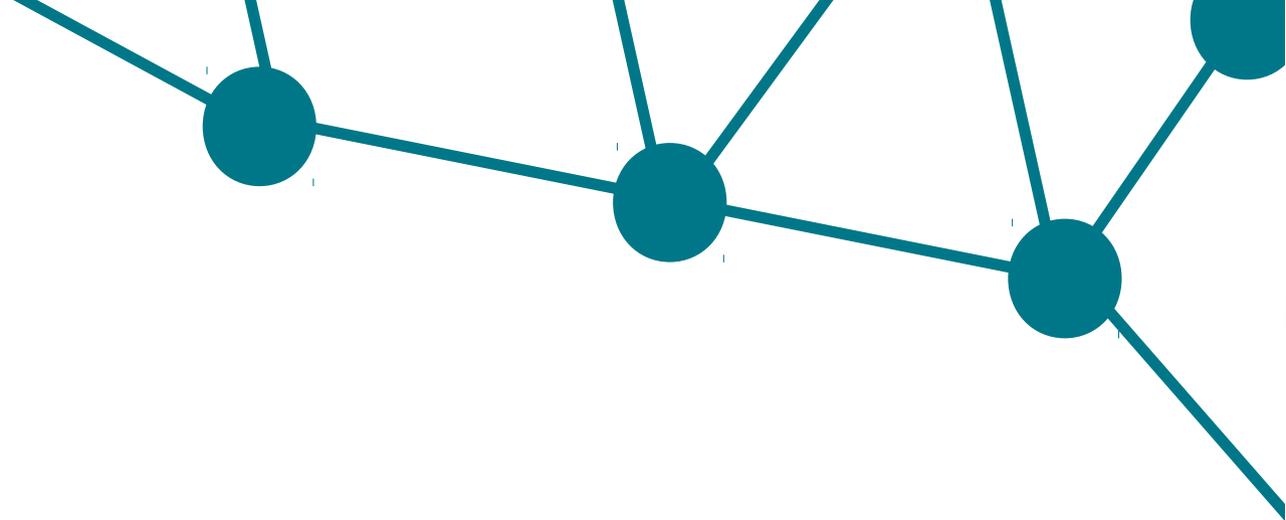




Ring



Take control of your communication !

*By Adrien Béraud
Guillaume Roguez*



Savoir-faire
LINUX[®]



Ring



Adrien Béraud



Simon Désaulniers



Édric Ladent-Milaret



Alexandre Lision



Guillaume Roguez



Stepan Salenikovich



Savoir-faire
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Ring

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A Free Software Company

**Connected
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**Digital Economy
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Toronto

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DEMONSTRATION



Ring

A Freedom Respectful Project

- To run, study, modify and distribute in a clear way (GPLv3)
- To federate: based on recognized open standards
- To respect privacy and personal data



Savoir-faire
LINUX[®]



Ring

- 1. A Distributed P2P Architecture**
- 2. Abstracting the Connection**
- 3. A Secure Solution**
- 4. A Universal Tool**



Savoir-faire
LINUX[®]

A DISTRIBUTED
PEER-TO-PEER
ARCHITECTURE

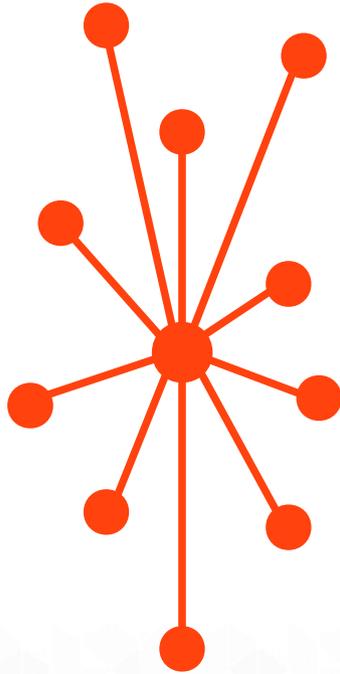
Concept of distribution



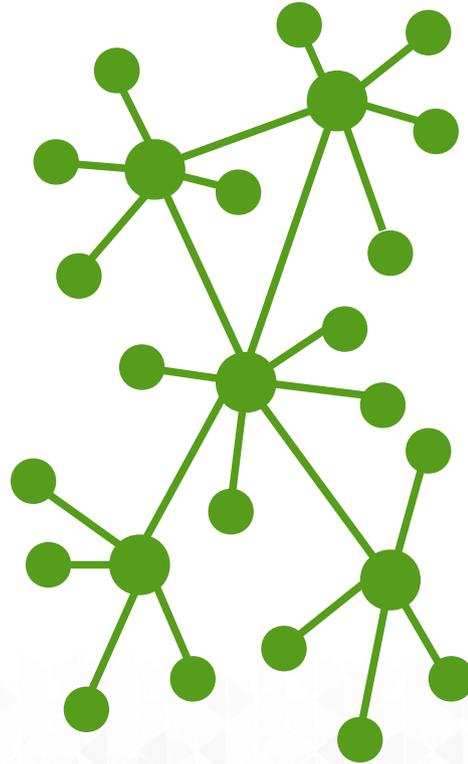
Paul Baran (1926-2011)

- Pioneer in the development of computer networks
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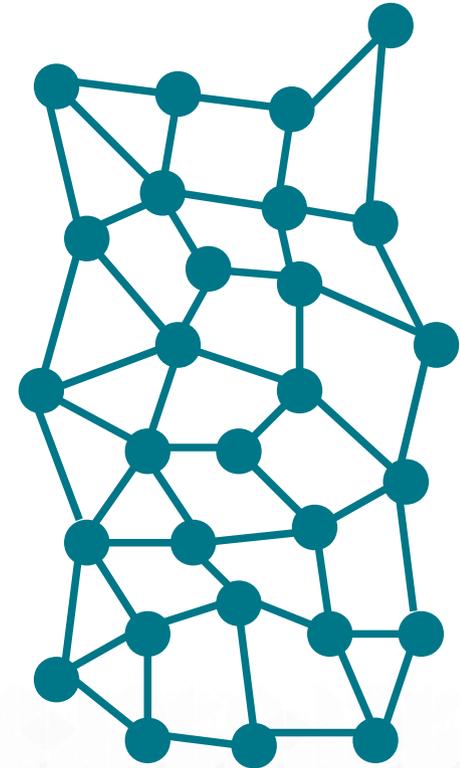
Concept of distribution



**Centralized
Network**



**Decentralized
Network**



**Distributed
Network**



Ring

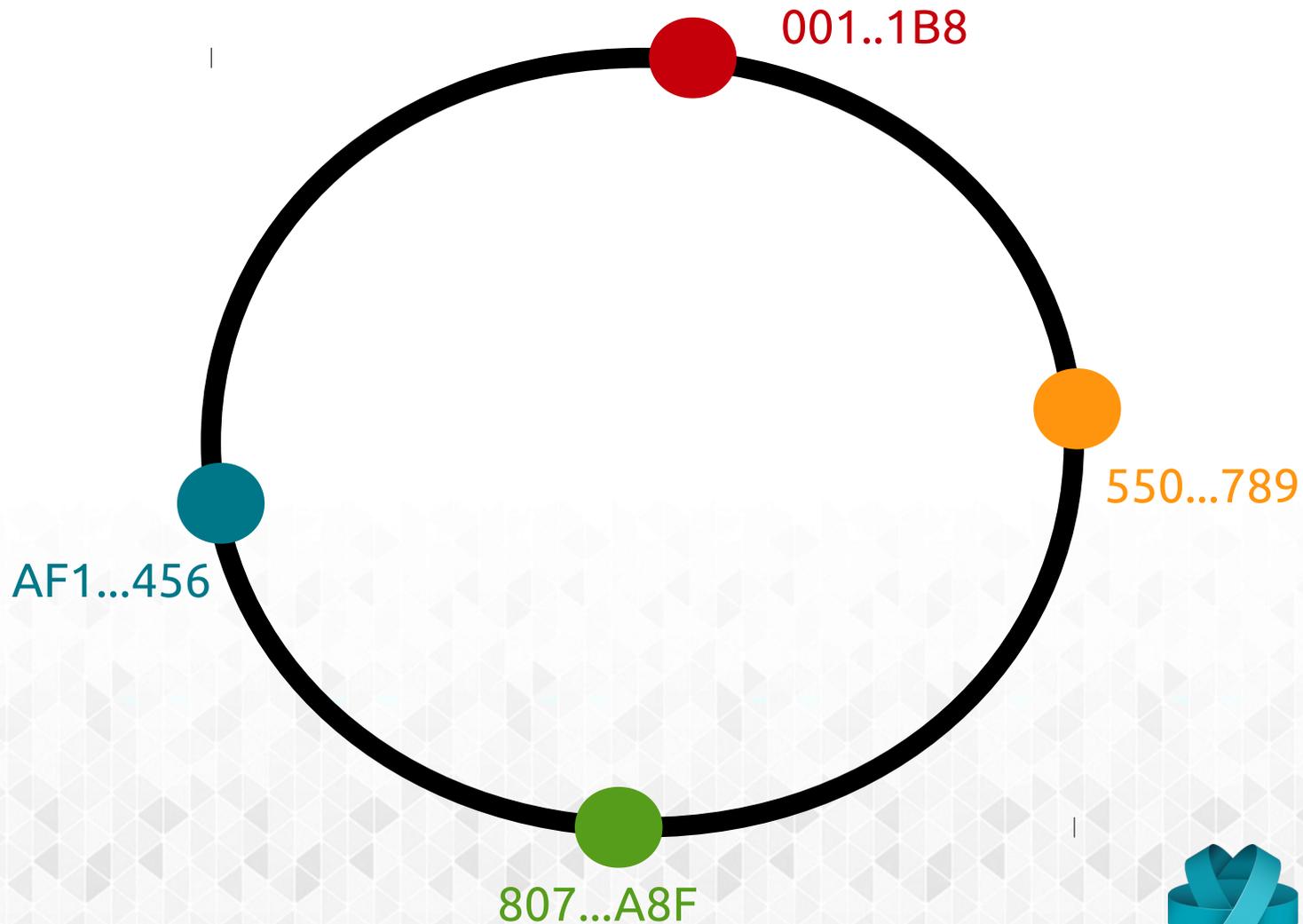
OpenDHT

<https://github.com/savoirfairelinux/opendht>



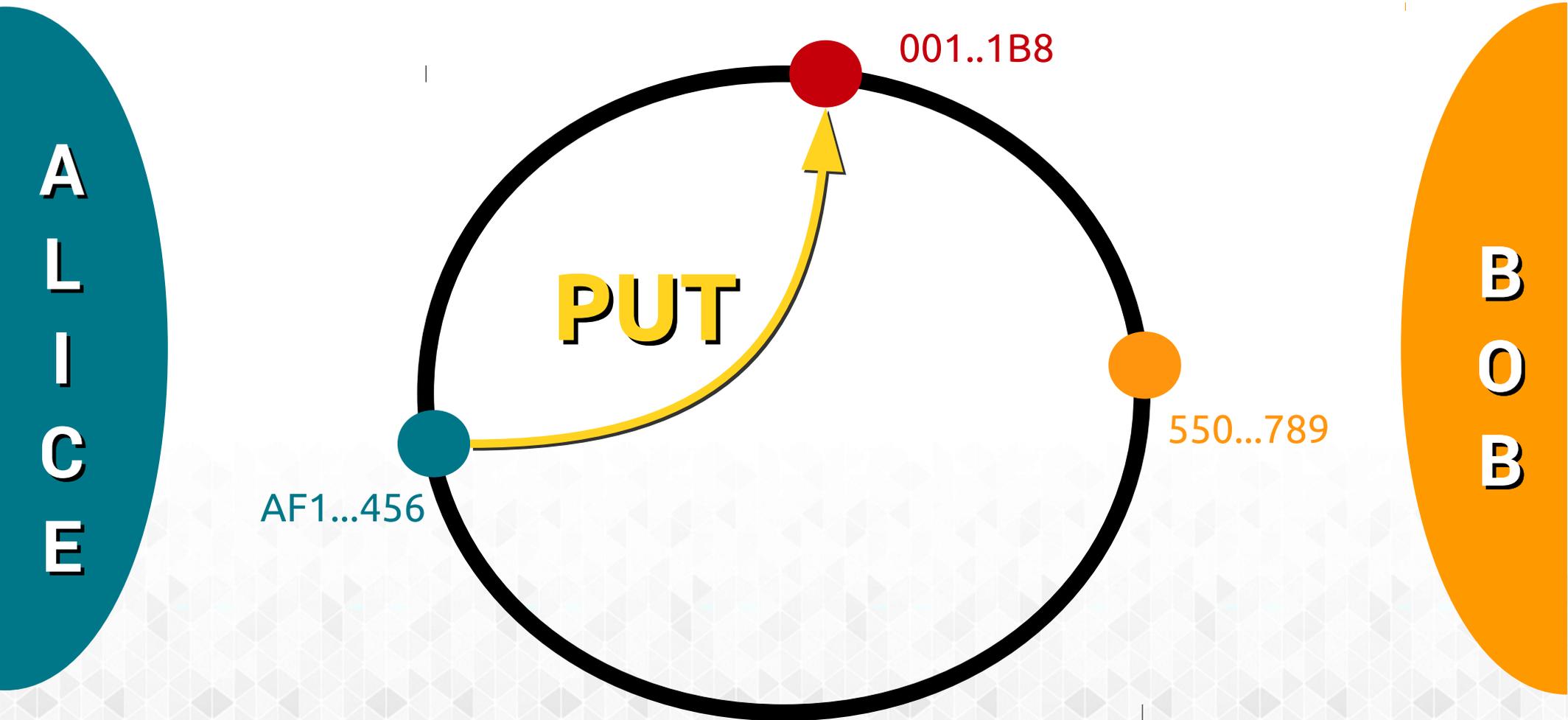
Ring

How does OpenDHT work?



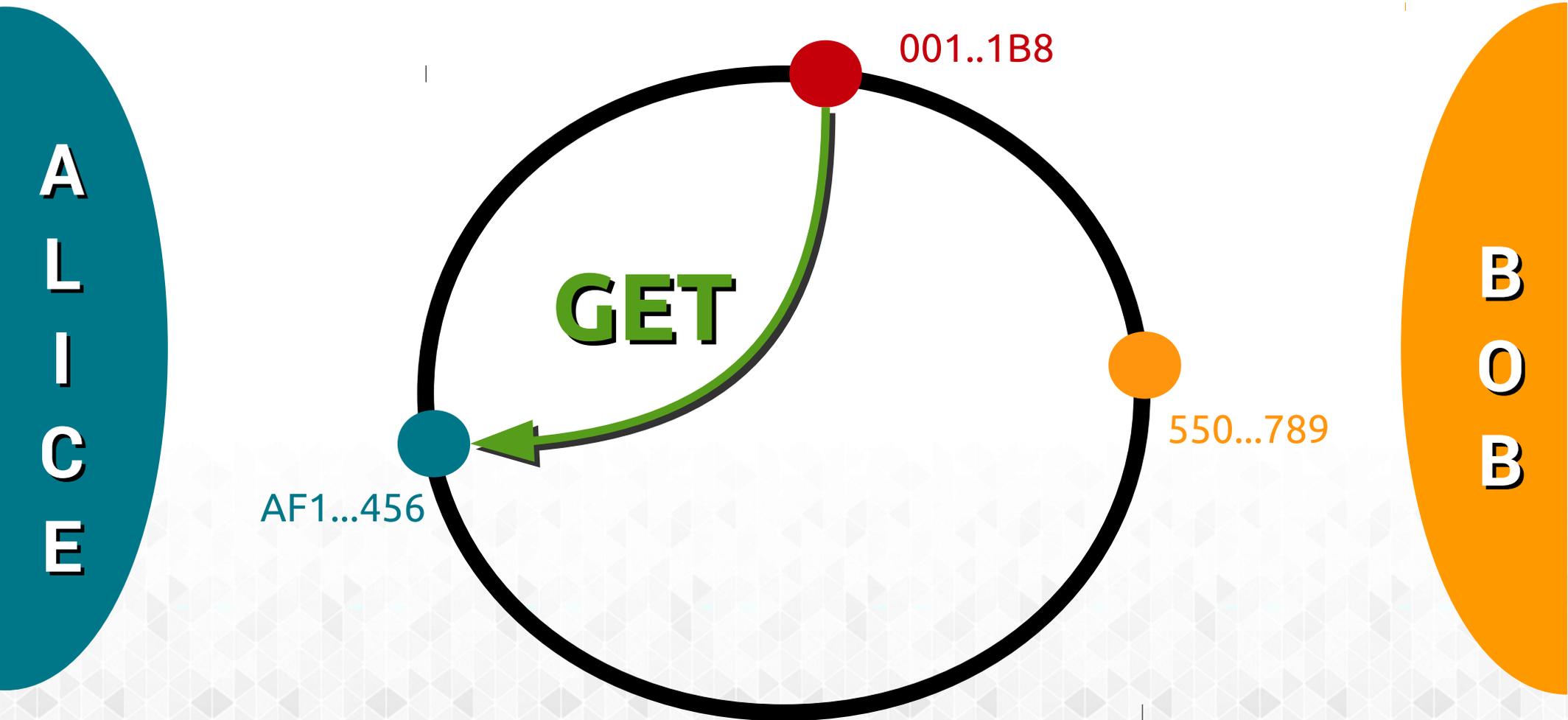
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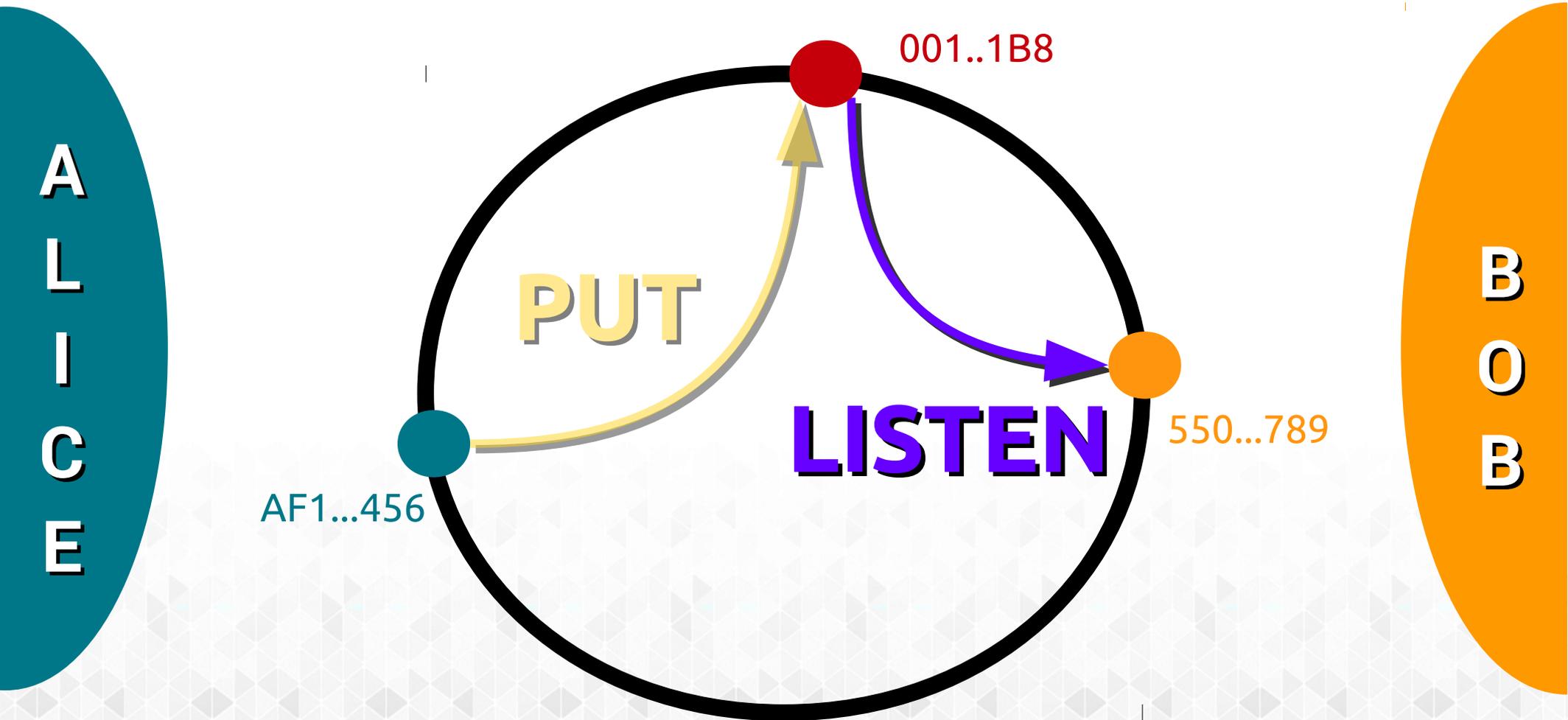
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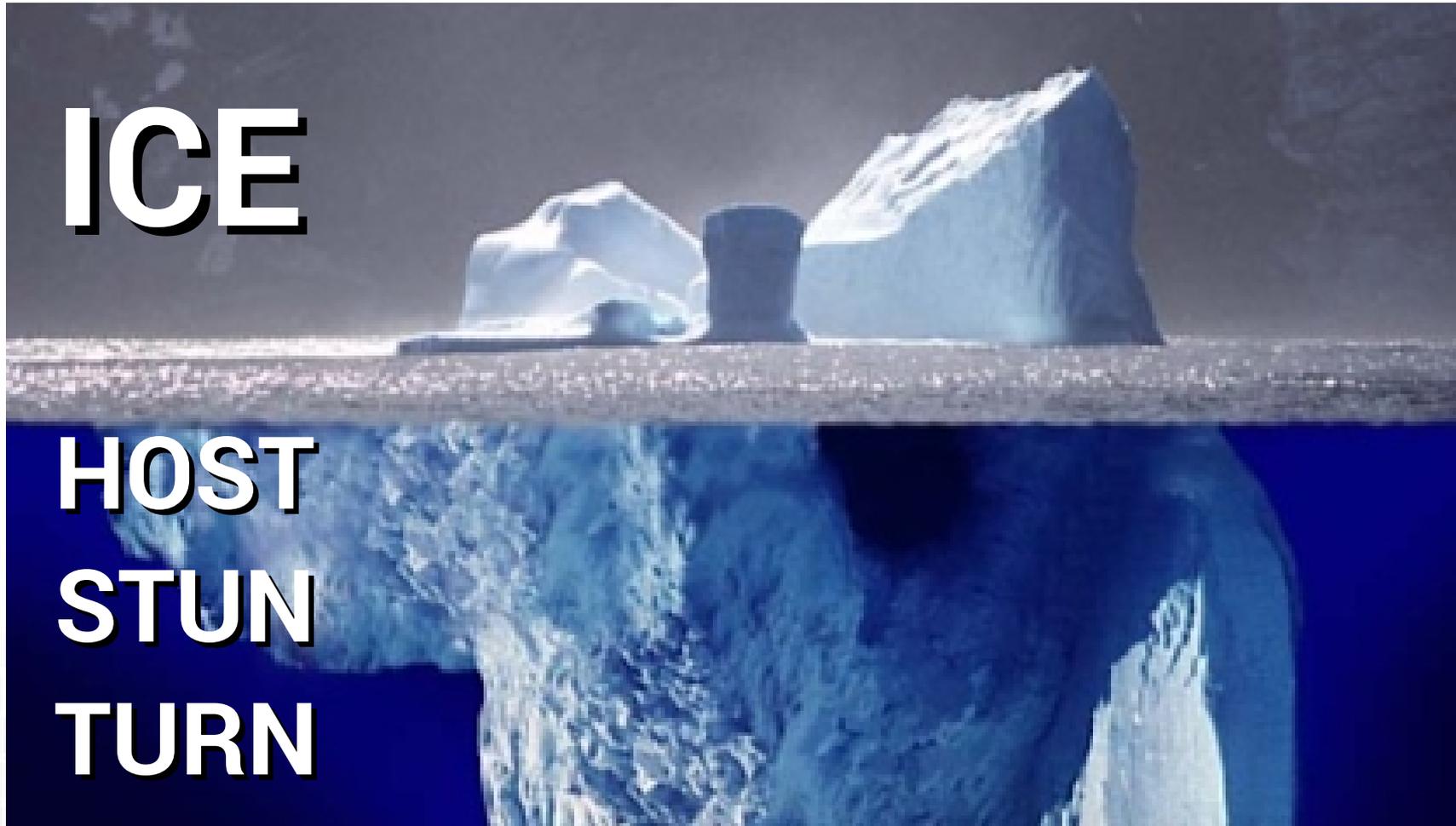


Ring



ABSTRACTING THE CONNECTION

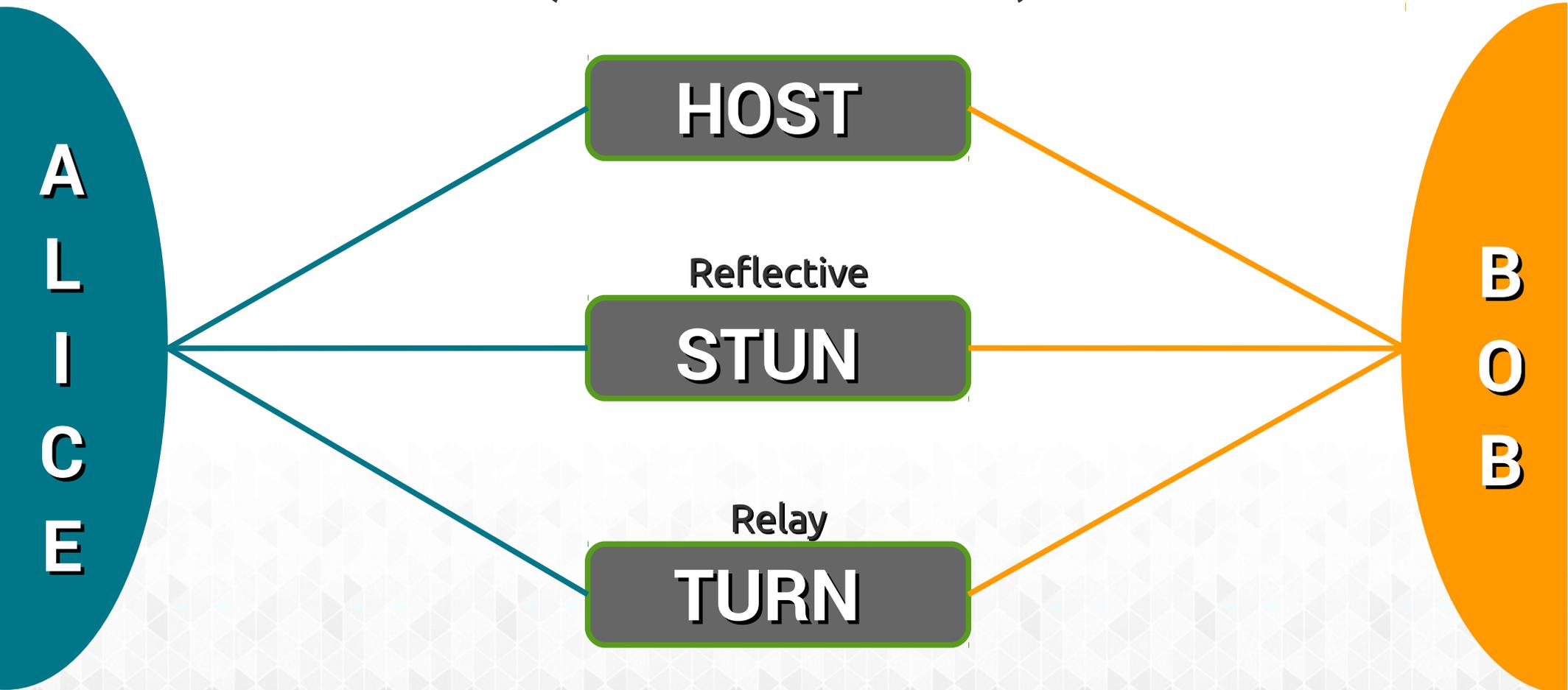
NAT / Firewall



Ring

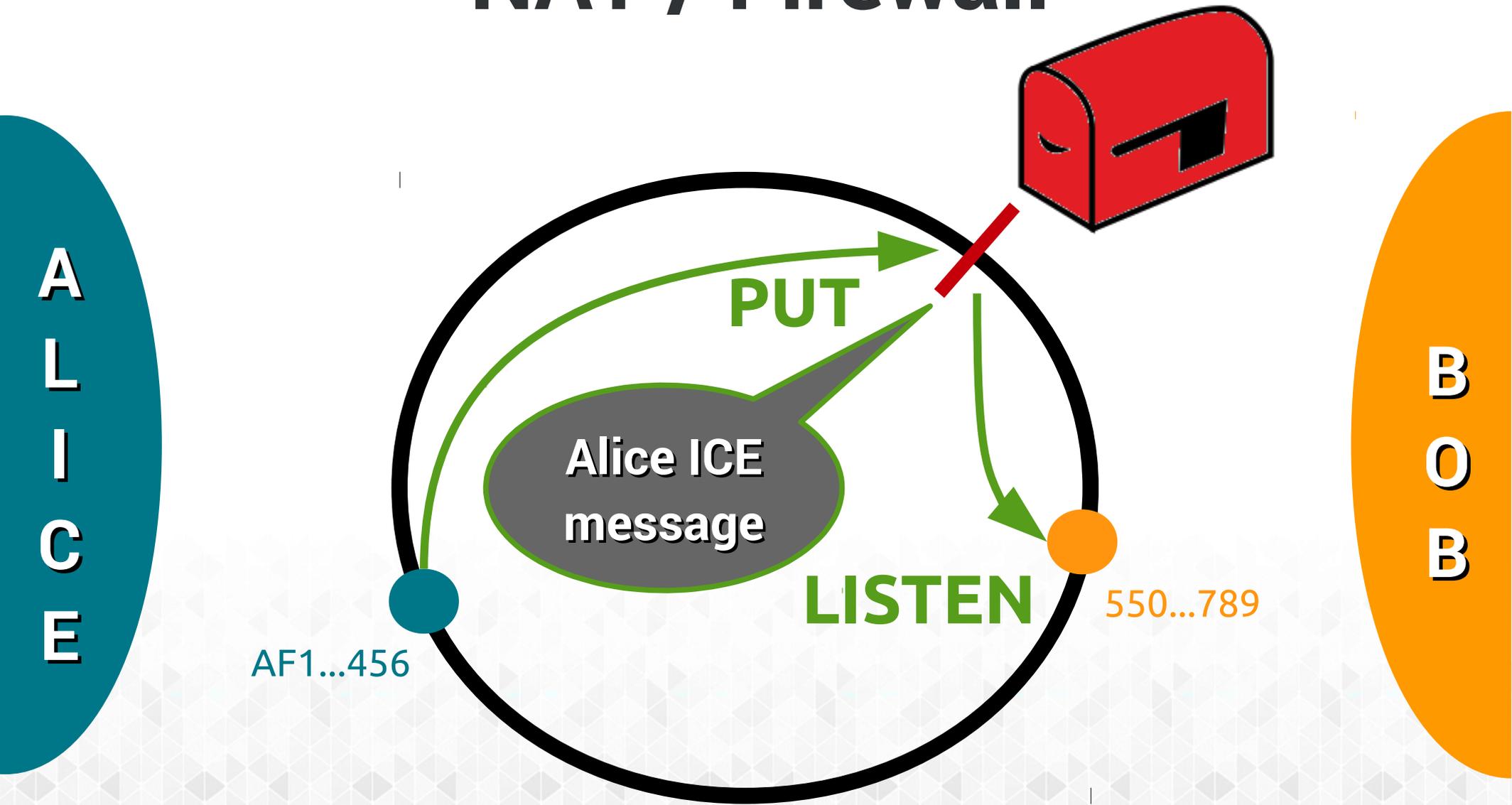
ICE Message

(list of candidats)

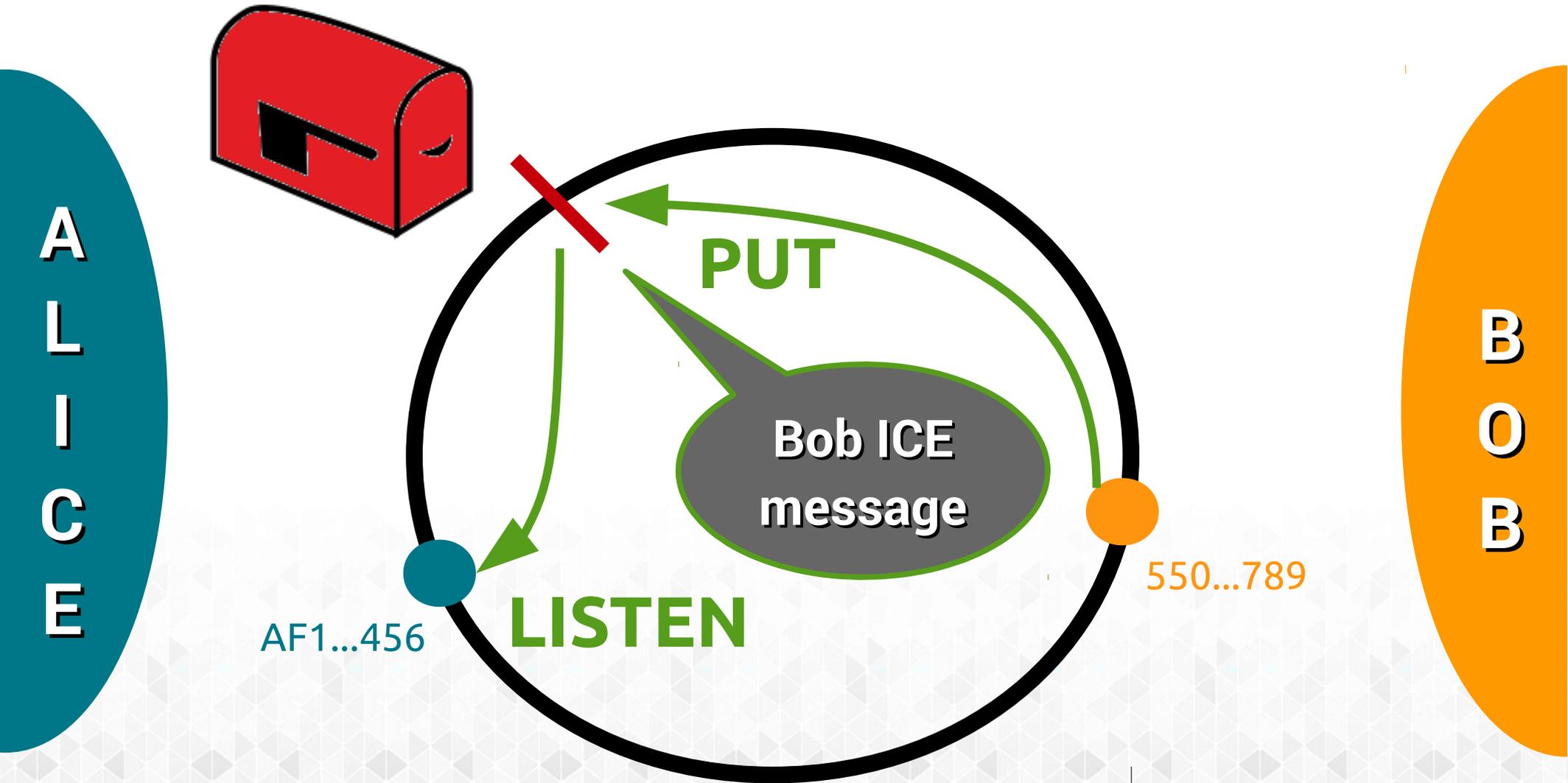


Ring

NAT / Firewall

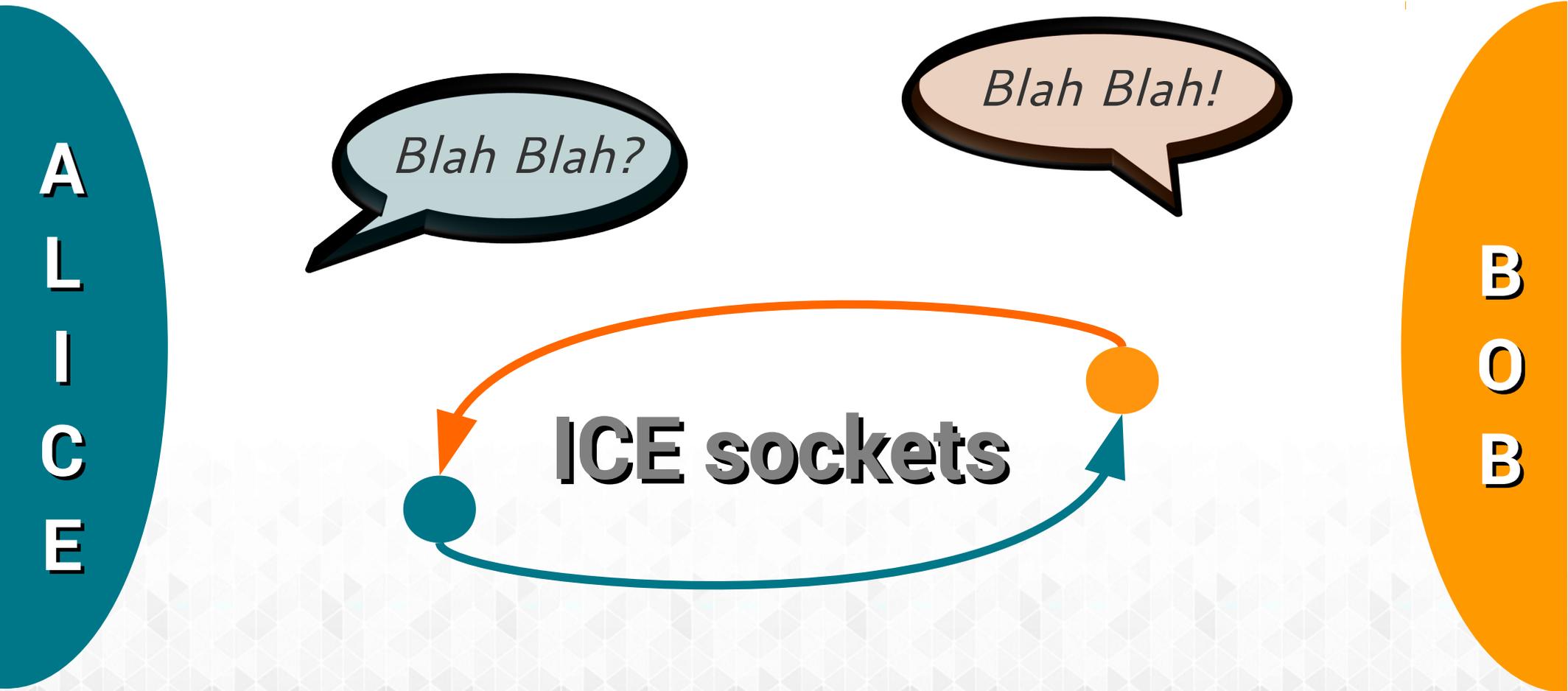


NAT / Firewall



Ring

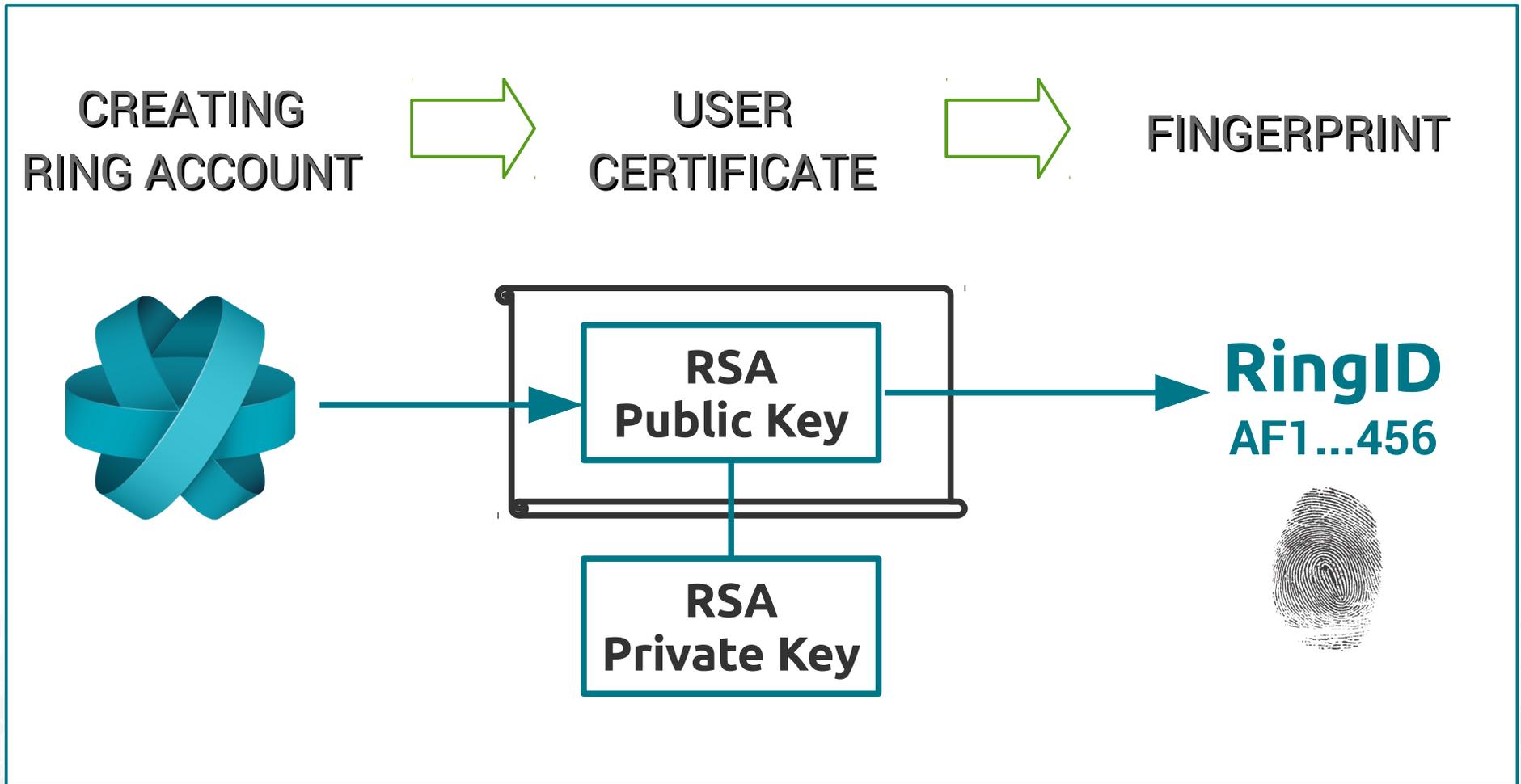
NAT / Firewall



Ring

A SECURE SOLUTION

How is generated a RingID?



How does Ring work?

RSA key pair
(4096 bits)

RSA key pair
(4096 bits)

Connecting

OpenDHT

RSA / GCM + AES

A
L
I
C
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B
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B

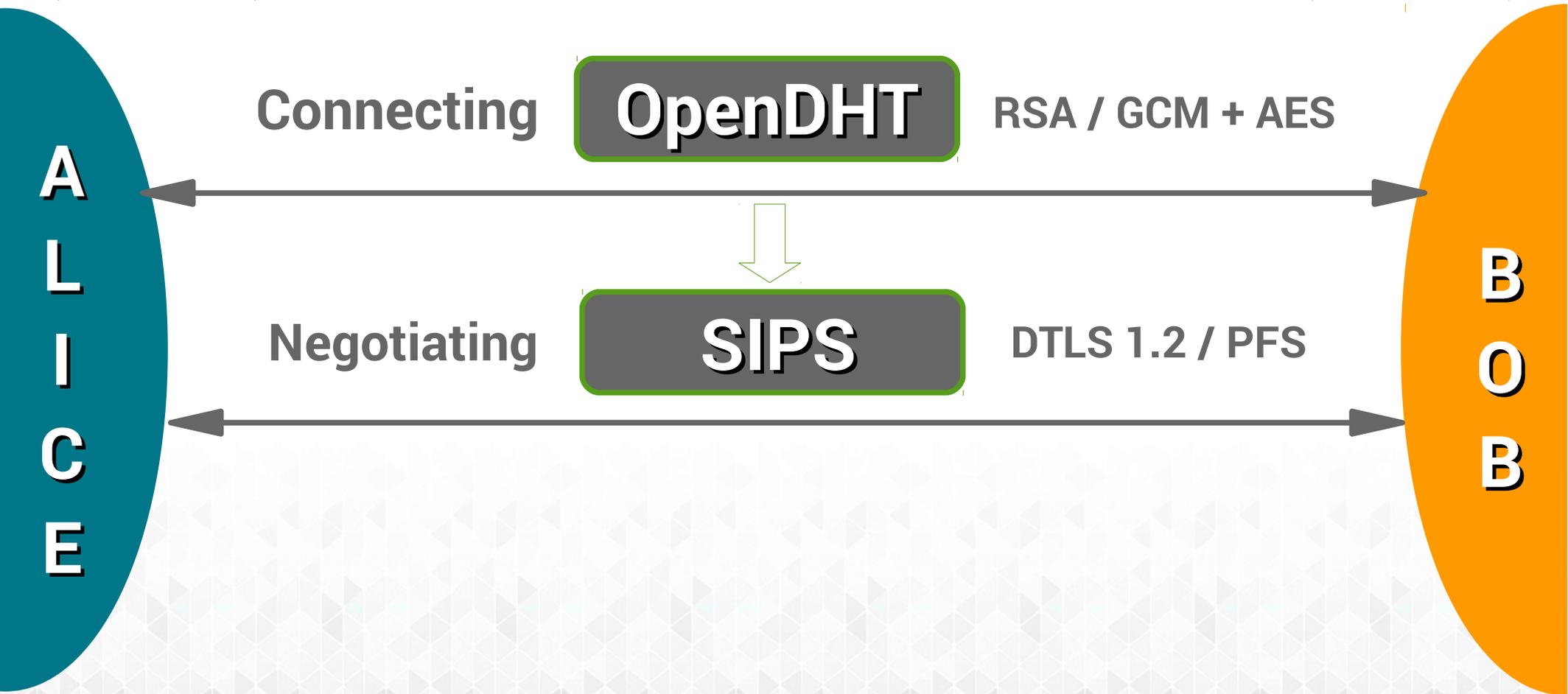


Ring

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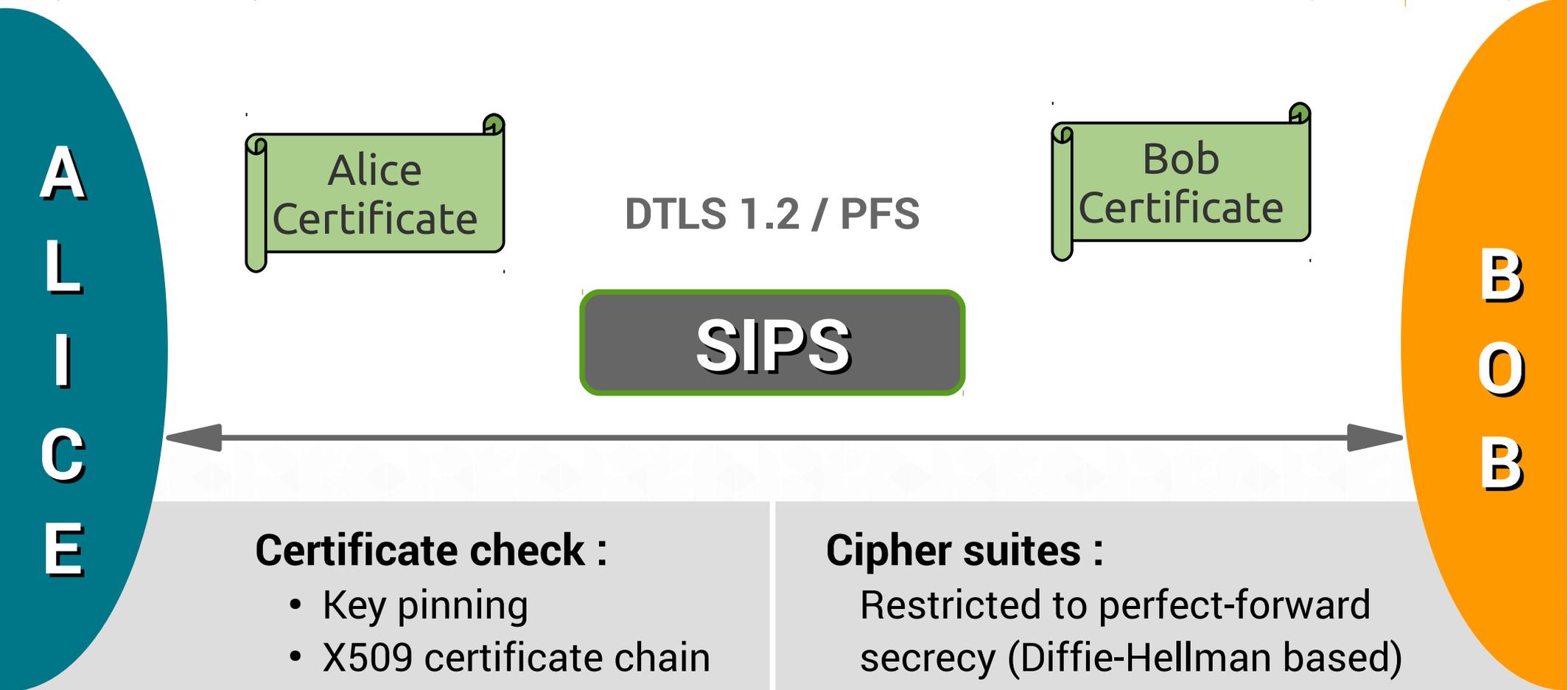


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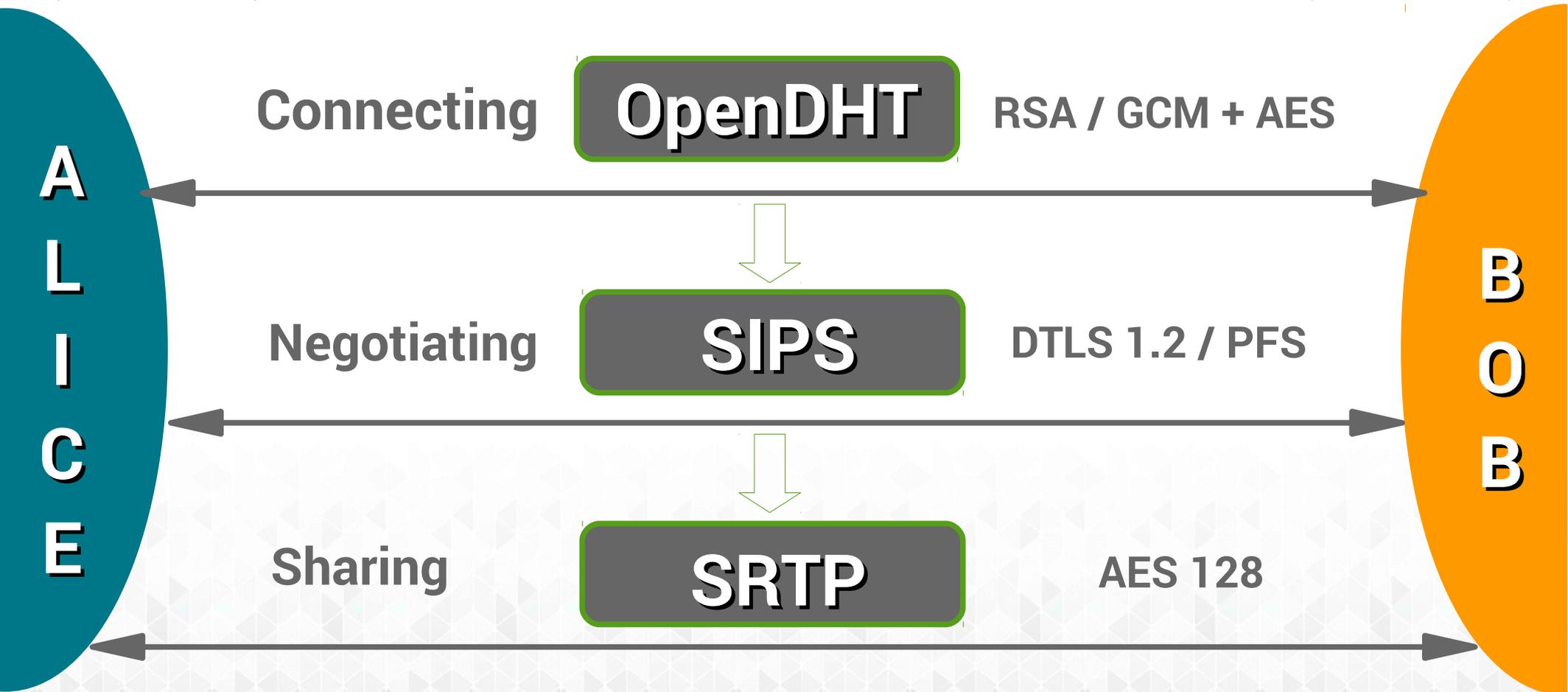


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Ring



A UNIVERSAL SOLUTION

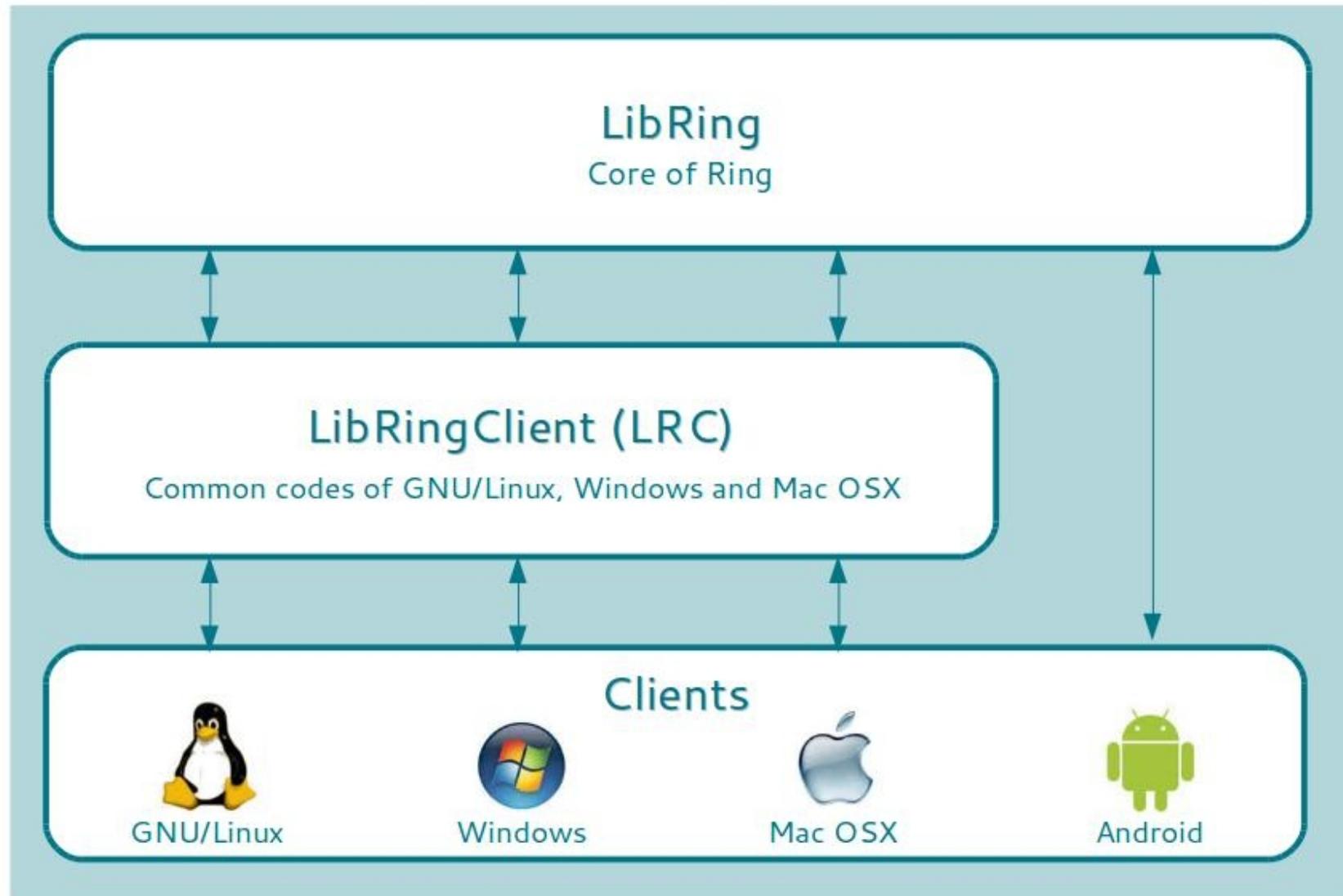
What does Ring?



Chat. Talk.
Share.

Internet of Things

How is Ring built?



Ring

Who?

All users (people and industry)
thanks to the contributors

What?

Free communication platform
(voice, video, text, files)

Why?

Freedom - To exchange data
respecting privacy

Where?

GNU/Linux – OS X – Windows
Android - Connected devices



Ring



is looking for
CONTRIBUTORS

UPnP

IPv6

Security

UX improvements

Go on and join the Ring team!



Ring

Report. Develop. **Contribute.**

Github github.com/savoirfairelinux/ring-project

**Bug tracker
+ML** tuleap.ring.cx/projects/ring

Transifex transifex.com/savoirfairelinux/ring/

IRC Freenode #ring





Ring

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ring.cx



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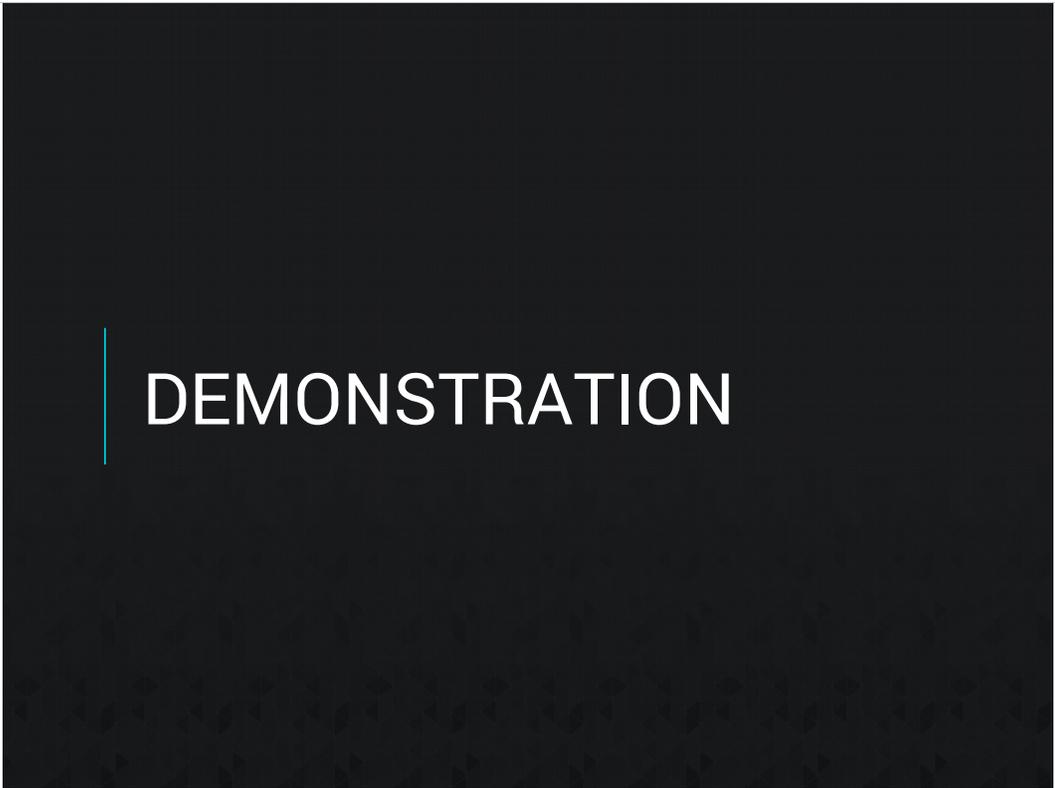
Toronto

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DEMONSTRATION

Valeurs usage



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Savoir-faire
LINUX



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PEER-TO-PEER
ARCHITECTURE

Concept of distribution



Paul Baran (1926-2011)

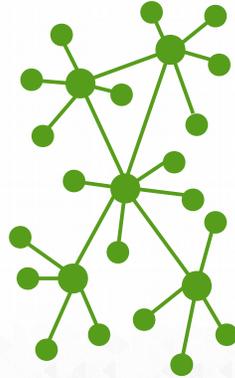
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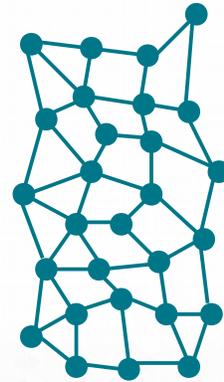
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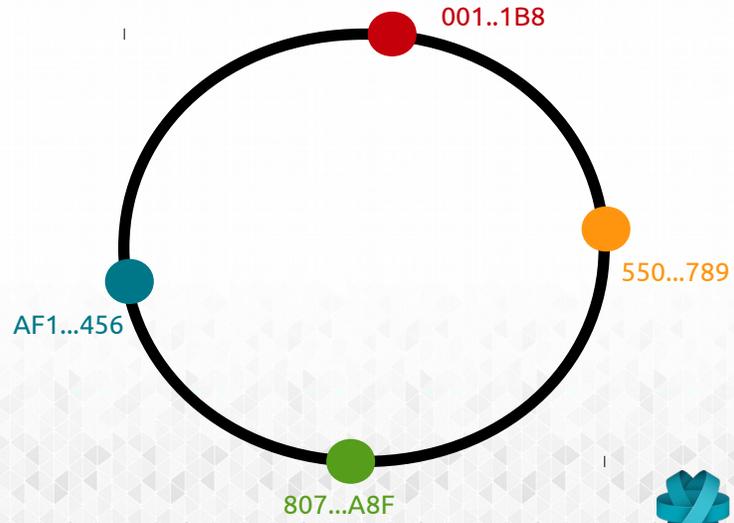


OpenDHT

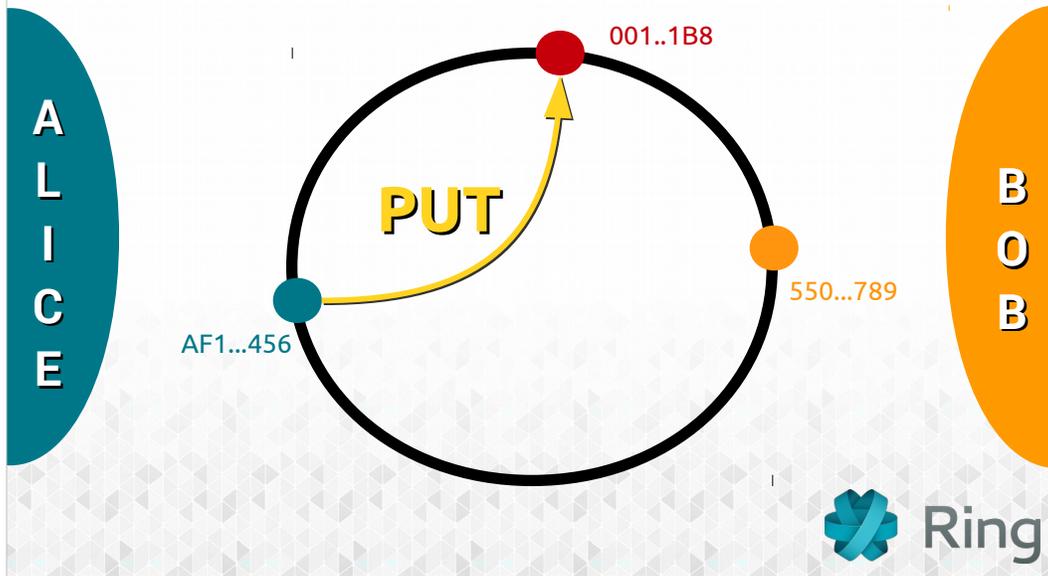
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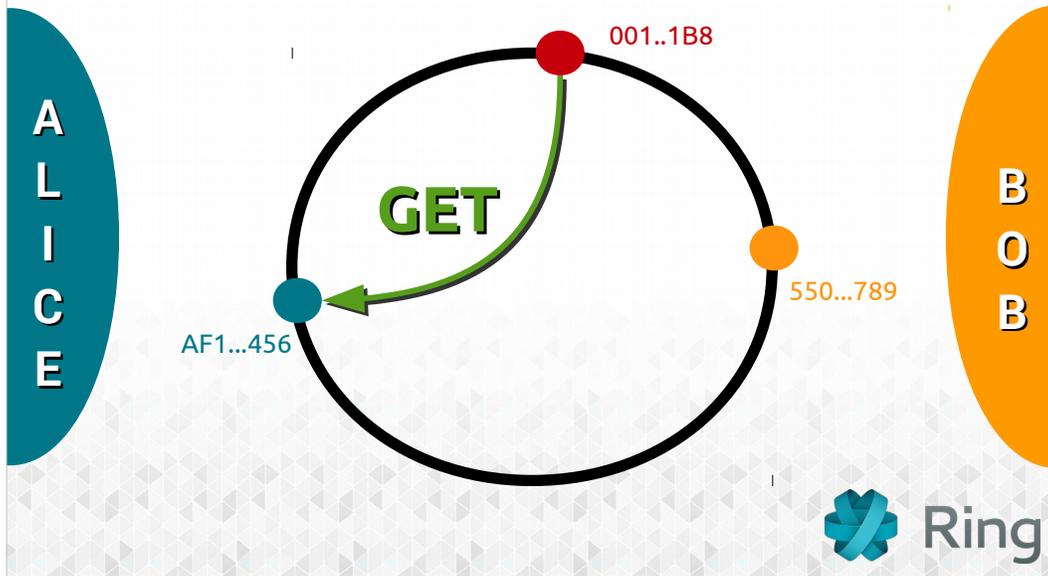
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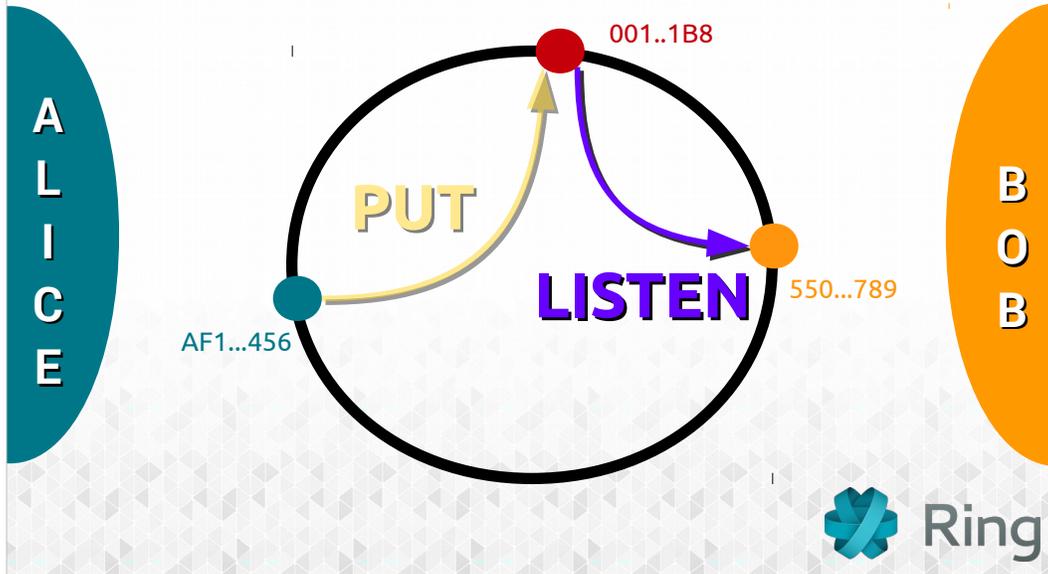
How does OpenDHT work?

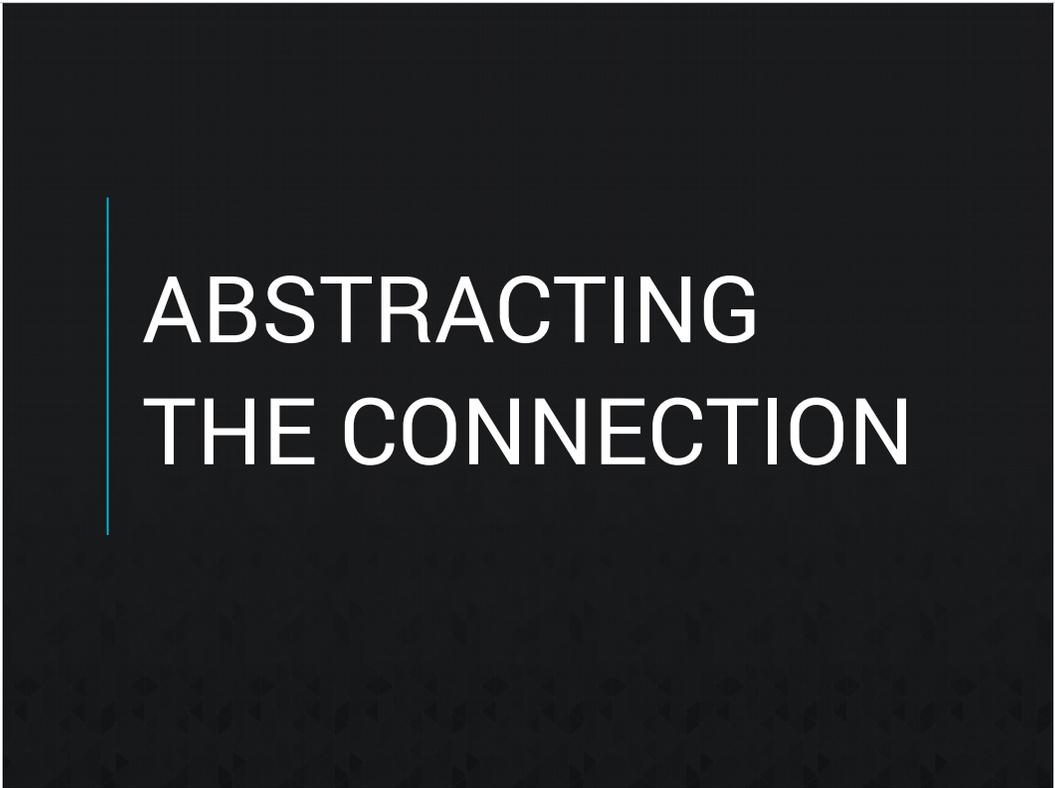


How does OpenDHT work?



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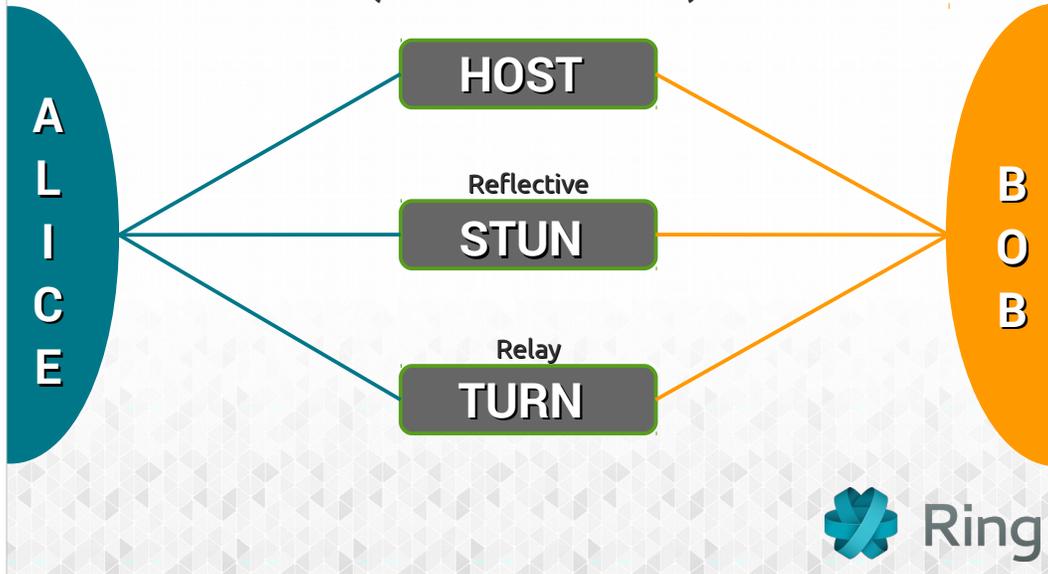
**ABSTRACTING
THE CONNECTION**

NAT / Firewall

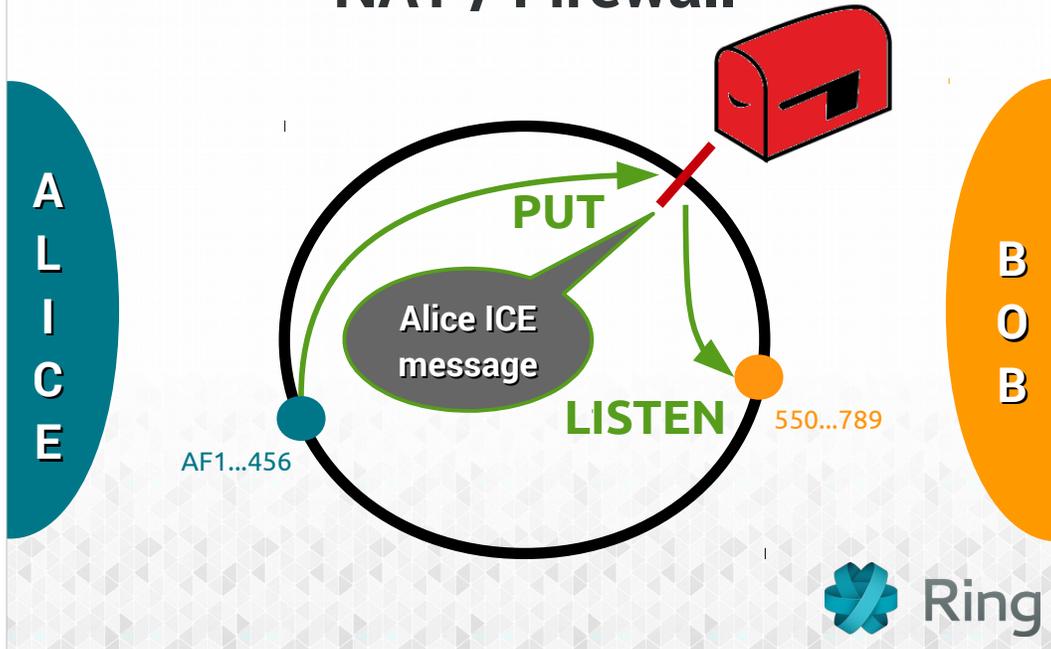


ICE Message

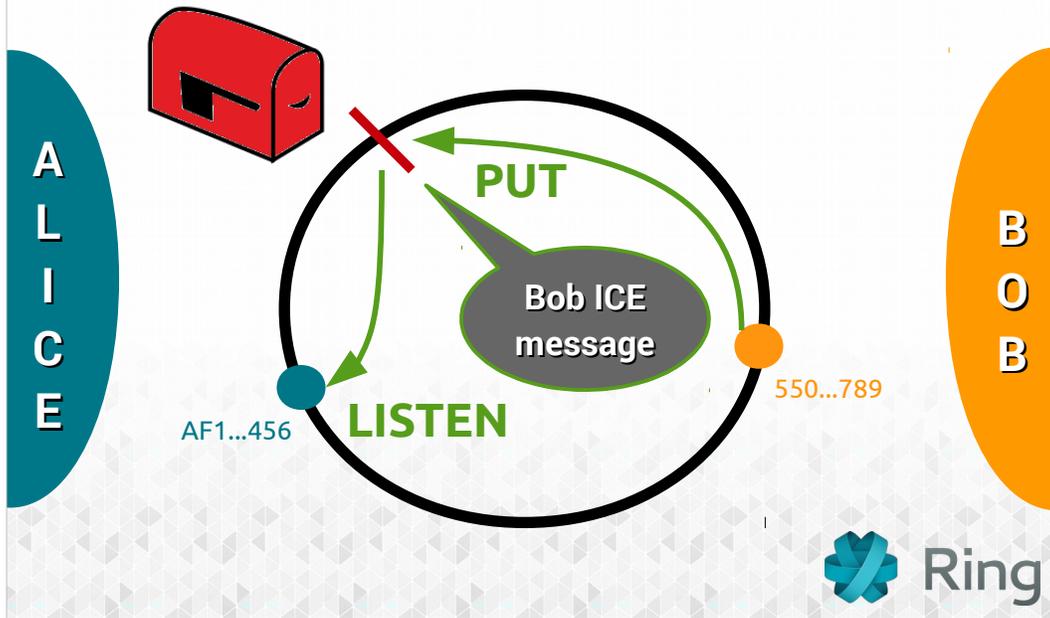
(list of candidats)



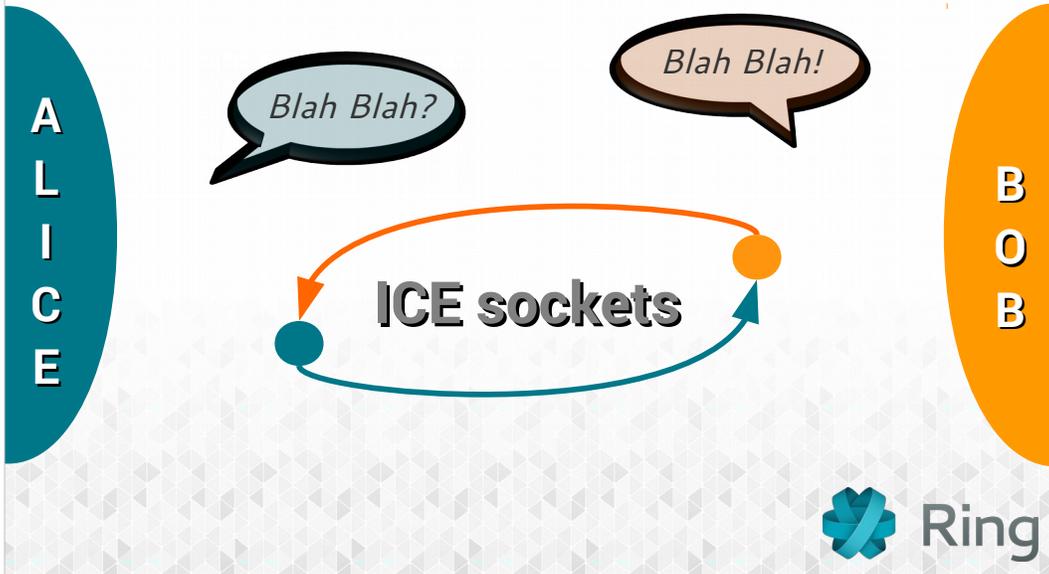
NAT / Firewall



NAT / Firewall

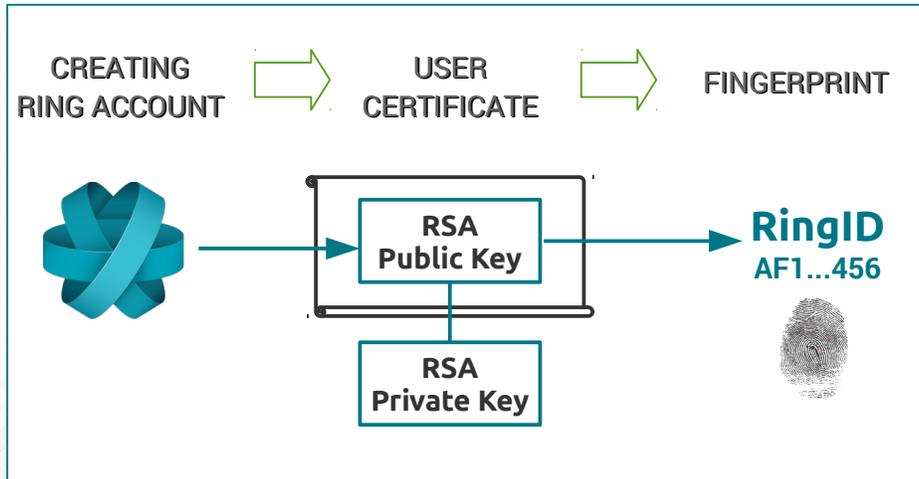


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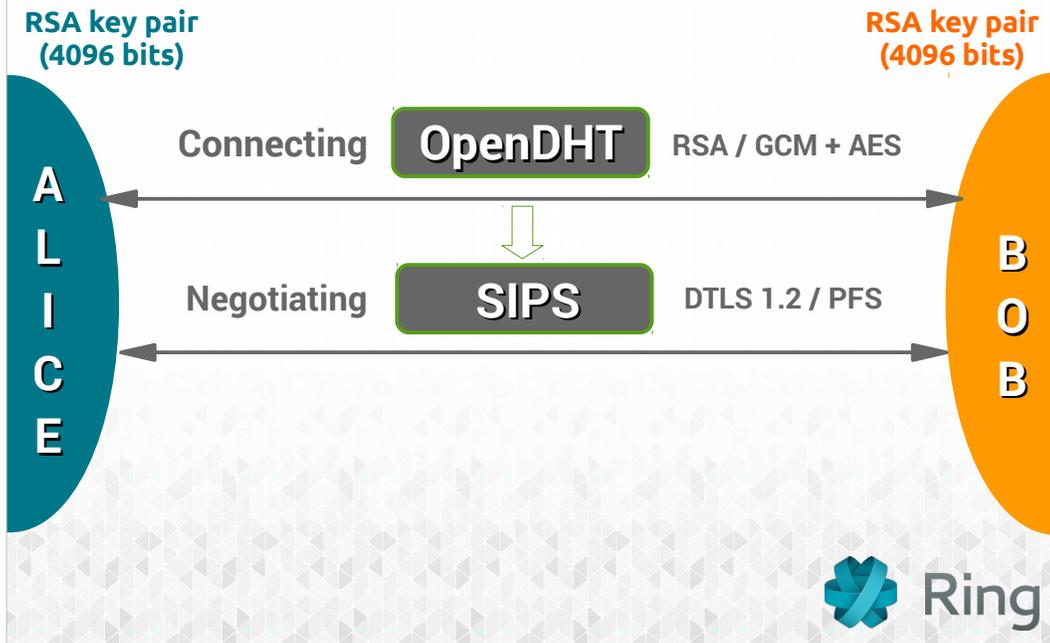
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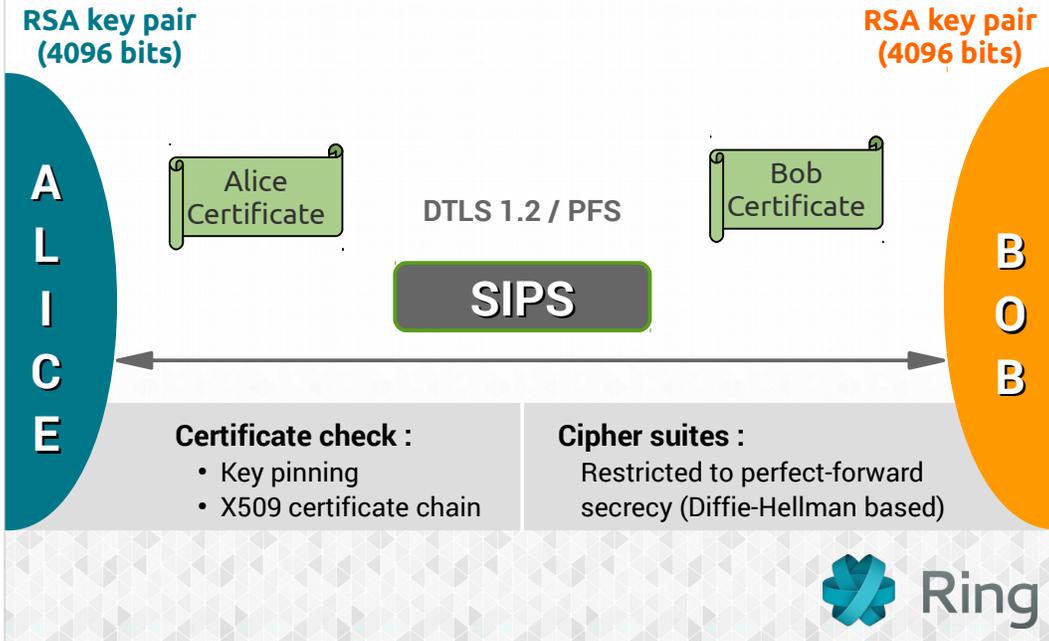
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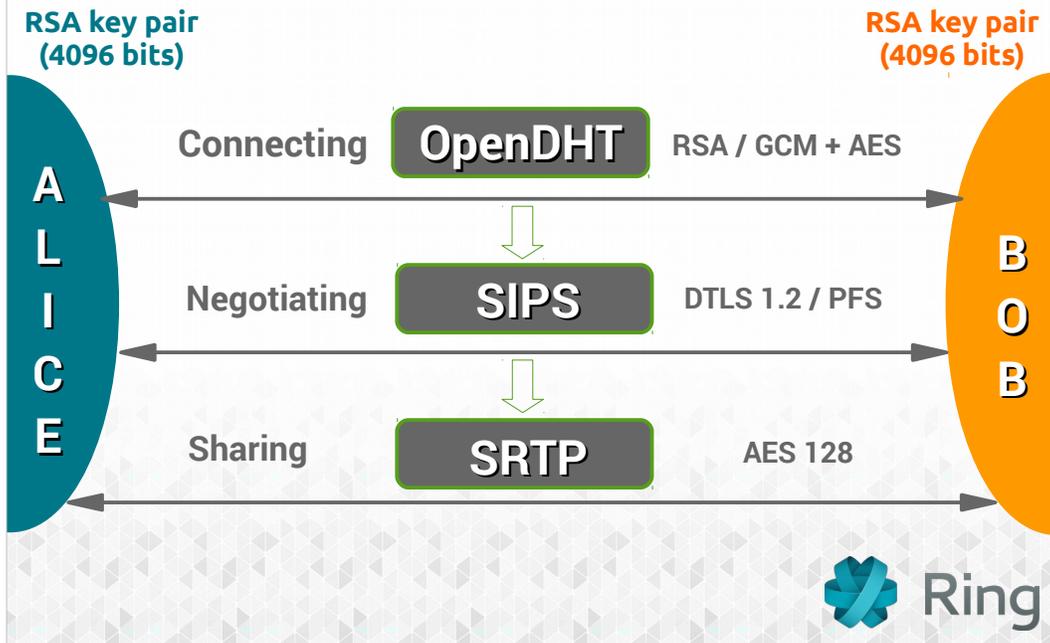
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How does Ring work?





A UNIVERSAL
SOLUTION

What does Ring?

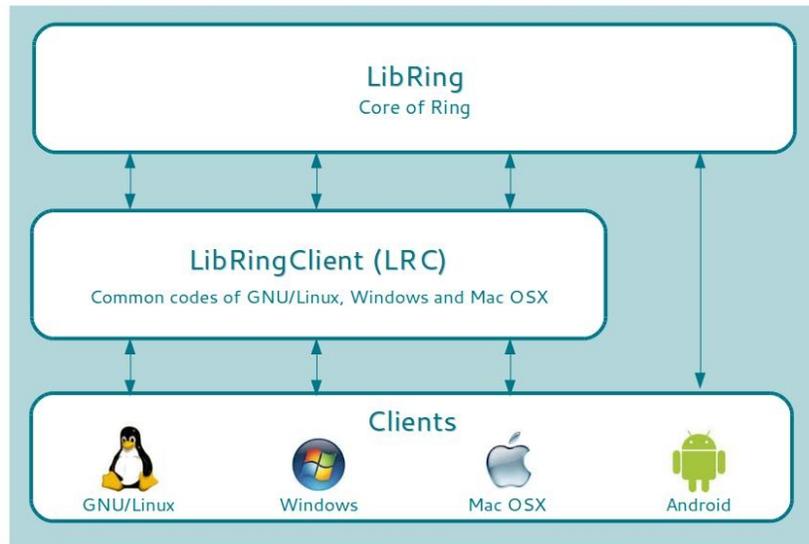


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Internet of Things



How is Ring built?



PK Android utilise pas LRC?
Technical difficulties with android platform architecture, threading, qt5....

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Transifex transifex.com/savoirfairelinux/ring/

IRC Freenode #ring





Ring

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ring.cx