

# The web browser game

*Hack4Kids@Deloitte*



*Qui sera...  
Who will be...*



X



X

?



X

X - Un ordinateur  
A laptop

X - Un smartphone  
A smartphone

X - [www.superkids.lu](http://www.superkids.lu)  
website

# Les concepts – Les acteurs

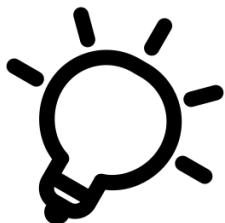
## The concepts – The actors



**Vous écrivez des messages**  
**You write messages**



**Vous lisez les messages**  
**You read messages**

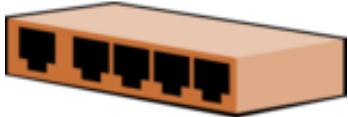


**Vous êtes le cerveau**  
**You are the brain**



# Les concepts - Les acteurs

## The concepts - The actors



Des routeurs / switches  
Routers / switches

*Vous faites la circulation, comme un policier. Vous décidez par où passent les messages.*

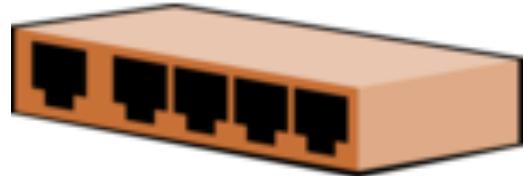
*You manage the traffic like a policeman. You choose the path that the messages should take.*





# Les concepts – Les acteurs

## The concepts – The actors



*Evitez les  
embouteillages!*

*Avoid traffic jams !*

*Quand un message passe, faites du bruit!  
When a message get across, make noise!*





# Les concepts – Les acteurs

## The concepts – The actors



**Vous êtes Flash. Vous  
êtes le Messager.**

**You are Flash.  
You are the  
Messenger.**





# Les concepts - Les acteurs

## The concepts - The actors



Vous transférez les messages entre les routeurs.

You transfer messages between routers.



# Les concepts - Les règles The concepts - the rules



**Question 1: Who knows what an IP address is?**

**Question 1: Qui sait ce qu'est une adresse IP?**

Dans la vraie vie  
In real life



Like a telephone number

Comme un numéro de téléphone



or



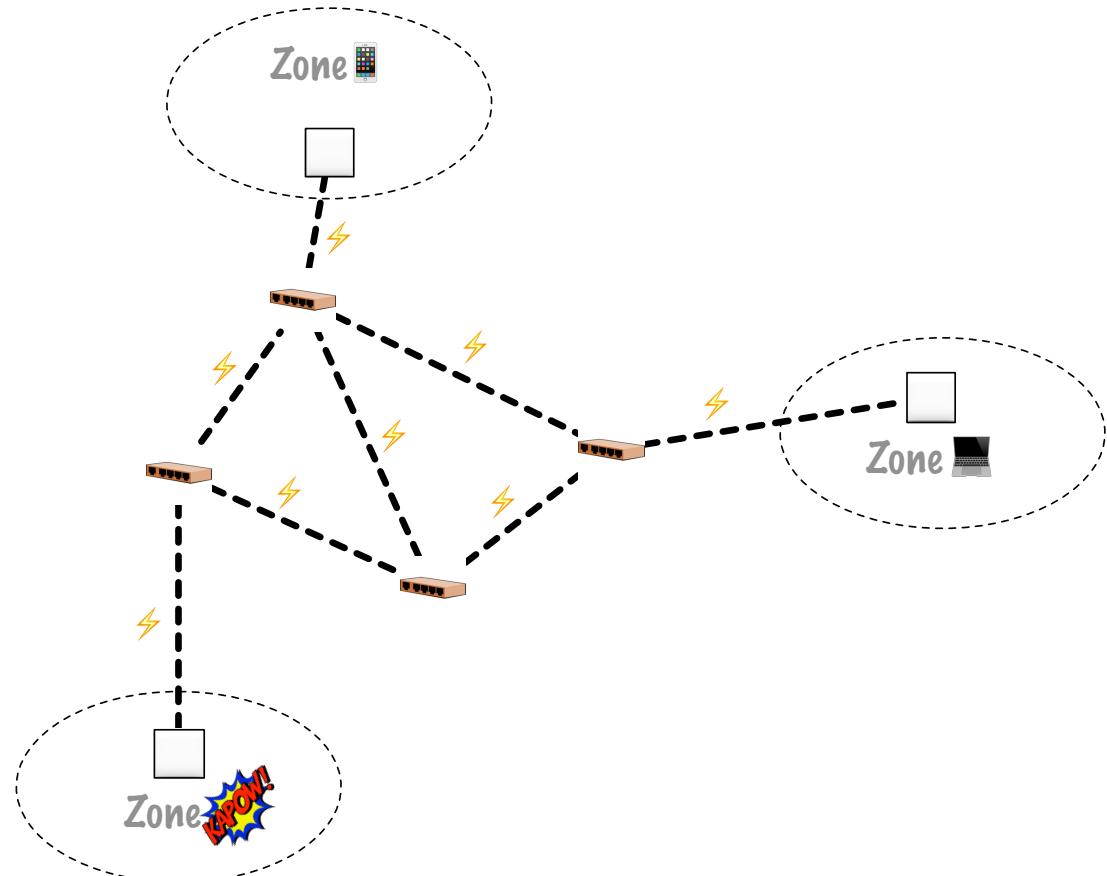
= 127.0.0.1

But we use pictures / Mais on utilise des images



# Regardons notre réseau

## Let's have a look at our network

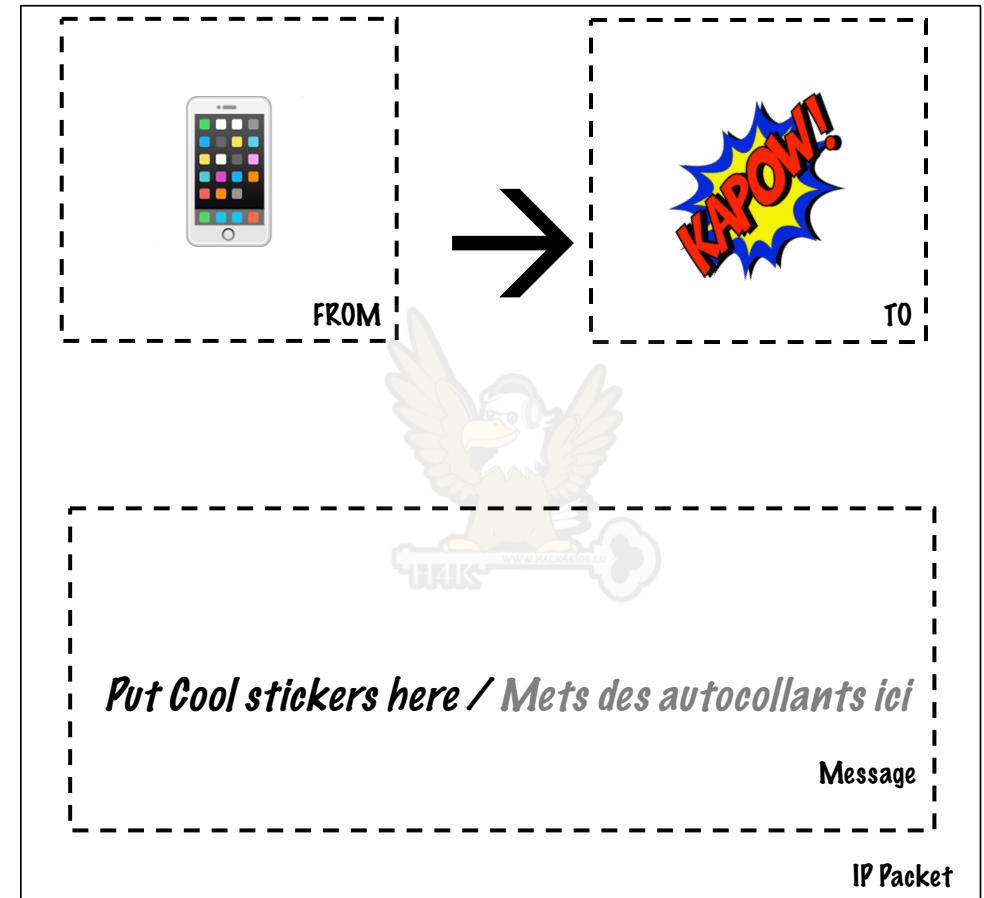


# Les concepts – Les règles The concepts – The rules



## Les messages Messages

Sur Internet, les ordinateurs  
échangent des messages IP  
On the Internet, Computer  
exchange IP M messages





# Les concepts - Les règles The concepts - The rules

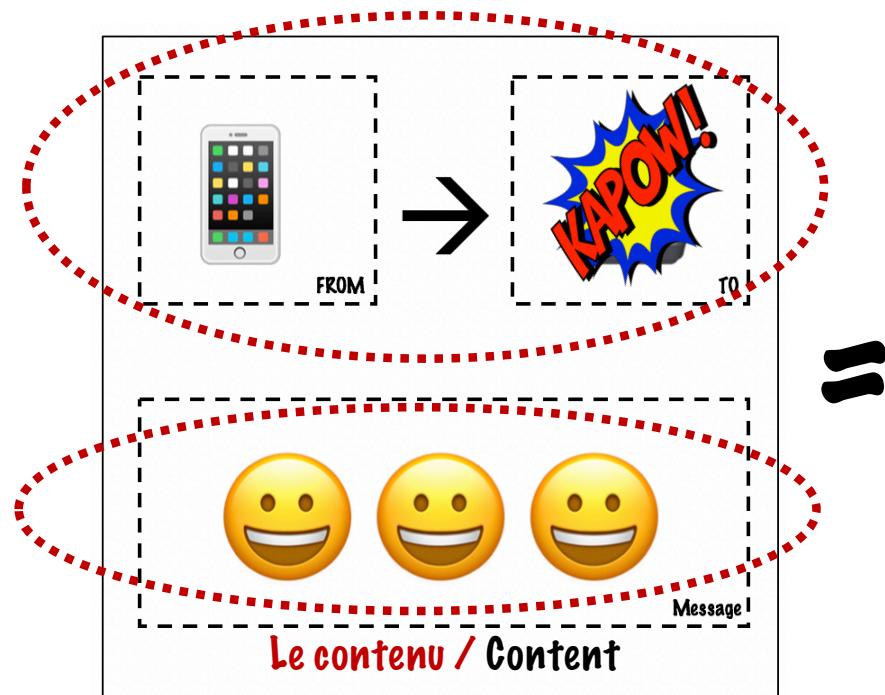
Jeu 1 -  ,  et   
Doivent recevoir et envoyer  
chacun au moins 1 MESSAGE

Game 1 -  ,  and   
Each participant must receive and send at  
least 1 message

# Dans la vraie vie In real life



Des  
métadonnées  
Metadata



Capturing from en0 [Wireshark 1.8.5 (SVN Rev 47350 from /trunk-1.8)]

No.	Time	Source	Destination	Protocol	Length	Info
153	25.002462000	10.9.0.201	10.9.0.255	DB-LSP-DI	175	Dropbox LAN sync Discovery Protocol
154	25.279451000	10.9.0.23	10.9.0.255	NBNS	92	Name query NB SOFTPEDIA-KE<lc>
155	25.453558000	AsustekC_95:34:b5	Broadcast	ARP	64	Who has 10.9.0.1? Tell 10.9.0.2 [ETHERNET FRAME CHECK S
156	25.491924000	10.9.0.41	239.255.255.250	SSDP	165	M-SEARCH * HTTP/1.1
157	26.0238587000	10.9.0.23	10.9.0.255	NBNS	92	Name query NB SOFTPEDIA-KE<lc>
158	26.048341000	10.9.0.48	10.9.0.255	NBNS	110	Registration NB SOFTPEDIA-PC<00>
159	26.048602000	Dell_0c:ff:ad	Broadcast	ARP	60	Who has 10.9.0.48? Tell 10.9.0.92
160	26.280066000	Dell_0c:ff:83	Broadcast	ARP	60	Who has 10.9.0.1? Tell 10.9.0.31
161	26.471554000	10.9.0.26	10.9.0.255	SMB Mails	321	Write Mail Slot
162	26.472024000	10.9.0.26	10.9.0.255	SMB Mails	390	Write Mail Slot
163	26.535934000	10.9.0.31	239.255.255.250	SSDP	175	M-SEARCH * HTTP/1.1
164	26.778531000	10.9.0.23	10.9.0.255	NBNS	92	Name query NB SOFTPEDIA-KE<lc>
165	26.811758000	10.9.0.31	10.9.0.255	UDP	82	Source port: 64695 Destination port: sentinelrsm

Frame 157: 92 bytes on wire (736 bits), 92 bytes captured (736 bits) on interface 0

Ethernet II, Src: Dell\_B1:87:48 (00:18:8b:81:87:48), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

Destination: Broadcast (ffff:ff:ff:ff:ff:ff)

Address: Broadcast (ffff:ff:ff:ff:ff:ff)

....1..... .... = LG bit: Locally administered address (this is NOT the factory default)

....1..... .... = IG bit: Group address (multicast/broadcast)

Source: Dell\_B1:87:48 (00:18:8b:81:87:48)

Address: Dell\_B1:87:48 (00:18:8b:81:87:48)

....0..... .... = LG bit: Globally unique address (factory default)

....0..... .... = IG bit: Individual address (unicast)

Type: IP (0x0800)

Internet Protocol Version 4, Src: 10.9.0.23 (10.9.0.23), Dst: 10.9.0.255 (10.9.0.255)

User Datagram Protocol, Src Port: netbios-ns (137), Dst Port: netbios-ns (137)

Source port: netbios-ns (137)

Destination port: netbios-ns (137)

Length: 58

Checksum: 0xbc8e [validation disabled]

NetBIOS Name Service

0000 ff ff ff ff ff 00 18 8b 81 87 48 08 00 45 00 ..... .H..E. ....  
0010 00 4e 05 47 00 00 80 11 20 31 0a 09 00 17 0a 09 .N.G. 1.....  
0020 00 ff 05 89 00 89 00 3a bc 8a 9f 33 01 10 00 01 ..... .3...  
0030 00 00 00 00 00 20 46 44 45 50 45 47 46 45 46 ..... F DEPEGFEE  
0040 41 45 46 45 45 44 45 42 43 4e 45 4c 45 46 43 AEFFEEJE BCNELEFC  
0050 41 43 41 43 41 42 4d 00 00 20 00 01 ACACABM. ...

en0: <live capture in progress...> Packets: 201 Displayed: 201 Marked: 0

Profile: Default

**PAUSE!**  
**BREAK!**



**Est-ce sécurisé?**  
**Is it secured?**

*Quelle différence entre  
une carte postale et  
une enveloppe?*

*What is the difference between a post-card  
and an envelop?*



Draw me the Internet - ©securitymadein.lu 2018 - Author: M. Farcot - License CC BY SA 4.0

Dans la vraie vie:  
In real life:





# Jeu 2 - le site web

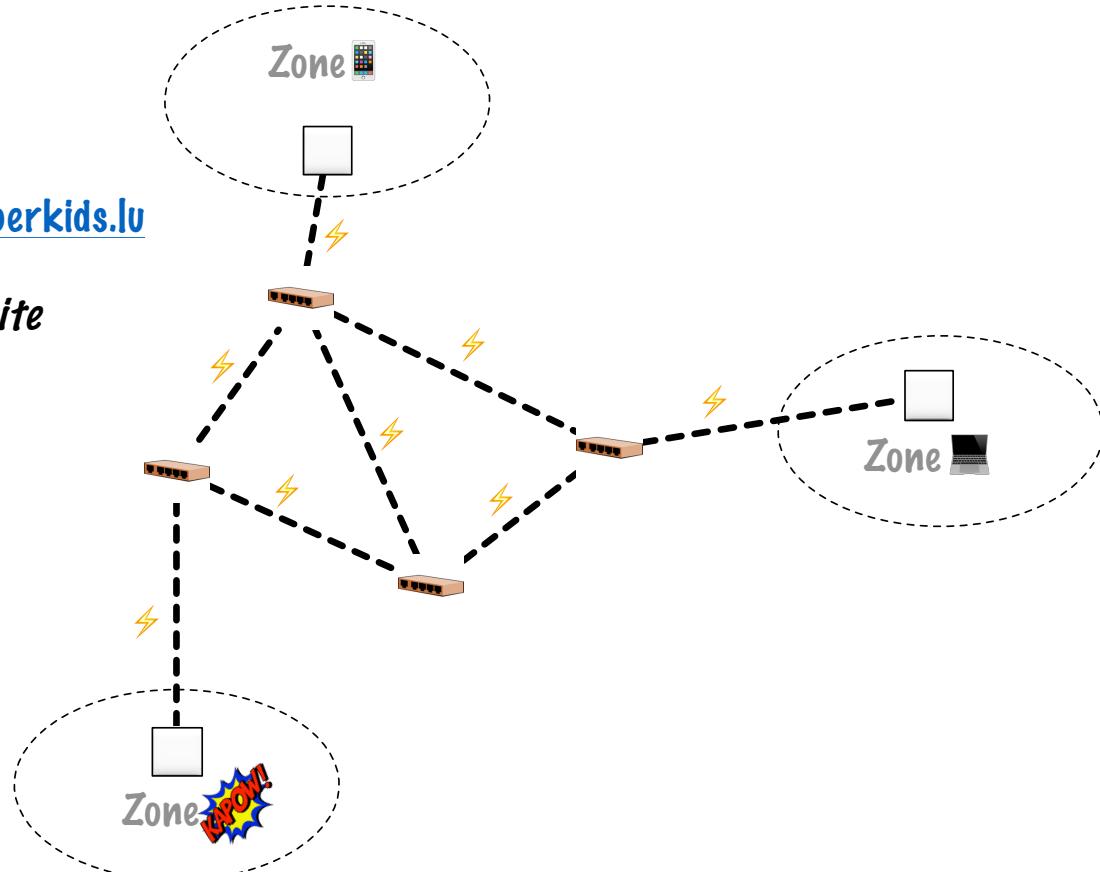
## Game 2 - the website

Joueurs et doivent aller sur le site web [www.superkids.lu](http://www.superkids.lu)

Players and have to go on [www.superkids.lu](http://www.superkids.lu) web site

Joueurs va envoyer le contenu

Player will send the content



# Jeu 2 - le site web Game 2 - the website



## Etape 1 / Step 1

Joueurs et envoient une requête de connexion à

Players and send a connection request to



## Etape 2 / Step 2

Joueurs répondent en envoyant le contenu 1 par 1 (en HTTPS, donc avec des enveloppes)

Player answers by sending the content 1 by 1 (Use HTTPS, so envelopes are needed)

## Etape 3 / Step 3

Joueurs et font le puzzle

Players and solve the puzzle

