



Monitoreo y Notificaciones

por Eduardo Del Valle

¿Qué significa monitorear?

- Controlar el desarrollo de una acción o un suceso a través de uno o varios monitores."en medicina se monitorea a los enfermos graves para controlar todas sus variables fisiológicas"
- Instalar monitores en un lugar para someterlo a vigilancia."los cajeros automáticos están monitoreados"
- El monitoreo, a rasgos generales, consiste en la observación del curso de uno o más parámetros para detectar eventuales anomalías. Los enfermeros pueden monitorear los signos vitales de un paciente a través de un dispositivo que refleja de manera gráfica los latidos de su corazón; en caso de advertir algún problema, son los encargados de avisar a los médicos.



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El valor esta en el servicio

Herramientas de Monitoreo

- Pueden ser básicas o avanzadas
- Manuales o automáticas
- Con notificación o sin ella
- Gratis o pagadas
- Una combinación de todas las anteriores

Herramientas Básicas

- Ping

```
[PulpoPro:~ edelvall$ ping google.com -t 3 ]
PING google.com (172.217.8.110): 56 data bytes
64 bytes from 172.217.8.110: icmp_seq=0 ttl=51 time=129.587 ms
64 bytes from 172.217.8.110: icmp_seq=1 ttl=51 time=130.042 ms
64 bytes from 172.217.8.110: icmp_seq=2 ttl=51 time=129.942 ms

--- google.com ping statistics ---
3 packets transmitted, 3 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 129.587/129.857/130.042/0.195 ms
PulpoPro:~ edelvall$
```

Herramientas Básicas

- Ping
- Telnet

```
[PulpoPro:~ edelvall$ telnet google.com 80 ]
Trying 172.217.8.110...
Connected to google.com.
Escape character is '^]'.
.
HTTP/1.0 400 Bad Request
Content-Type: text/html; charset=UTF-8
Referrer-Policy: no-referrer
Content-Length: 1555
Date: Sat, 26 Jan 2019 01:53:59 GMT

<!DOCTYPE html>
<html lang=en>
  <meta charset=utf-8>
  <meta name=viewport content="initial-scale=1, minimum-scale=1, width=device-wi
dth">
  <title>Error 400 (Bad Request)!!1</title>
  <style>
    *{margin:0;padding:0}html,code{font:15px/22px arial,sans-serif}html{backgrou
nd:#fff;color:#222;padding:15px}body{margin:7% auto 0;max-width:390px;min-height
:180px;padding:30px 0 15px}* > body{background:url(//www.google.com/images/error
s/robot.png) 100% 5px no-repeat;padding-right:205px}p{margin:11px 0 22px;overflo
w:hidden}ins{color:#777;text-decoration:none}a img{border:0}@media screen and (m
ax-width:772px){body{background:none;margin-top:0;max-width:none;padding-right:0
}}#logo{background:url(//www.google.com/images/branding/googlelogo/1x/googlelogo
_color_150x54dp.png) no-repeat;margin-left:-5px}@media only screen and (min-reso
lution:192dpi){#logo{background:url(//www.google.com/images/branding/googlelogo/
2x/googlelogo_color_150x54dp.png) no-repeat 0% 0%/100% 100%;-moz-border-image:ur
l(//www.google.com/images/branding/googlelogo/2x/googlelogo_color_150x54dp.png)
0}}@media only screen and (-webkit-min-device-pixel-ratio:2){#logo{background:ur
l(//www.google.com/images/branding/googlelogo/2x/googlelogo_color_150x54dp.png)
no-repeat;-webkit-background-size:100% 100%}}#logo{display:inline-block;height:5
4px;width:150px}
  </style>
  <a href=//www.google.com/><span id=logo aria-label=Google></span></a>
  <p><b>400.</b> <ins>That's an error.</ins>
  <p>Your client has issued a malformed or illegal request. <ins>That's all we
know.</ins>
Connection closed by foreign host.
```

Herramientas Básicas

- Ping
- Telnet
- Traceroute

```
[PulpoPro:~ edelvall$ traceroute google.com
traceroute to google.com (172.217.8.110), 64 hops max, 52 byte packets
 1 192.168.68.1 (192.168.68.1)  1.766 ms  0.828 ms  0.751 ms
 2 190.187.28.169 (190.187.28.169)  1.439 ms  1.608 ms  1.317 ms
 3 10.22.34.177 (10.22.34.177)  3.717 ms  1.964 ms  2.022 ms
 4 10.3.1.25 (10.3.1.25)  2.267 ms
   10.3.1.162 (10.3.1.162)  2.596 ms
   10.3.1.161 (10.3.1.161)  3.936 ms
 5 10.1.2.2 (10.1.2.2)  2.409 ms
   10.3.1.17 (10.3.1.17)  3.022 ms
   10.1.2.2 (10.1.2.2)  2.216 ms
 6 10.1.2.6 (10.1.2.6)  3.847 ms
   10.1.2.2 (10.1.2.2)  2.367 ms
   10.1.2.6 (10.1.2.6)  2.532 ms
 7 ae0-2005.lima4.lim.seabone.net (195.22.222.54)  2.602 ms
   10.76.7.29 (10.76.7.29)  3.317 ms
   186.160.196.1 (186.160.196.1)  4.526 ms
 8 10.76.7.29 (10.76.7.29)  9.144 ms
   ae0-2005.lima4.lim.seabone.net (195.22.222.54)  2.917 ms  2.696 ms
 9 ae0-2005.lima4.lim.seabone.net (195.22.222.54)  2.631 ms
   et1-0-2.santiago1.san.seabone.net (195.22.221.185)  32.071 ms
   et1-0-5.santiago1.san.seabone.net (195.22.221.189)  32.694 ms
10 72.14.216.20 (72.14.216.20)  32.567 ms  33.624 ms  35.435 ms
11 72.14.216.20 (72.14.216.20)  32.683 ms  32.485 ms
   74.125.242.3 (74.125.242.3)  33.666 ms
12 216.239.56.71 (216.239.56.71)  33.787 ms
   74.125.242.19 (74.125.242.19)  33.951 ms
   209.85.244.162 (209.85.244.162)  37.336 ms
13 216.239.62.52 (216.239.62.52)  163.179 ms  163.512 ms  162.838 ms
14 64.233.174.133 (64.233.174.133)  136.402 ms  132.208 ms
   216.239.62.52 (216.239.62.52)  163.421 ms
15 108.170.231.78 (108.170.231.78)  136.463 ms  182.450 ms
   64.233.174.133 (64.233.174.133)  175.199 ms
16 108.170.249.1 (108.170.249.1)  172.533 ms  137.664 ms
   108.170.249.17 (108.170.249.17)  131.369 ms
17 108.170.226.255 (108.170.226.255)  135.735 ms
   108.170.227.1 (108.170.227.1)  135.047 ms
   108.170.249.1 (108.170.249.1)  131.341 ms
18 108.170.227.1 (108.170.227.1)  134.220 ms
   mia07s48-in-f14.1e100.net (172.217.8.110)  130.091 ms  129.450 ms
```


Herramientas Avanzadas

- Uso de scripts

```
-----  
Verificación de estado de Tuneles y PCs  
2017-11-20_19:22:56  
-----
```

Distribuidor	Tunel	PC
MK-01 -	ALIVE	ALIVE
MK-02 -	ALIVE	ALIVE
MK-03 -	ALIVE	ALIVE
MK-04 -	ALIVE	ALIVE
MK-05 -	ALIVE	ALIVE
MK-06 -	ALIVE	ALIVE
MK-07 -	ALIVE	ALIVE
MK-08 -	ALIVE	ALIVE
MK-10 -	ALIVE	ALIVE
MK-11 -	ALIVE	ALIVE
MK-12 -	ALIVE	ALIVE
MK-13 -	ALIVE	ALIVE
MK-14 -	ALIVE	ALIVE
MK-15 -	ALIVE	ALIVE
MK-16 -	ALIVE	ALIVE
MK-17 -	DOWN ✘	DOWN ✘
MK-19 -	ALIVE	DOWN ✘
MK-20 -	ALIVE	ALIVE
MK-21 -	ALIVE	ALIVE
MK-22 -	ALIVE	ALIVE
MK-23 -	ALIVE	ALIVE
MK-24 -	ALIVE	ALIVE
MK-25 -	ALIVE	ALIVE

Herramientas Avanzadas

- Uso de scripts

```
ALIVE ALIVE
ALIVE ALIVE
ALIVE ALIVE
ALIVE ALIVE
DOWN ✘ DOWN ✘
cas ALIVE DOWN ✘
ALIVE ALIVE
men ALIVE ALIVE
a ALIVE ALIVE
si ALIVE ALIVE
```

```
-----
Verificación de estado de Tuneles y PCs
2017-11-20_19:22:56
-----

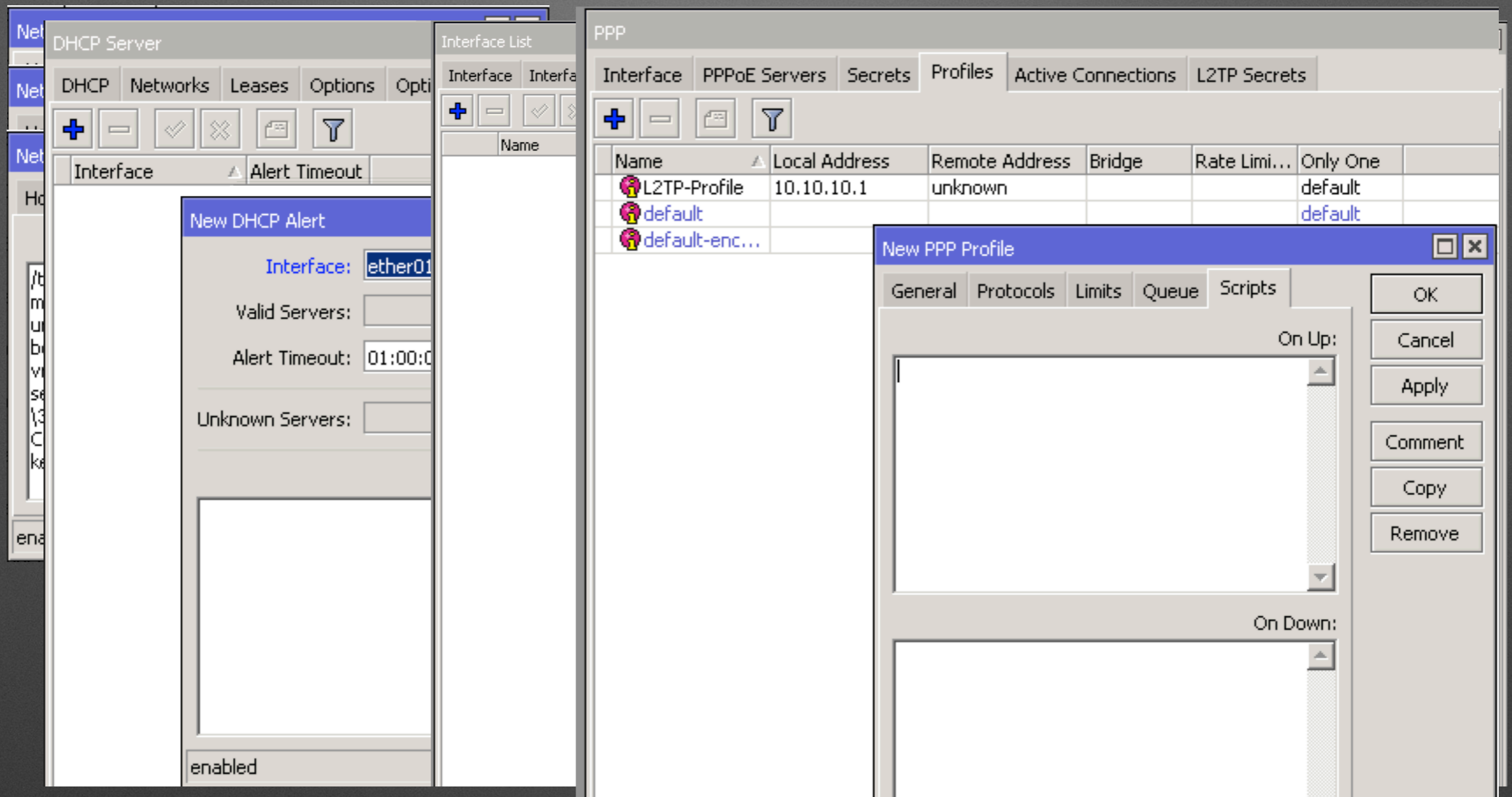
Distribuidor      Tunel  PC
MK-01 -           ALIVE ALIVE
MK-02 -           ALIVE ALIVE
MK-03 -           ALIVE ALIVE
MK-04 -           ALIVE ALIVE
MK-05 -           ALIVE ALIVE
MK-06 -           ALIVE ALIVE
MK-07 -           ALIVE ALIVE
MK-08 -           ALIVE ALIVE
MK-10 -           ALIVE ALIVE
MK-11 -           ALIVE ALIVE
MK-12 -           ALIVE ALIVE
MK-13 -           ALIVE ALIVE
MK-14 -           ALIVE ALIVE
MK-15 -           ALIVE ALIVE
MK-16 -           ALIVE ALIVE
MK-17 -           DOWN ✘ DOWN ✘
MK-19 -           ALIVE DOWN ✘
MK-20 -           ALIVE ALIVE
MK-21 -           ALIVE ALIVE
MK-22 -           ALIVE ALIVE
MK-23 -           ALIVE ALIVE
MK-24 -           ALIVE ALIVE
MK-25 -           ALIVE ALIVE
```

Herramientas Avanzadas

- Uso de scripts
 - Unix bash o similar
 - Windows batch
 - Python
 - Mikrotik scripts

```
#!/bin/bash
# Program name: pingall.sh
IFS=","
RED=$(tput setaf 1)
GREEN=$(tput setaf 2)
BLUE=$(tput setaf 4)
REVERSE=$(tput smso)
NORMAL=$(tput sgr0)

cd /Users/edellvall/Google\ Drive/Gloria
echo
echo "-----"
echo " Verificación de estado de Tuneles y PCs "
printf " "
date +%F_%T
echo "-----"
echo
echo "Distribuidor          Tunel    PC"
cat /Users/edellvall/Google\ Drive/Gloria/ips.txt | while read distribuidor tune
l pc
do
    printf "$distribuidor "
# Ping the tunel
ping -c 2 "$tunel" > /dev/null
if [ $? -eq 0 ]; then
    printf "${BLUE}ALIVE    ${NORMAL}"
else
    #printf "${REVERSE}${RED}DOWN    ${NORMAL}"
    printf "${REVERSE}${RED}DEAD\xE2\x98\xA0${NORMAL} "
fi
# Ping the pc
ping -c 2 "$pc" > /dev/null
if [ $? -eq 0 ]; then
    printf "${BLUE}ALIVE    ${NORMAL}\n"
else
    printf "${REVERSE}${RED}DEAD\xE2\x98\xA0${NORMAL}\n"
fi
done
echo
/Users/edellvall/Google\ Drive/Gloria/pinger.sh (END)
```



¿Dónde ponerlos?

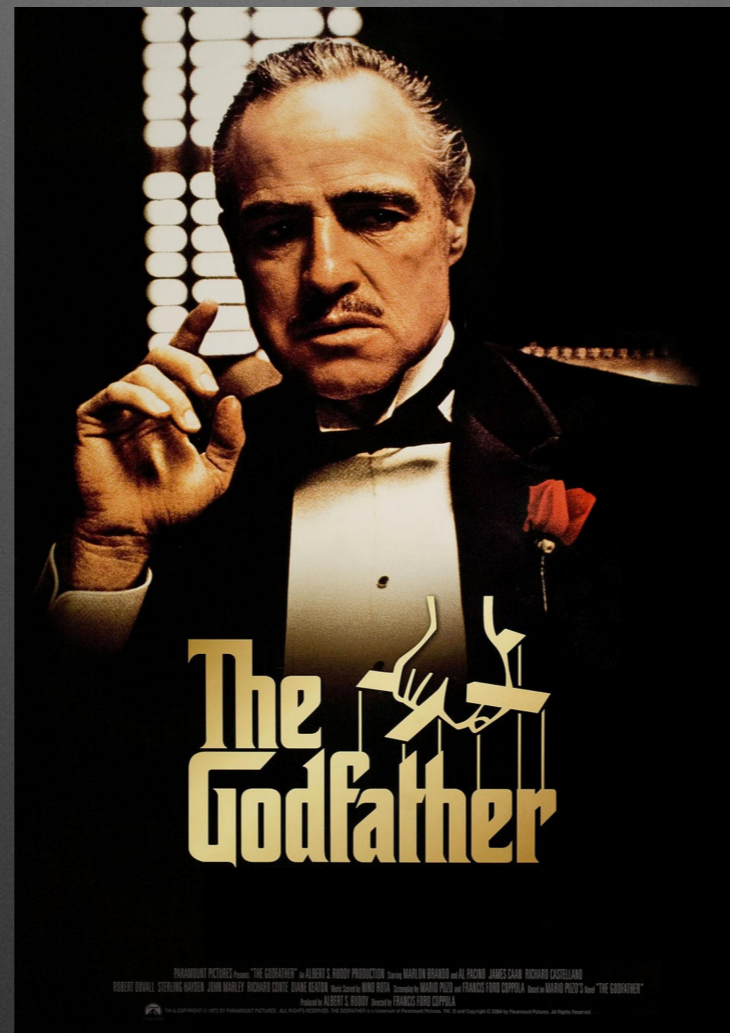
los scripts en MikroTik

Telegram

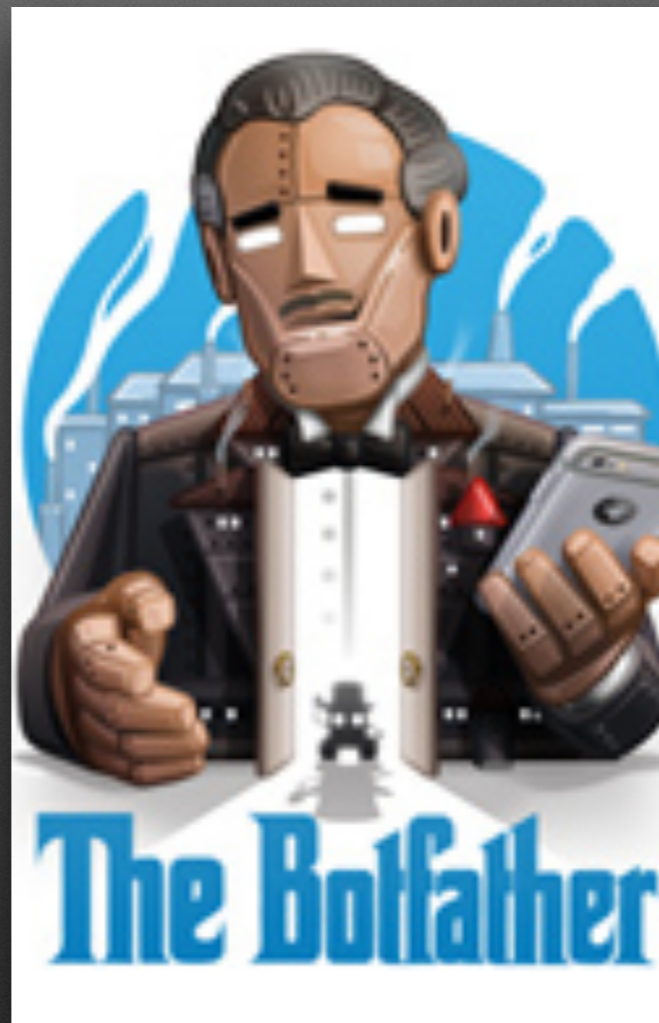


<https://telegram.org/>

El Padrino

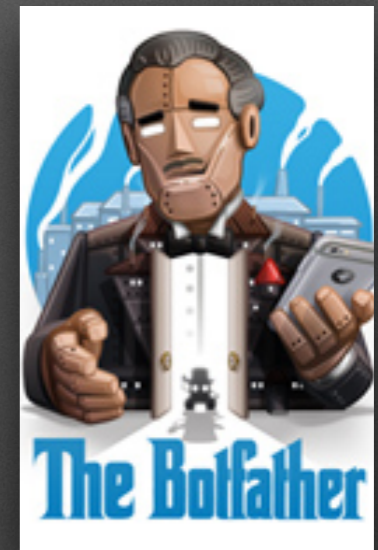


El Botfather



¿Cómo se usa?

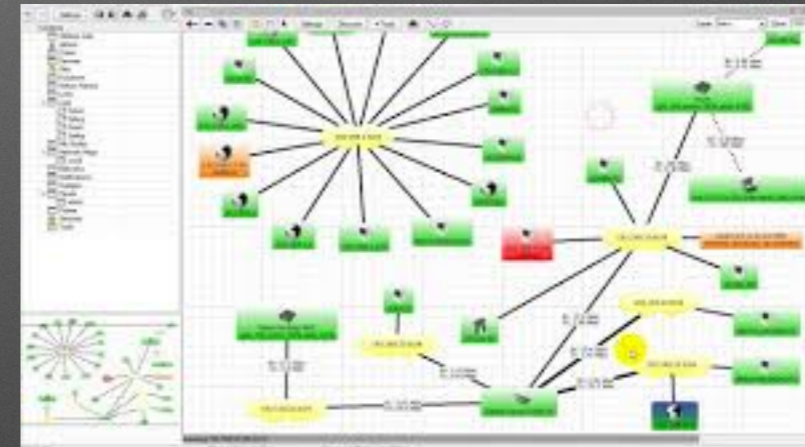
- Creat el BOT
 - /newbot
- Nombre común
- Nombre interno
- Token: 742282904:AAH_w9mYJXWNMqRV_ue1ToJIVFhg8PRsuL4
- Script generico:
 - /tool fetch mode=https http-method=get url="https://api.telegram.org/bot[token]/sendMessage\3Fchat_id=[chat_id]&text=[texto]" keep-result=no



Demo

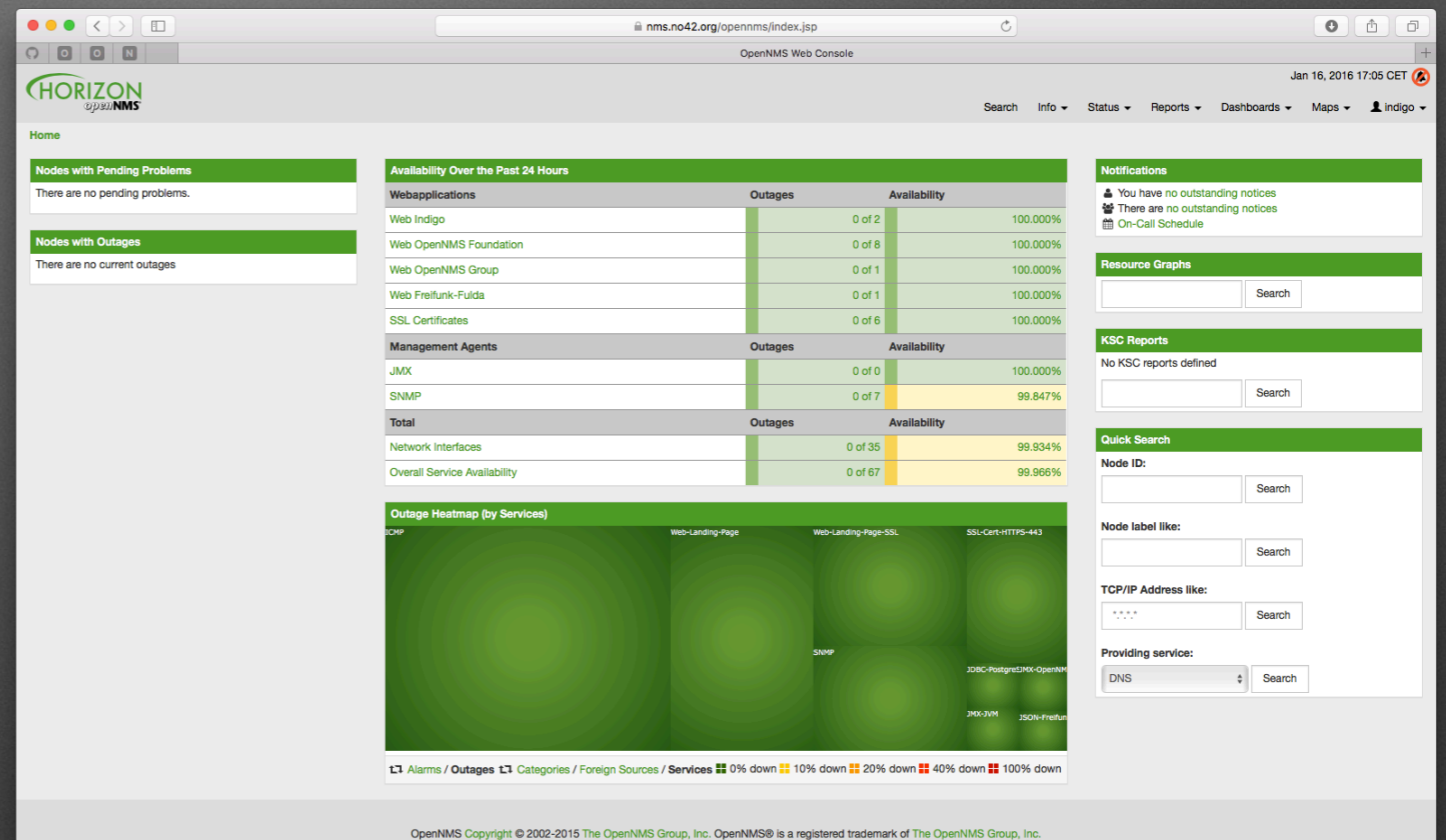
¿Qué viene después?

- Notificaciones
- Aplicaciones
- Dude



¿Qué viene después?

- Notificaciones
- Aplicaciones
 - Dude
 - OpenNMS



¿Qué viene después?

- Notificaciones
- Aplicaciones
 - Dude
 - OpenNMS
 - Oráculo de MKE Solutions

Q Events Viewer

Search Next Rows: 10 Type: ALL Category: ALL Category Device: ALL Devices READ Filter Search

Date	Type	Status	Device	Category	Variable	Value Before	Actual Value	Details
Tuesday at 5:15am	WARNING	UNREAD	Router Casa PAPA Maxi / 192.168.20.1 MKE Solutions	backup	export	NA	→ NA	Remote Backup too small size=
Tuesday at 3:48am	WARNING	UNREAD	Core Sauce / 1.1.2.234 MKE Solutions	ping	down	N/A	→ N/A	Device is DOWN since 5 minutes ago
Tuesday at 3:00am	WARNING	UNREAD	Server Alameda / 1.1.2.206 MKE Solutions	reboot	uptime	13:09:01	→ 00:00:59	Reboot Device
Tuesday at 2:10am	INFO	UNREAD	Router BGP / 1.1.2.244 MKE Solutions	bgp	uptime	3d23:48:29	→ 00:02:09	Change value for peer BGP
Tuesday at 2:00am	INFO	UNREAD	Octavia Core / 1.1.3.16 Testing Debug	interface	link-downs	1	→ 2	Change for Interface ether10 Value (link-downs)
Tuesday at 1:37am	WARNING	UNREAD	Core Sauce / 1.1.2.234 MKE Solutions	ping	down	N/A	→ N/A	Device is DOWN since 5 minutes ago
Monday at 11:20pm	WARNING	UNREAD	Core Sauce / 1.1.2.234 MKE Solutions	ping	down	N/A	→ N/A	Device is DOWN since 5 minutes ago
Monday at 9:35pm	WARNING	UNREAD	Level 3 - / 1.1.2.220 MKE Solutions	reboot	uptime	1w5d18:38:07	→ 00:09:26	Reboot Device
Monday at 9:17pm	WARNING	UNREAD	Level 3 - / 1.1.2.220 MKE Solutions	ping	down	N/A	→ N/A	Device is DOWN since 5 minutes ago
Monday at 1:50pm	WARNING	UNREAD	Server Alameda / 1.1.2.206 MKE Solutions	reboot	uptime	00:15:03	→ 00:04:01	Reboot Device

¿Qué viene después?

- Notificaciones
- Aplicaciones
- Dude
- OpenNMS
- Oráculo de MKE Solutions
- Dashboards



Siguientes pasos

- Experimenten
- SI en Sandbox NO en Producción
- Sigam curiosos
- Pregunten
- Comparense
- Aspiren a más



Gracias!