



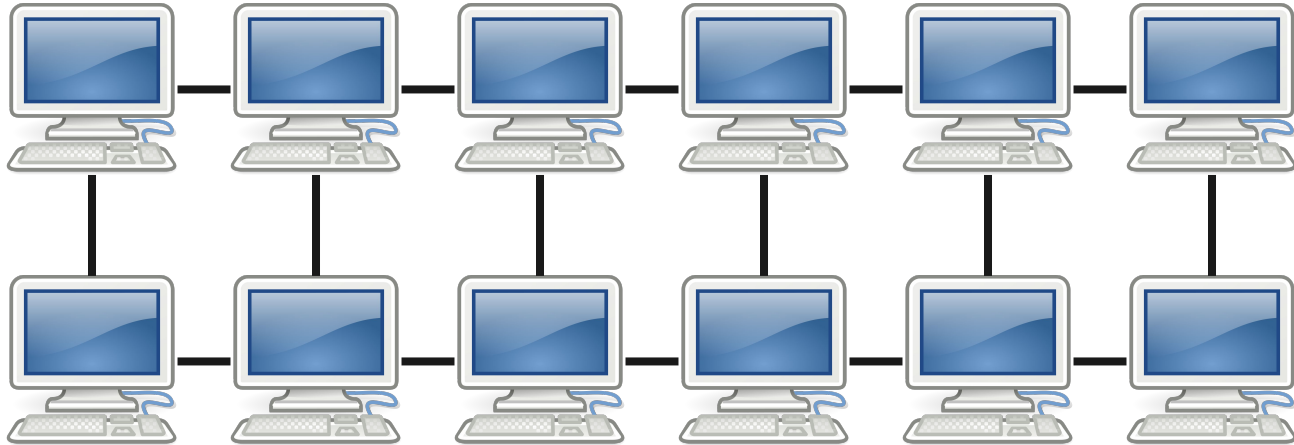
Universidade Federal do ABC



Redes de Computadores

Prof. Fabrício Olivetti de França

Redes de Computadores



Redes de Computadores



SAGE

Redes de Computadores



ARPANET

Redes de Computadores



01000101110101



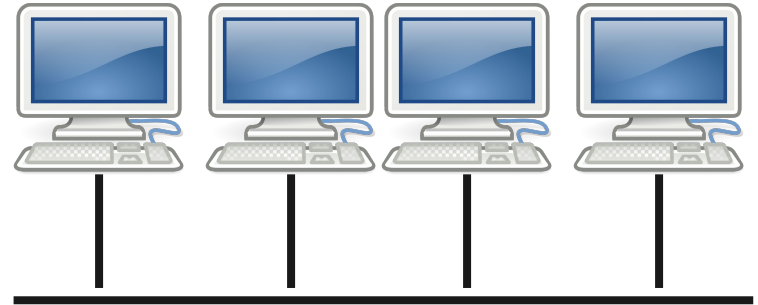
Redes de Computadores

Nós: computadores, roteadores

Arestas: cabo par trançado, coaxial, fibra ótica, ondas de rádio



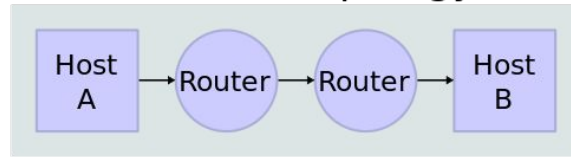
Ponto a ponto



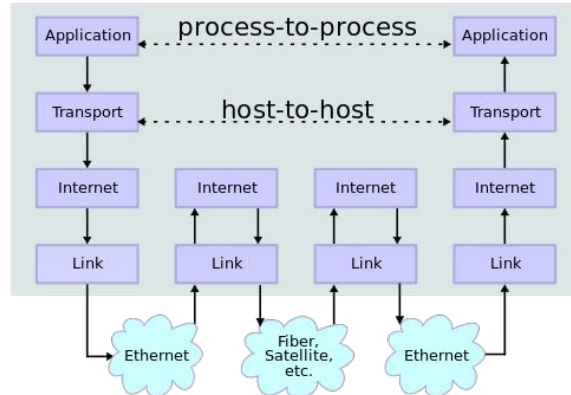
Múltiplo acesso

Redes de Computadores

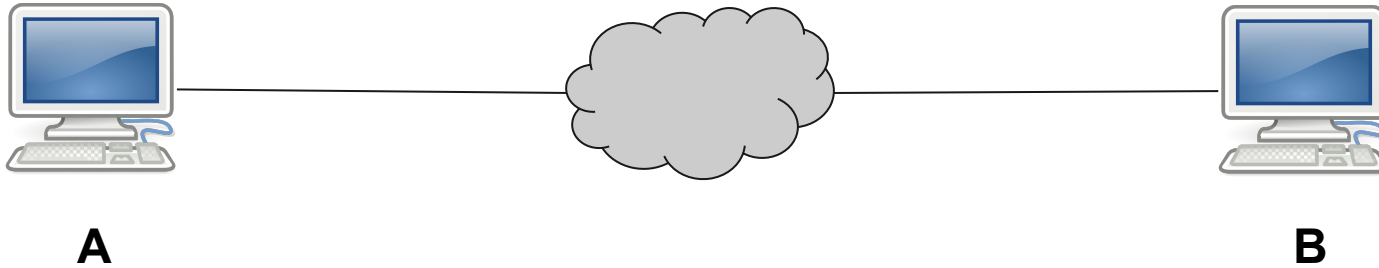
Network Topology



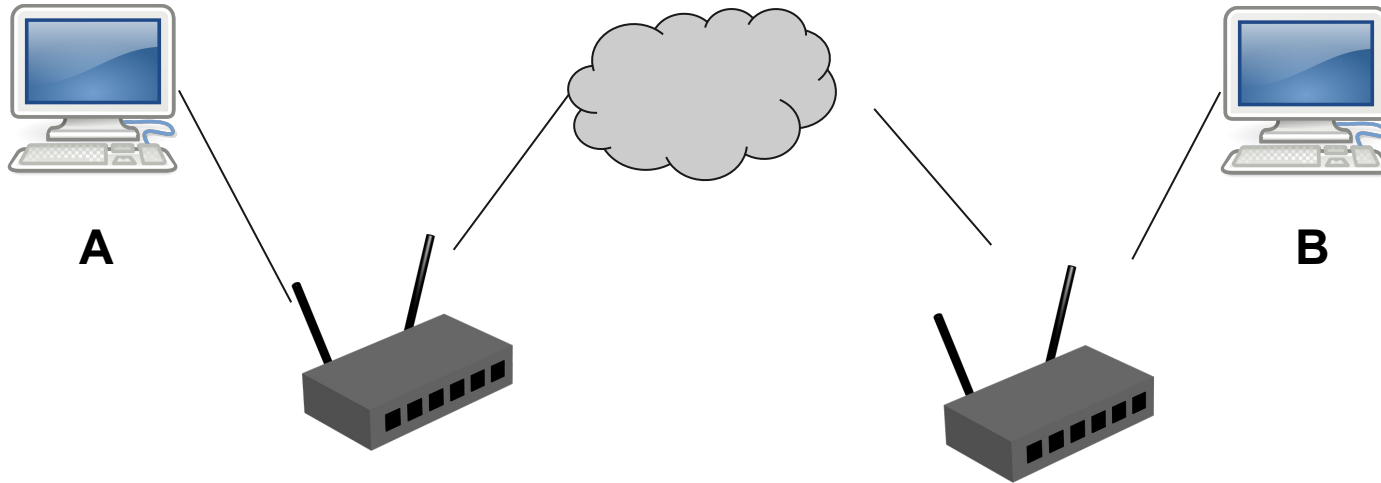
Data Flow



Passos da transmissão



Passos da transmissão

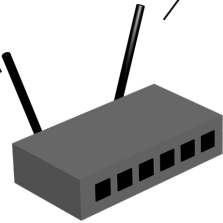


Passos da transmissão

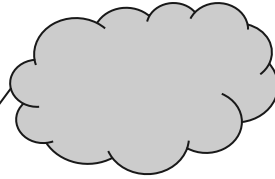
00-11-22-FF-BC-AF



A



0C-21-32-EF-CC-AF



1C-21-32-EF-CD-A0

FF-21-32-EF-CD-AF



B

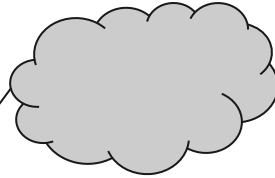
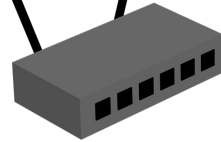
Passos da transmissão

192.168.1.13



A

100.32.12.1

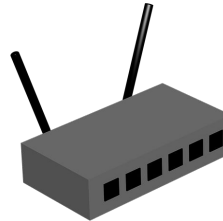


192.168.1.16



B

231.43.54.12



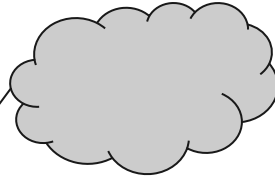
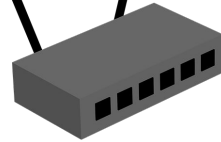
Passos da transmissão

192.168.1.13



A

100.32.12.1

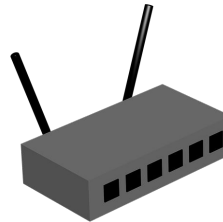


192.168.1.16 / google.com



B

231.43.54.12



Passos da transmissão

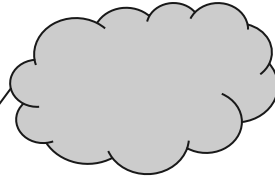
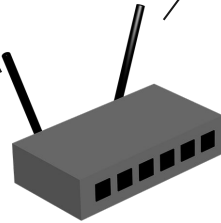
192.168.1.13



A

Pode me trazer algo da internet?

100.32.12.1

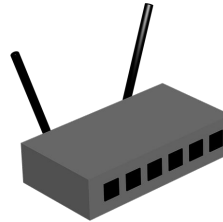


192.168.1.16 / google.com



B

231.43.54.12



Passos da transmissão

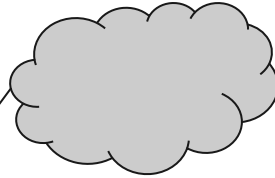
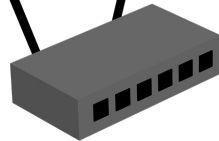
192.168.1.13



A

Qual o endereço?

100.32.12.1

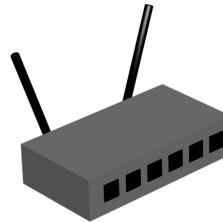


192.168.1.16 / google.com



B

231.43.54.12



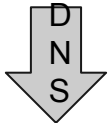
Passos da transmissão

192.168.1.13



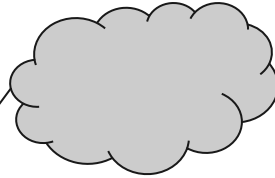
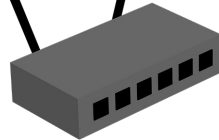
A

google.com?



192.168.1.16

100.32.12.1

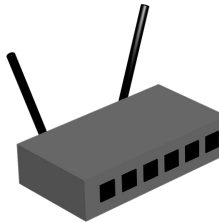


192.168.1.16 / google.com



B

231.43.54.12



Passos da transmissão

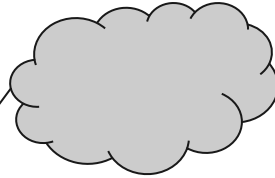
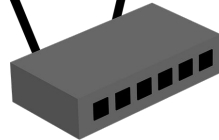
192.168.1.13



A

192.168.1.16?

100.32.12.1

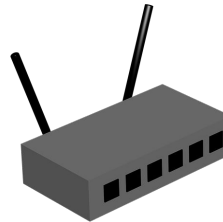


192.168.1.16 / google.com

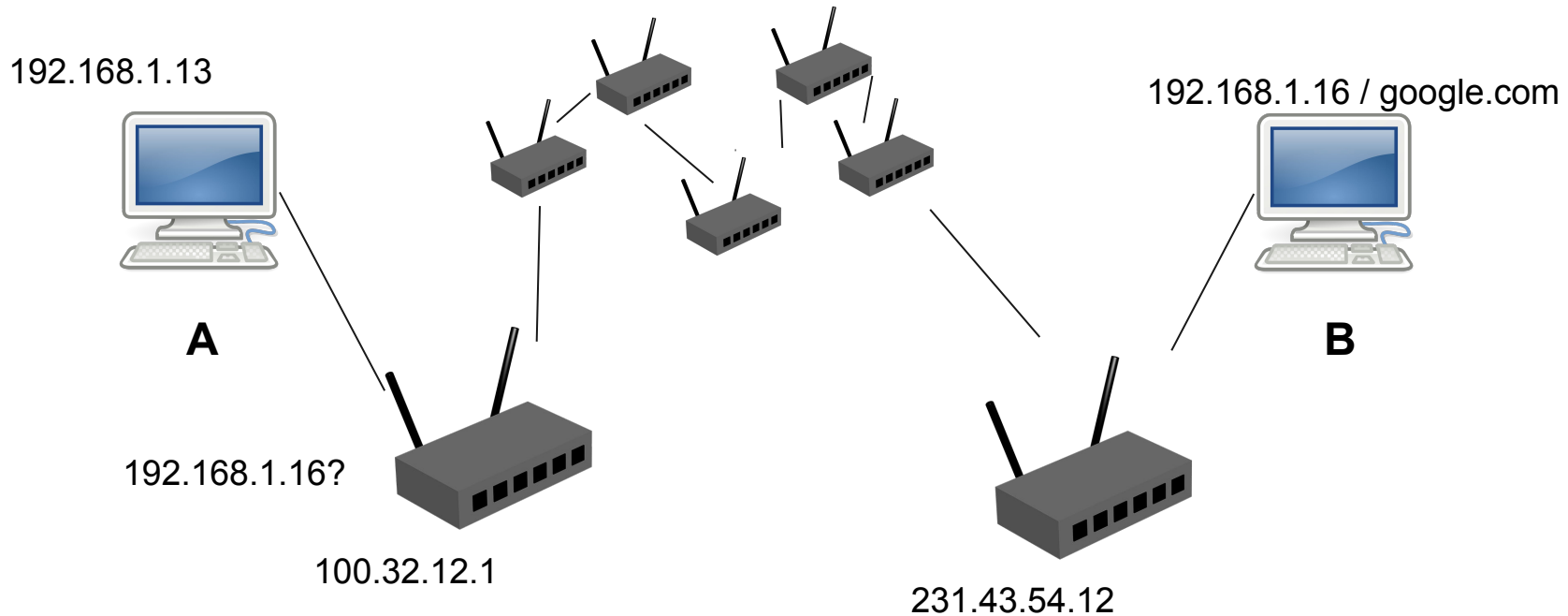


B

231.43.54.12



Passos da transmissão



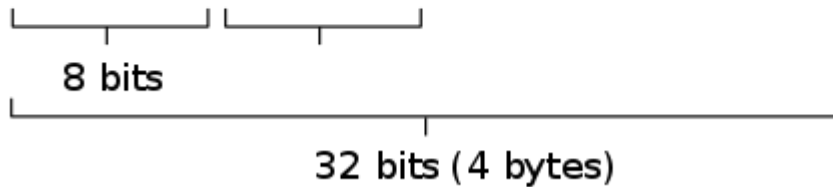
Endereçamento

IPv4 address in dotted-decimal notation

172 . 16 . 254 . 1



10101100 . 00010000 . 11111110 . 00000001



Endereçamento

10.0.0.0 - 10.255.255.255 com 16.777.216 endereços possíveis

172.16.0.0 – 172.31.255.255 com 1.048.576 endereços possíveis

192.168.0.0 – 192.168.255.255 com 65.536 endereços possíveis

127.0.0.1 - localhost

255.255.255.255 - broadcast



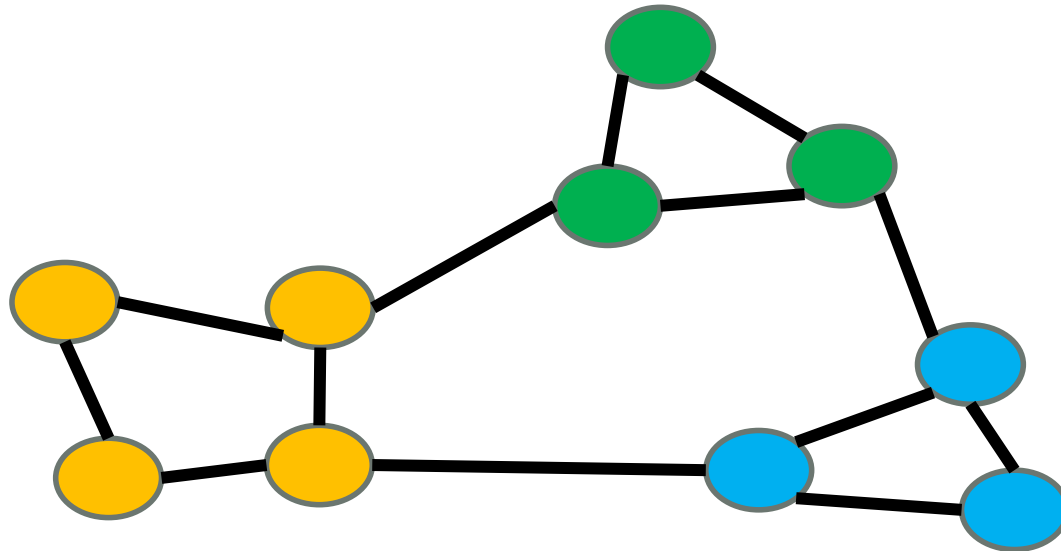
Universidade Federal do ABC



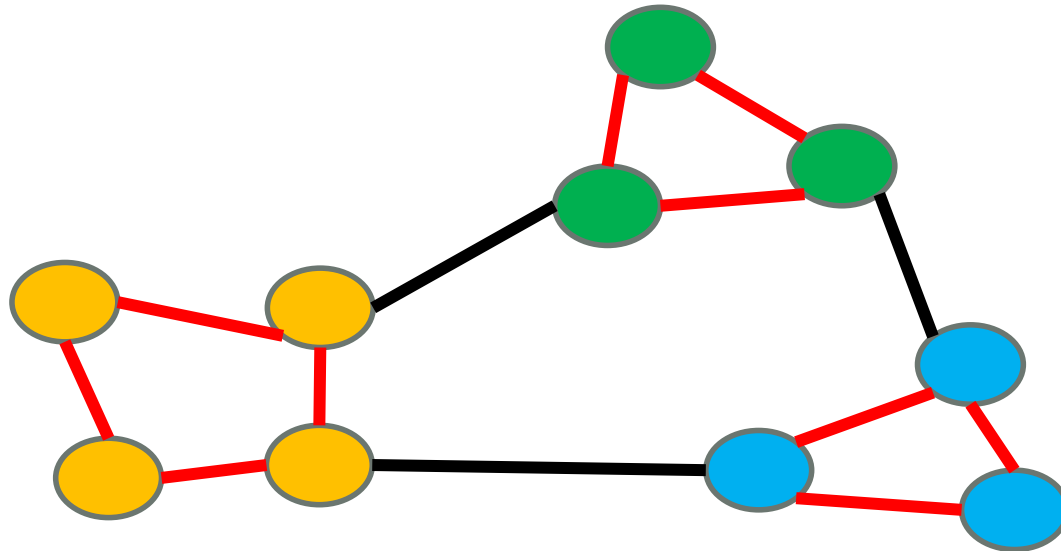
ROTEAMENTO

Prof. Fabrício Olivetti de França

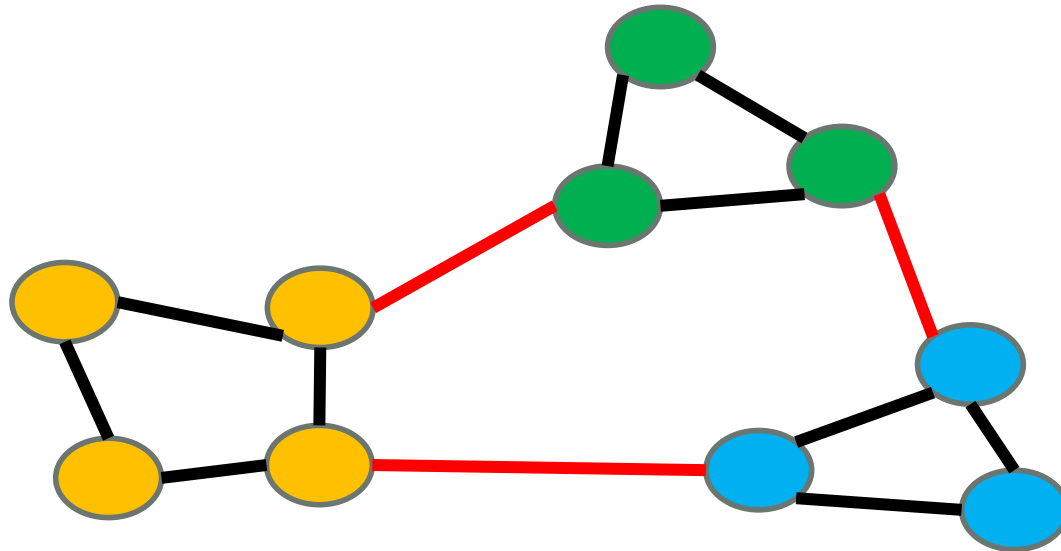
Redes Desconhecidas



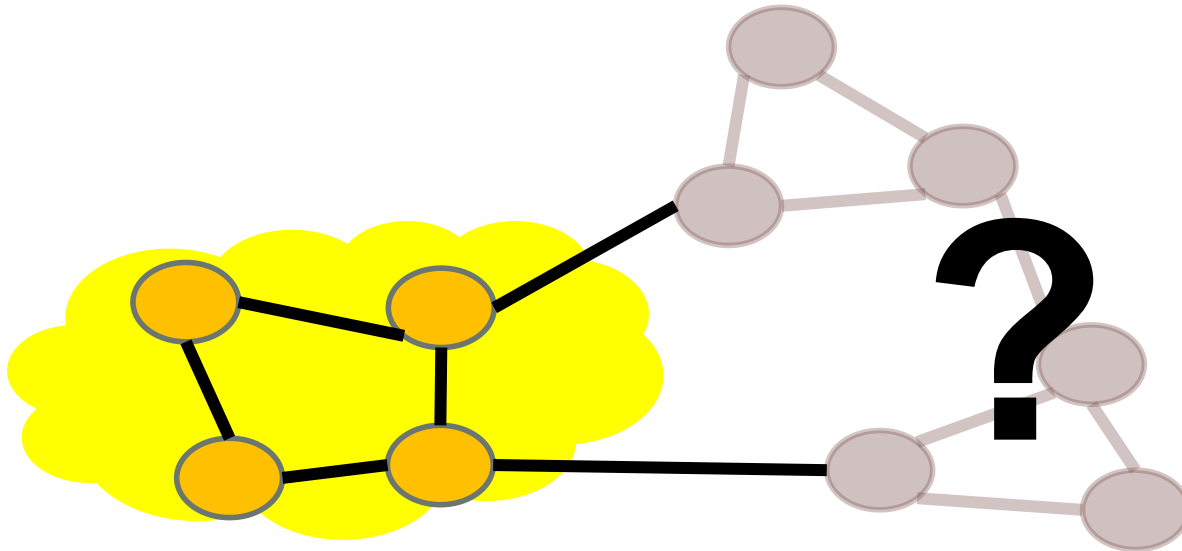
Redes Desconhecidas



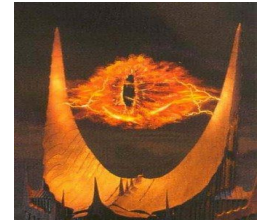
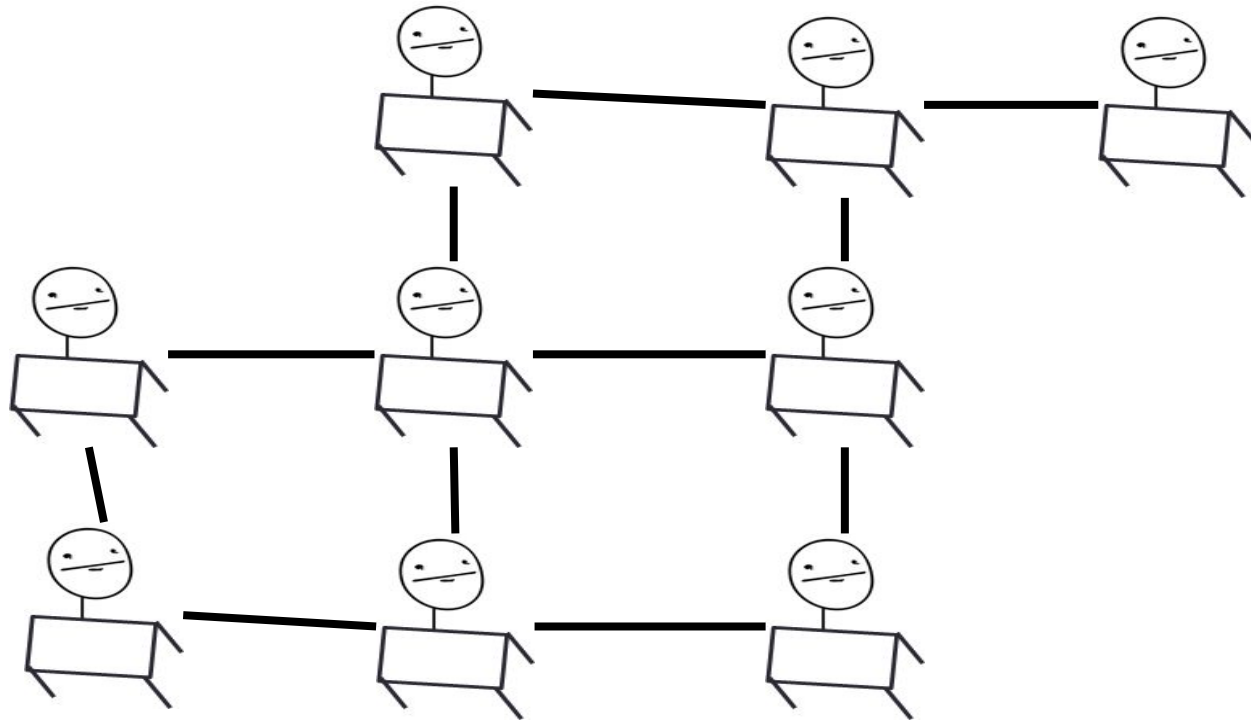
Redes Desconhecidas



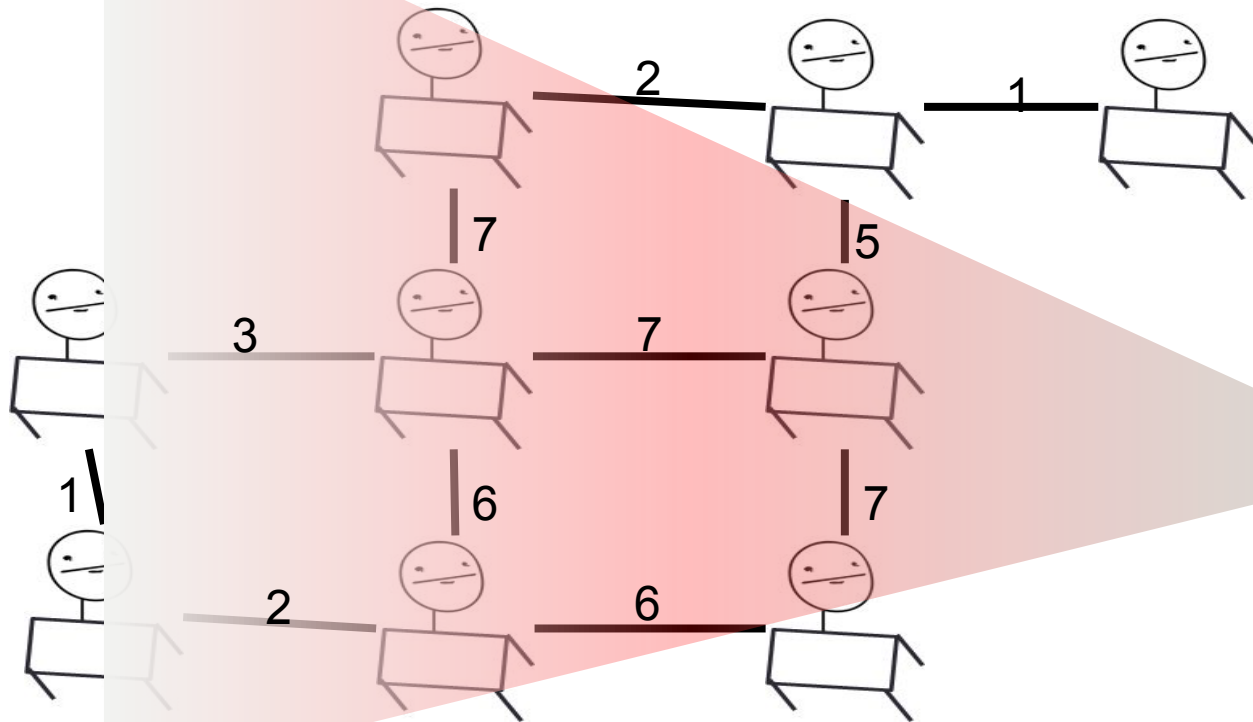
Redes Desconhecidas



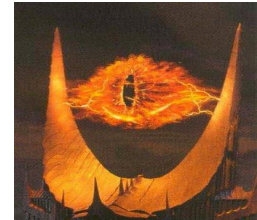
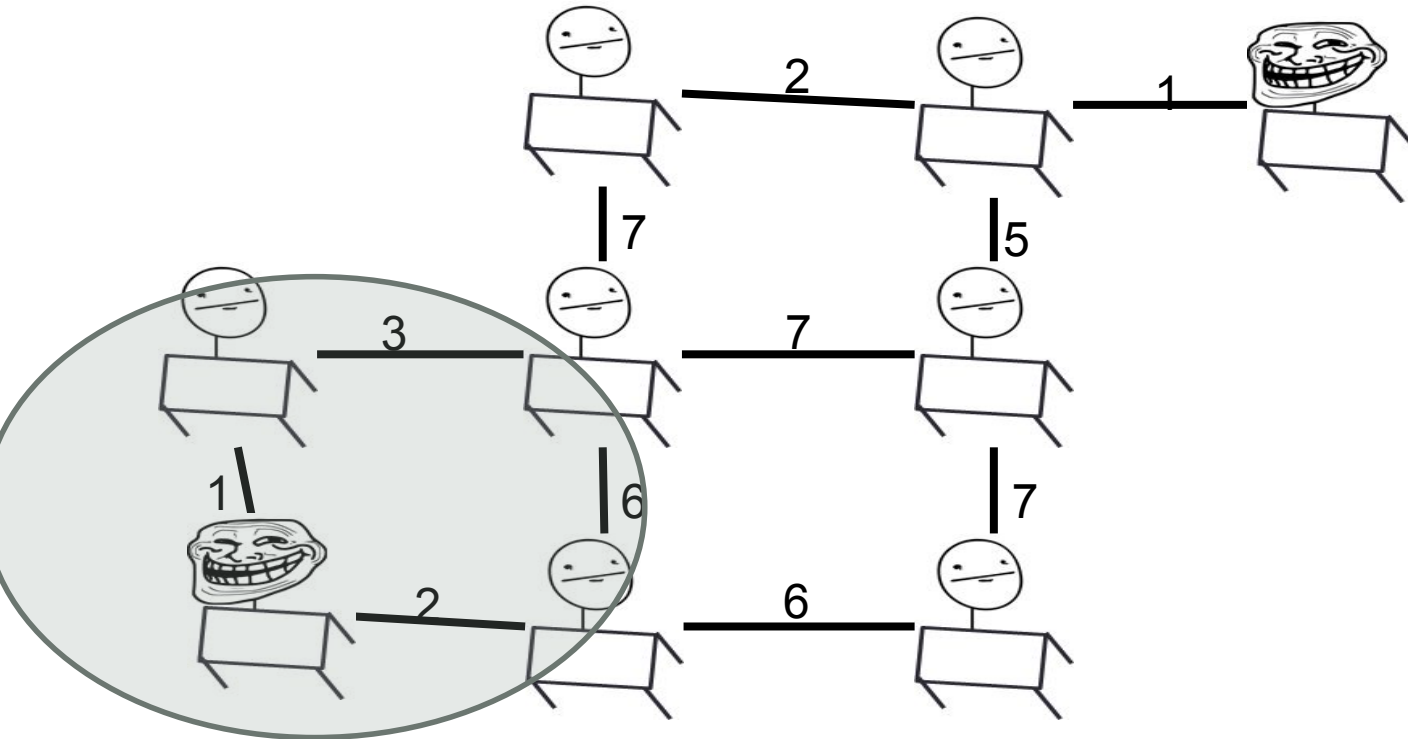
Situação Hipotética



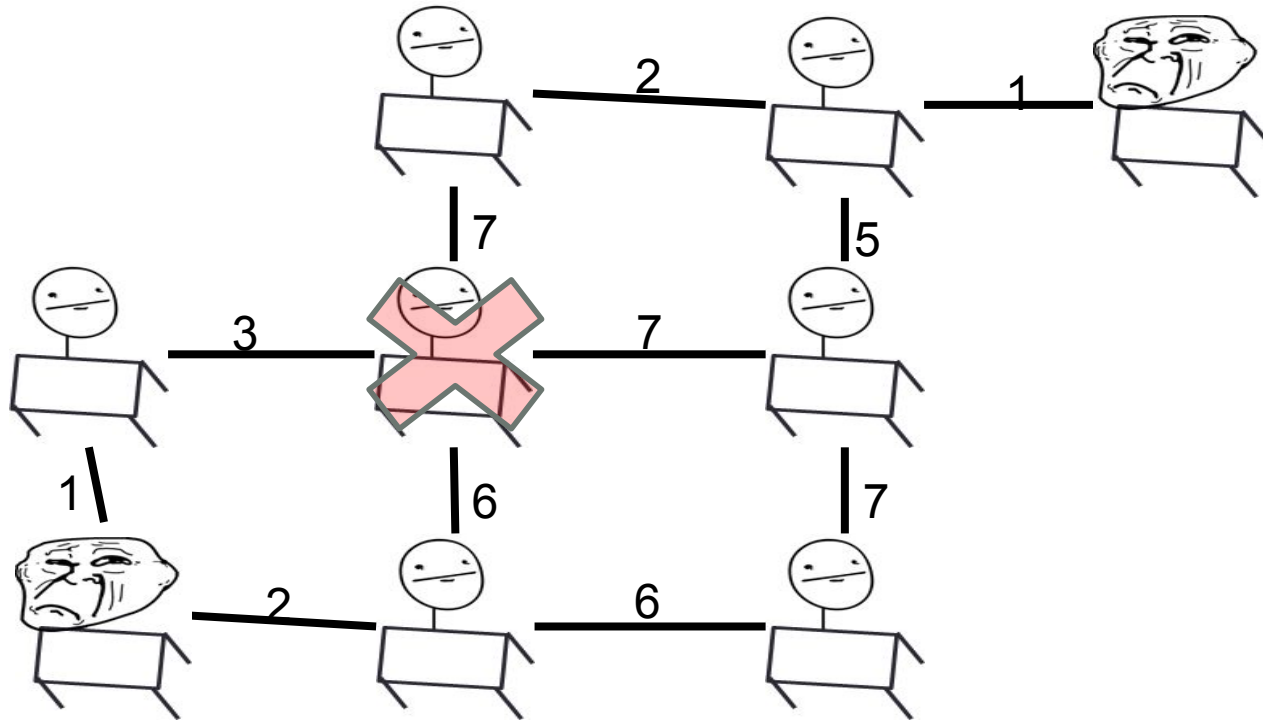
Situação Hipotética



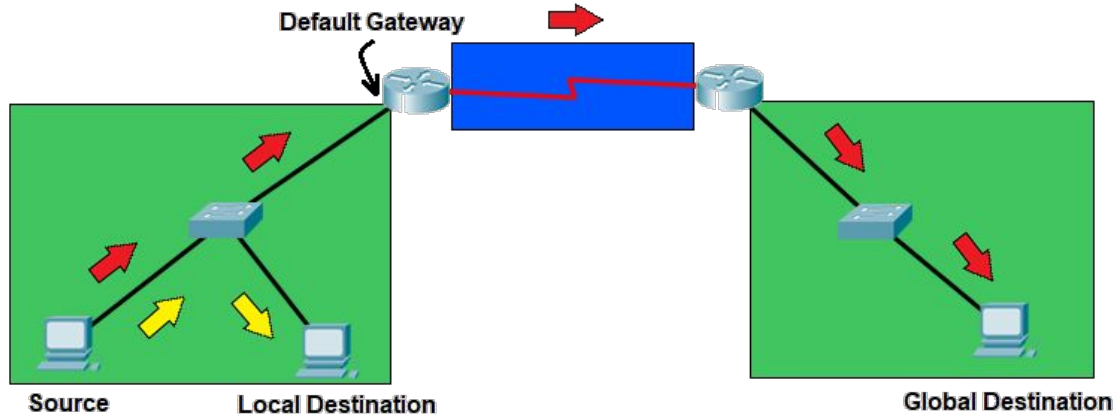
Situação Hipotética



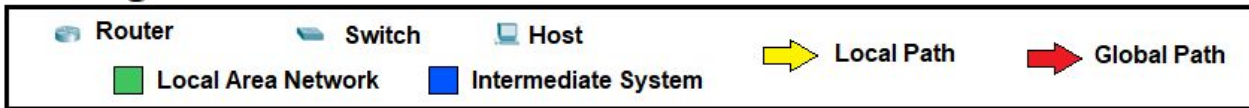
Situação Hipotética



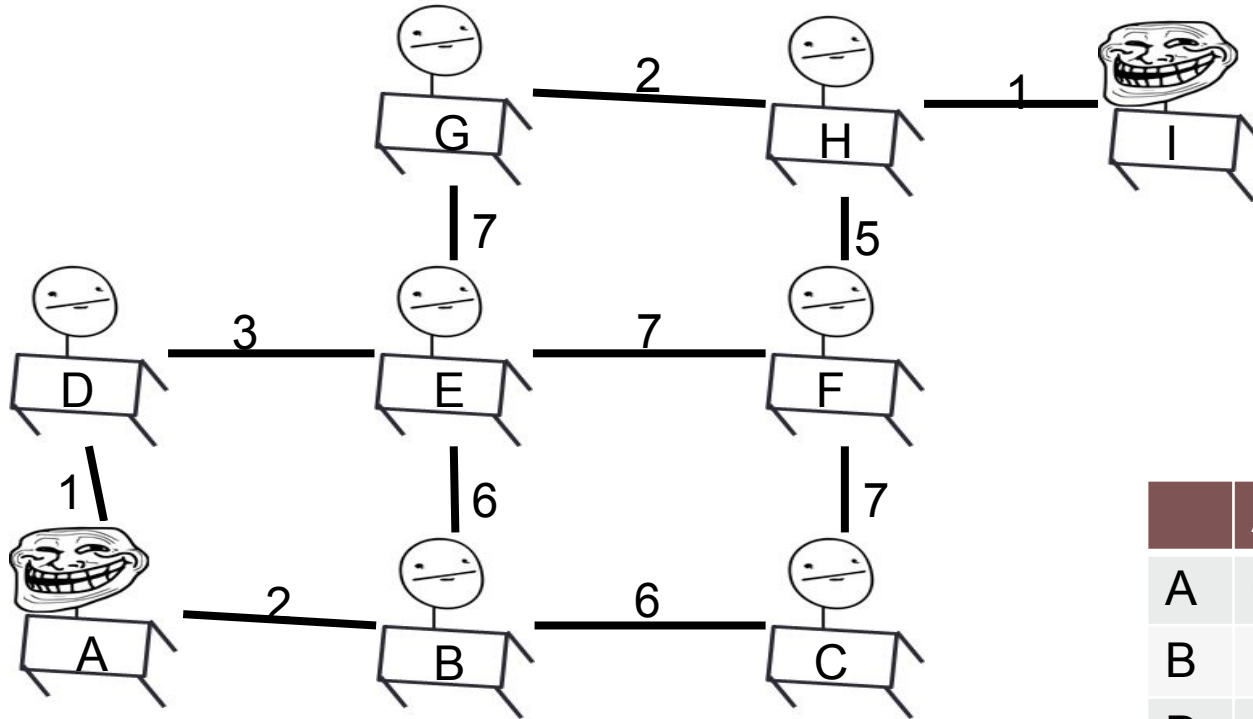
Algoritmo de Roteamento



The Legend



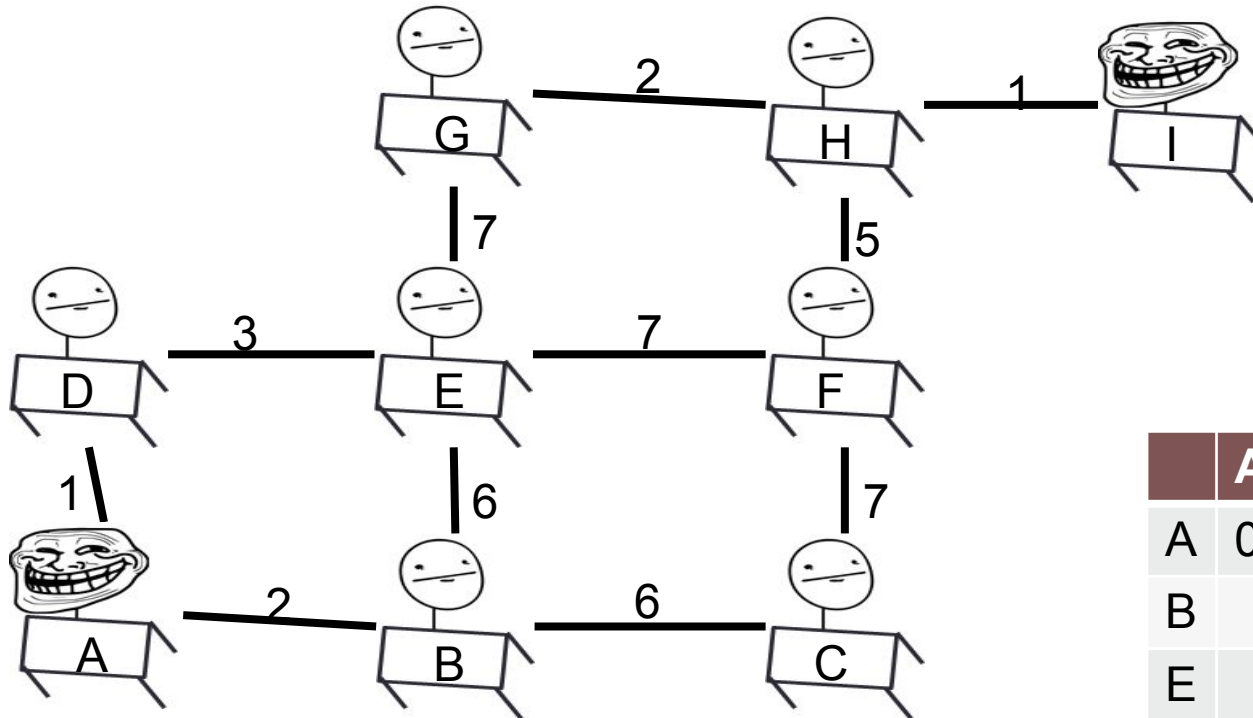
Algoritmo de Roteamento



	A	B	D
A	0	2	1
B		0	3
D			0



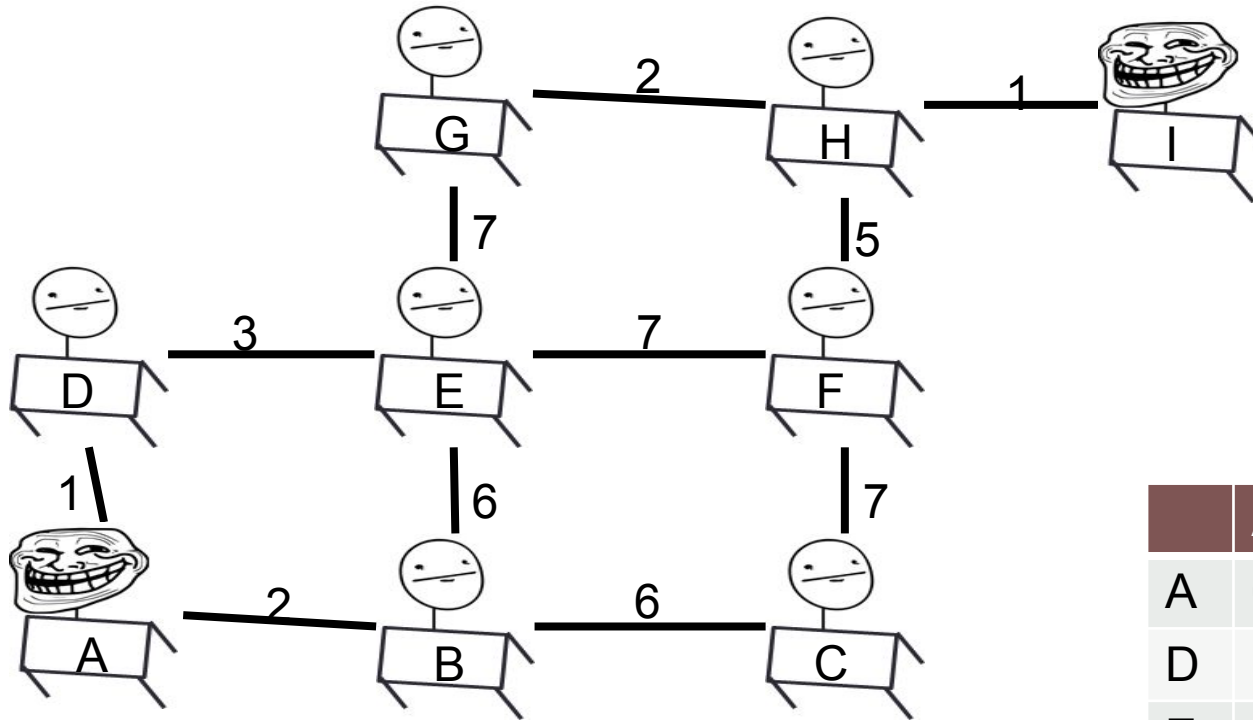
Algoritmo de Roteamento



	A	B	E	C
A	0	2	8	8
B		0	6	6
E			0	12
C				0



Algoritmo de Roteamento



	A	D	E
A	0	1	4
D		0	3
E			0



Algoritmo de Roteamento

A	A	B	D
A	0	2	1
B		0	3
D			0

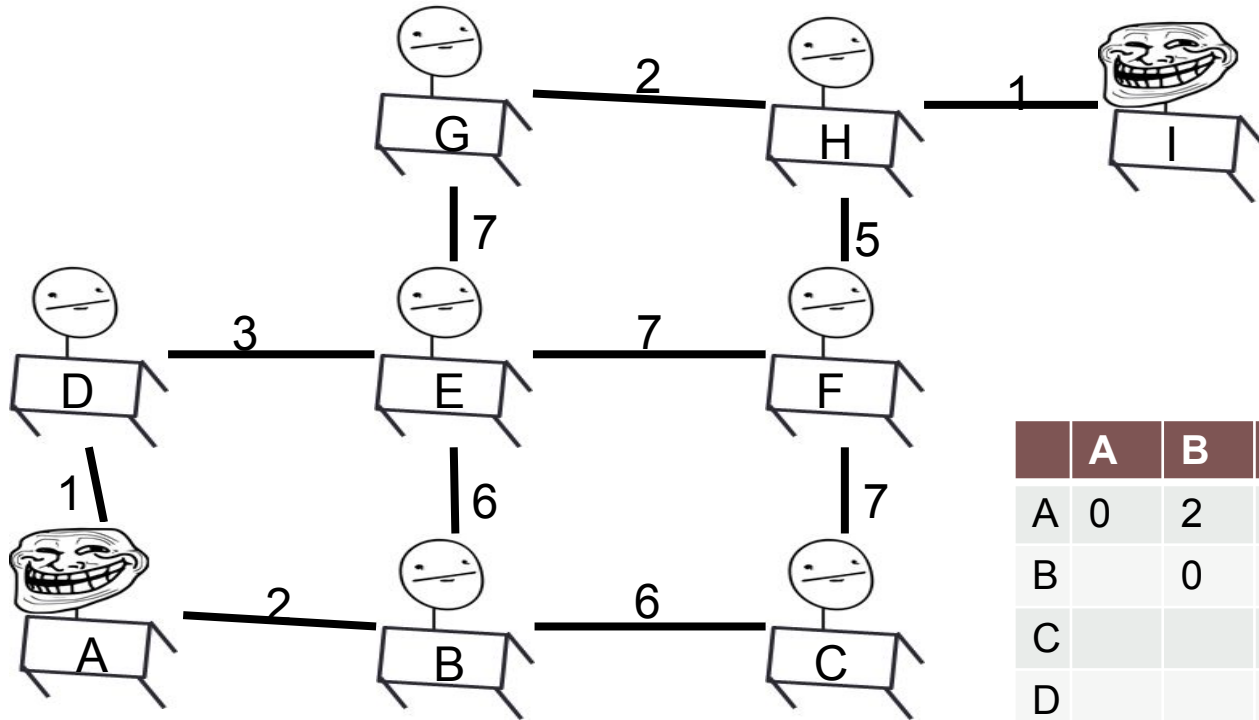
B	A	B	E	C
A	0	2	8	8
B		0	6	6
E			0	12
C				0

D	A	D	E
A	0	1	4
D		0	3
E			0

	A	B	C	D	E
A	0	2	8(B)	1	4 (D)
B		0	6	3(A)	6
C			0	9(B)	12
D				0	3
E					0

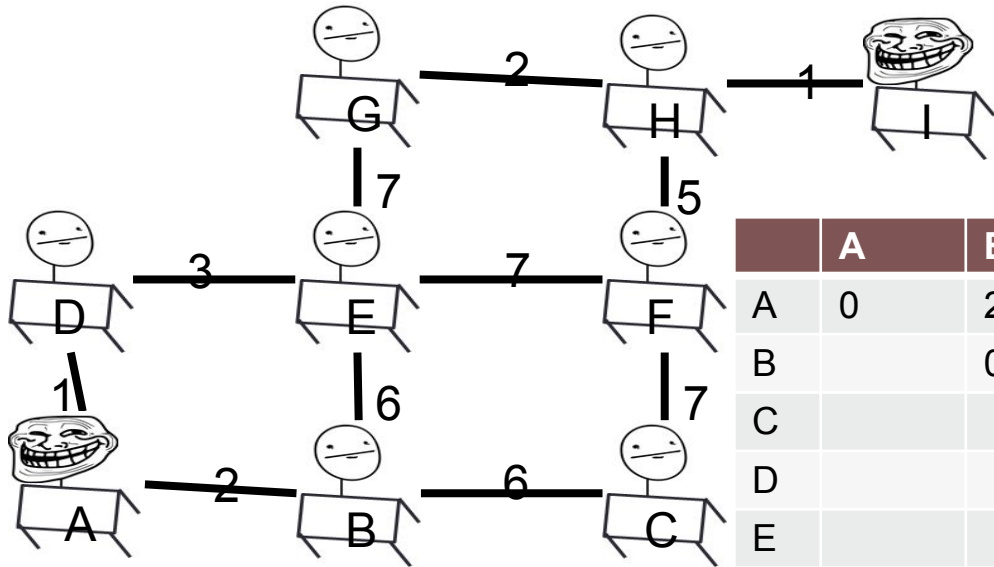


Algoritmo de Roteamento



	A	B	C	D	E
A	0	2	8(B)	1	4 (D)
B		0	6	3(A)	6
C			0	9(B)	12
D				0	3
E					0

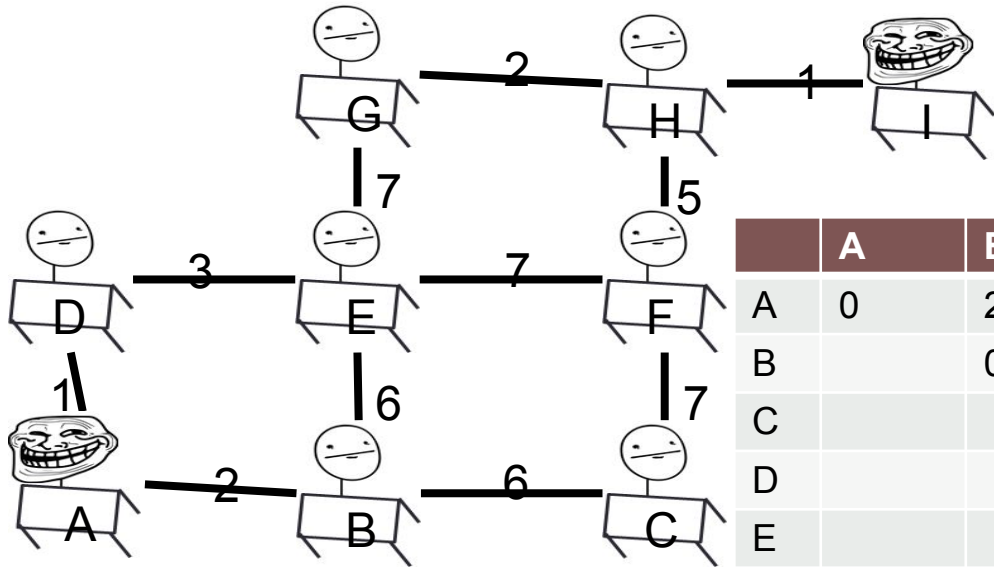
Algoritmo de Roteamento



	A	B	C	D	E	F	G
A	0	2	8(B)	1	4(D)	11(D)	11(D)
B		0	6	3(A)	6	13(E)	13(E)
C			0	9(B)	12(B)	19(B)	19(B)
D				0	3	10(E)	10(E)
E					0	7	7
F						0	14(E)
G							0



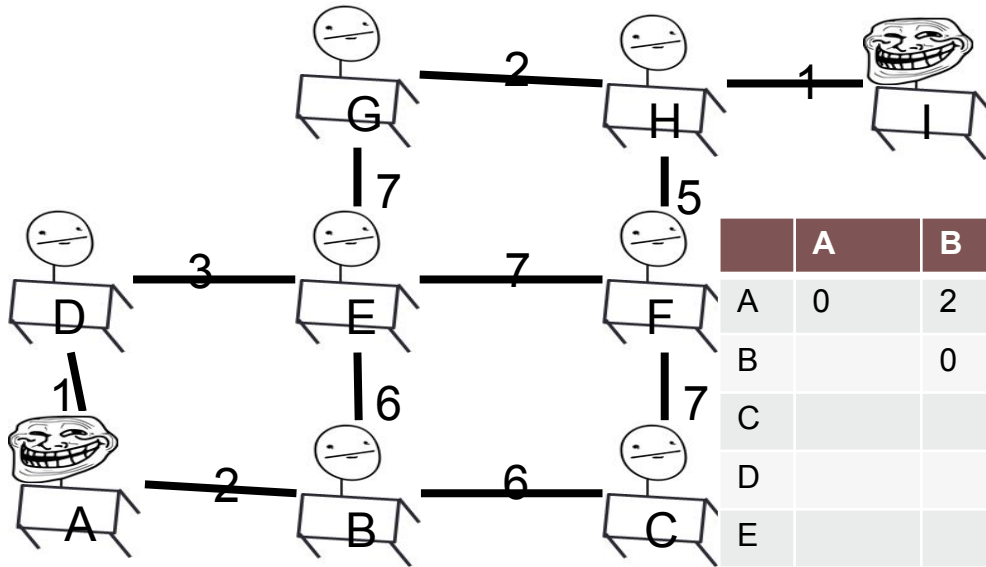
Algoritmo de Roteamento



	A	B	C	D	E	F	G
A	0	2	8(B)	1	4(D)	11(D)	11(D)
B		0	6	3(A)	6	13(E)	13(E)
C			0	9(B)	12(B)	7	19(B)
D				0	3	10(E)	10(E)
E					0	7	7
F						0	14(E)
G							0

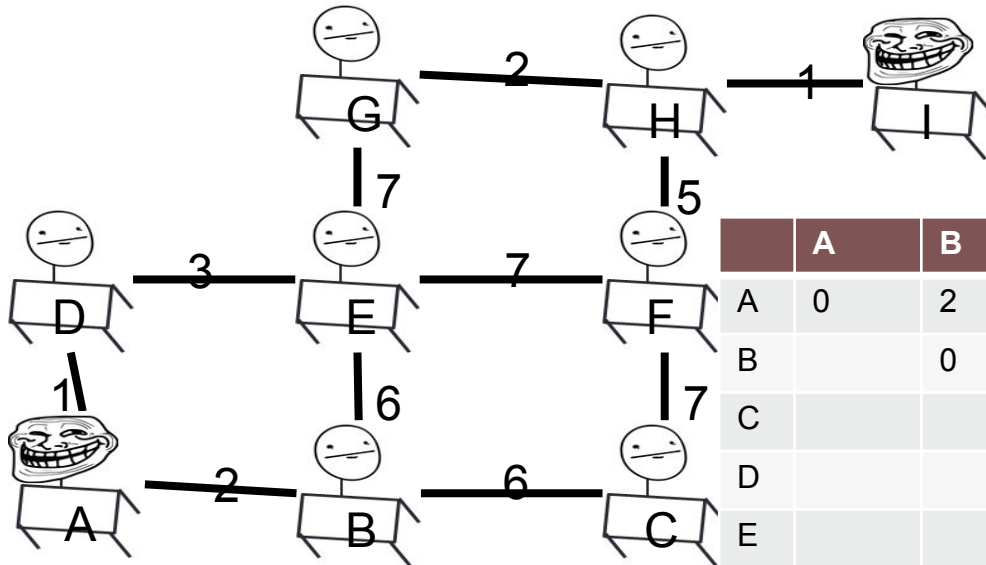


Algoritmo de Roteamento



	A	B	C	D	E	F	G	H
A	0	2	8(B)	1	4(D)	11(D)	11(D)	16(D)
B		0	6	3(A)	6	13(E)	13(E)	18(E)
C			0	9(B)	12(B)	7	19(B)	12(F)
D				0	3	10(E)	10(E)	15(E)
E					0	7	7	12(F)
F						0	14(E)	5
G							0	19(E)
H								0

Algoritmo de Roteamento



	A	B	C	D	E	F	G	H
A	0	2	8(B)	1	4(D)	11(D)	11(D)	13(D)
B		0	6	3(A)	6	13(E)	13(E)	15(E)
C			0	9(B)	12(B)	7	19(B)	12(F)
D				0	3	10(E)	10(E)	12(E)
E					0	7	7	9(G)
F						0	14(E)	5
G							0	2
H								0

