: Sun Jul  8 15:40:49 2018 from 10.0.2.2
```

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# Changing The Locks > 😅 Prevention

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## VISUDO

```
GNU nano 2.5.3          File: /etc/sudoers.tmp

#
# This file MUST be edited with the 'visudo' command as root.
#
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults      env_reset
Defaults      exempt_group=sudo
Defaults      mail_badpass
Defaults      secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
```

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# Changing The Locks > 😅 Prevention

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```

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# Get Out Of Jail Free Cards

CONTENT  
DELIVERY  
NETWORK

INSTANT  
SLL

INCREASE  
CONNECTION  
LIMIT

SLOW QUERY  
LOG

RESTART  
SERVICES

HISTORY &  
STRACE

GIT REFLOG

:CQ!

2  
TERMINALS

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