

Open NetNorad



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Jose

Daniel

facebook scale

as of March 2018



**1.45 billion daily
active users**



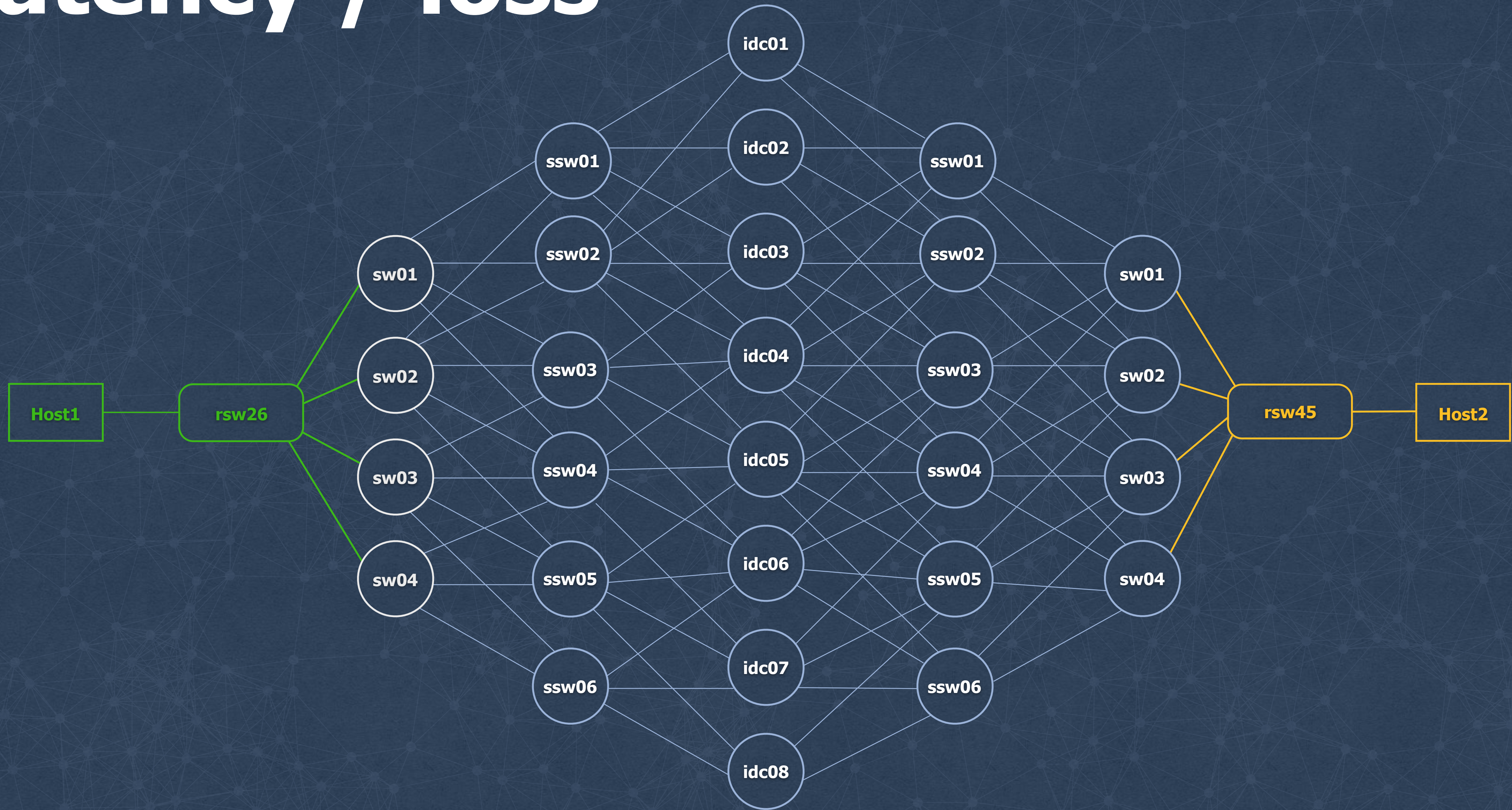
**2.20 billion monthly
active users**



Problem?



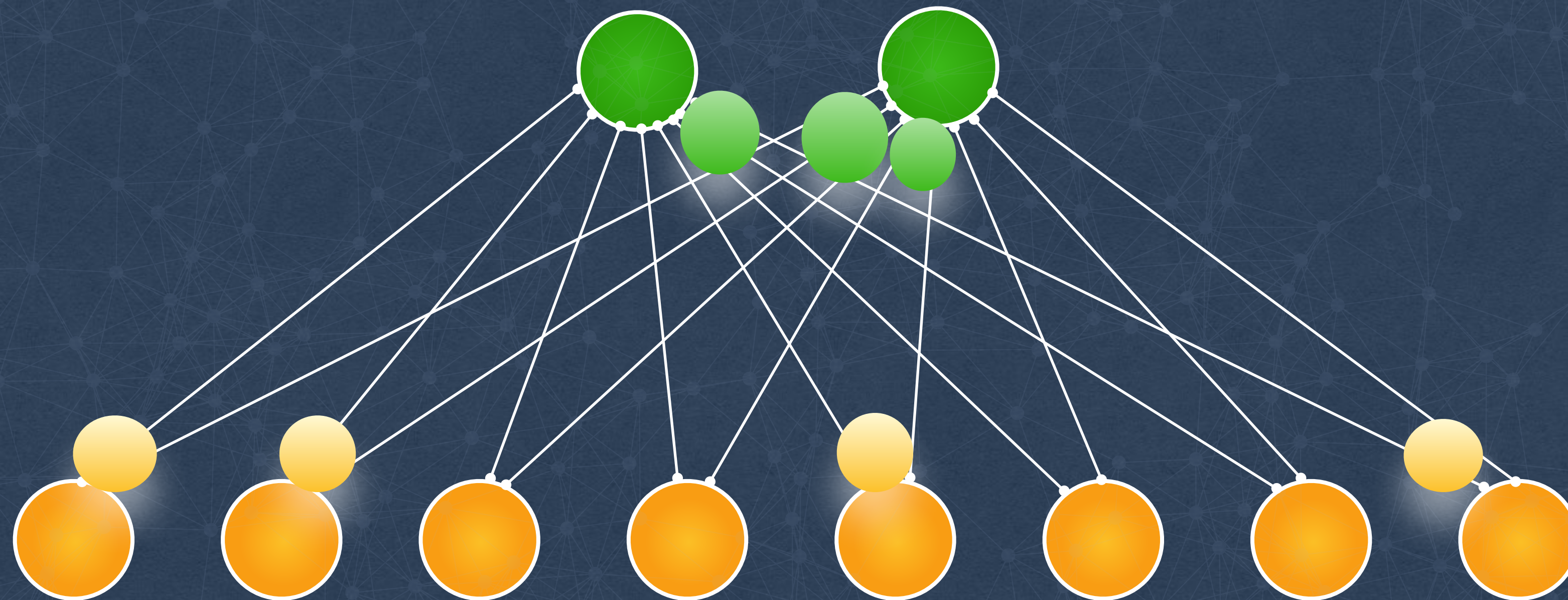
Latency / loss



NetNORAD



Ping all the things!



**Run pingers on
some machines**

**Run responders
on all machines**

**Collect and
analyze data**

Evolution



**Run /bin/ping
from a python
agent**



**Raw Sockets,
Fast TCP Probes**



**Raw Sockets,
Fast ICMP Probes**



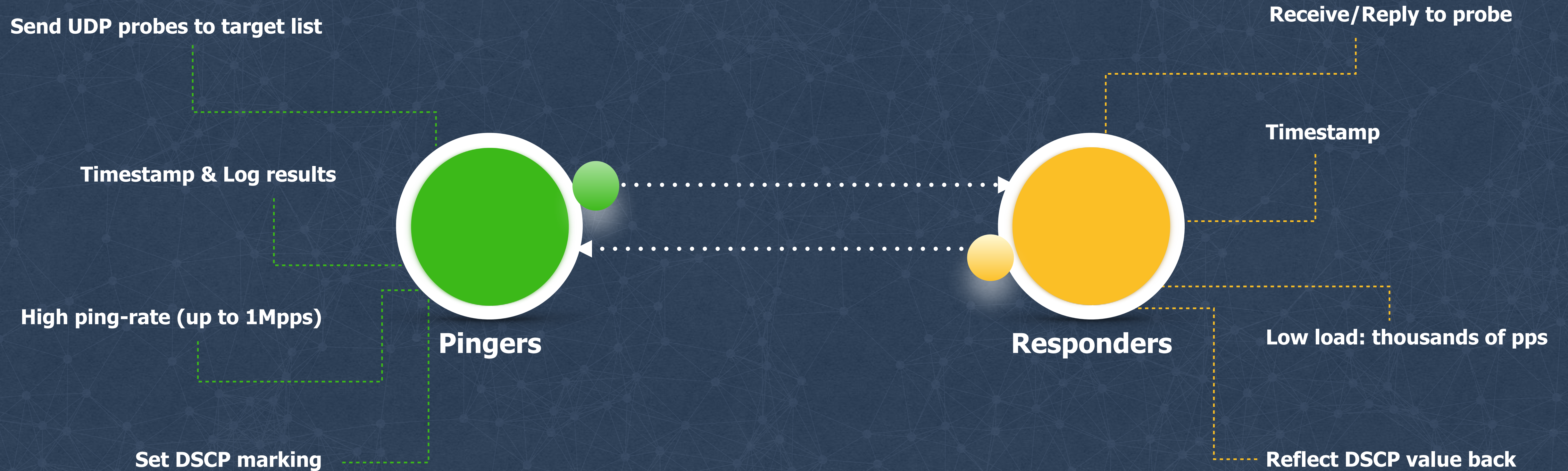
**UDP Probes and
Responder**



**UDP Probes and
Responder + Fast
ICMP Probes**

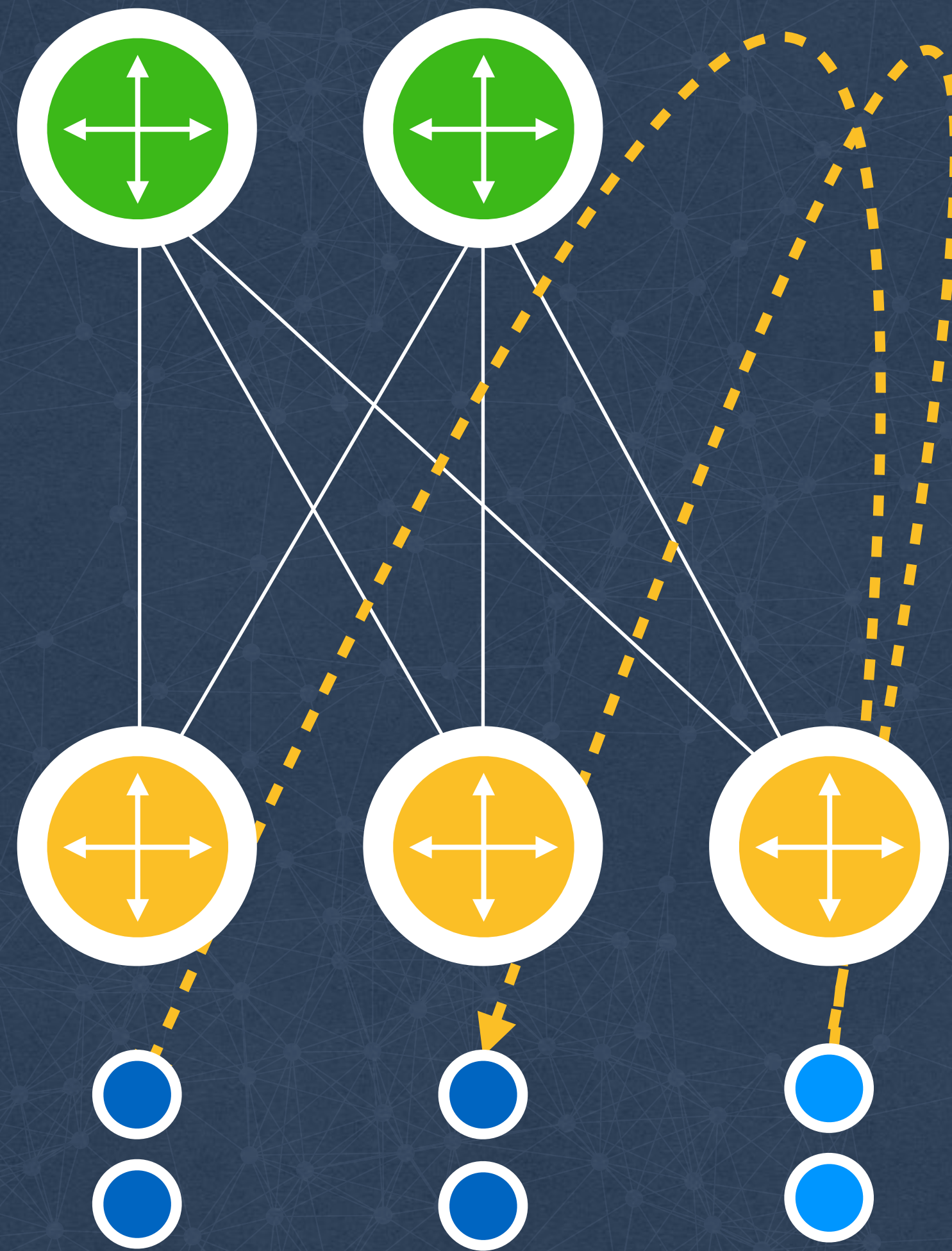


Pinger and responder



github.com/facebook/UdpPinger

UoL Racks - Pinging inside clusters



Detect issues
with **rack
switches**



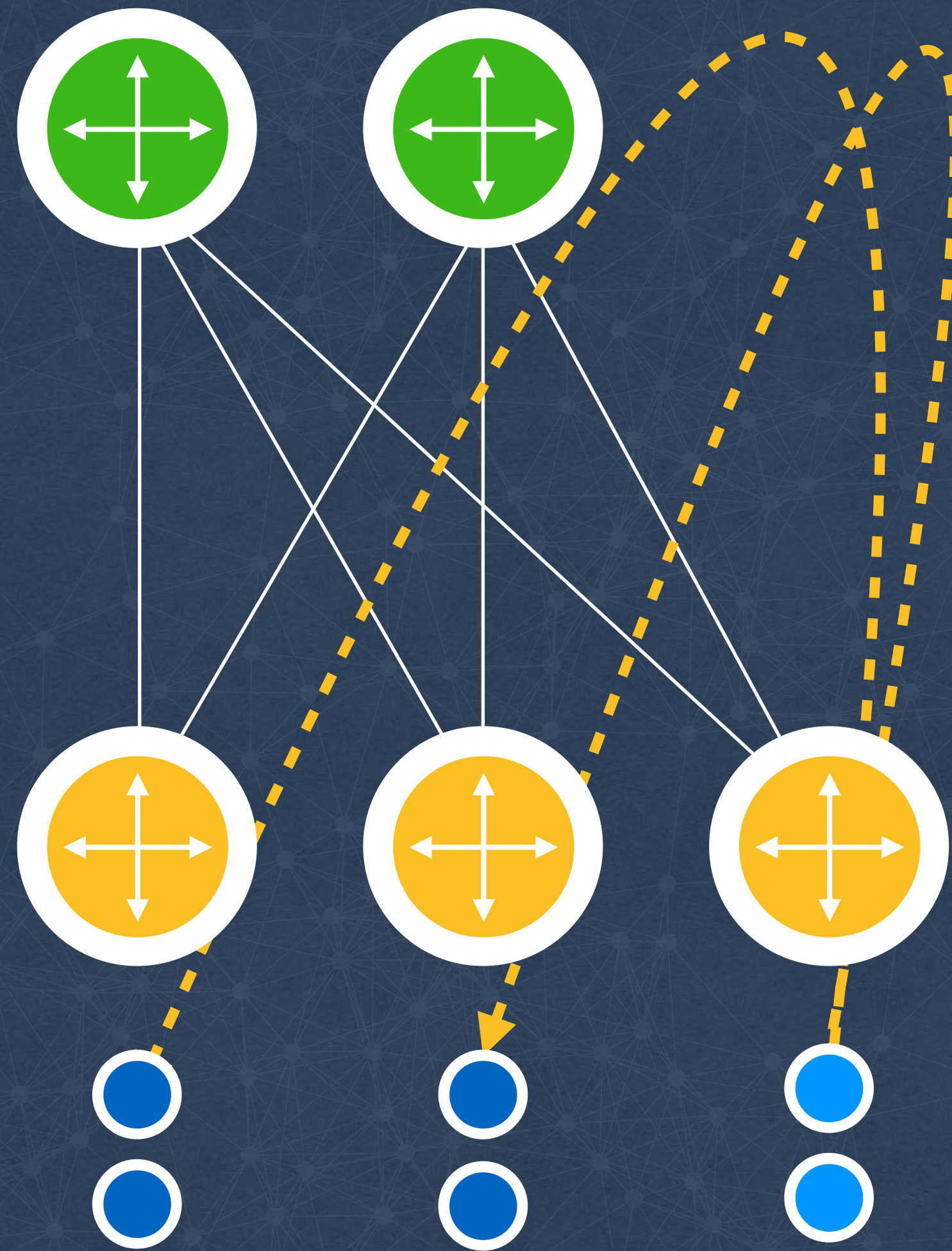
Dedicated
pingers per
cluster

Probe ALL
machines in
cluster

Store time-
series per
host/rack

Lags real-
time by 2
minutes

Pinging inside clusters



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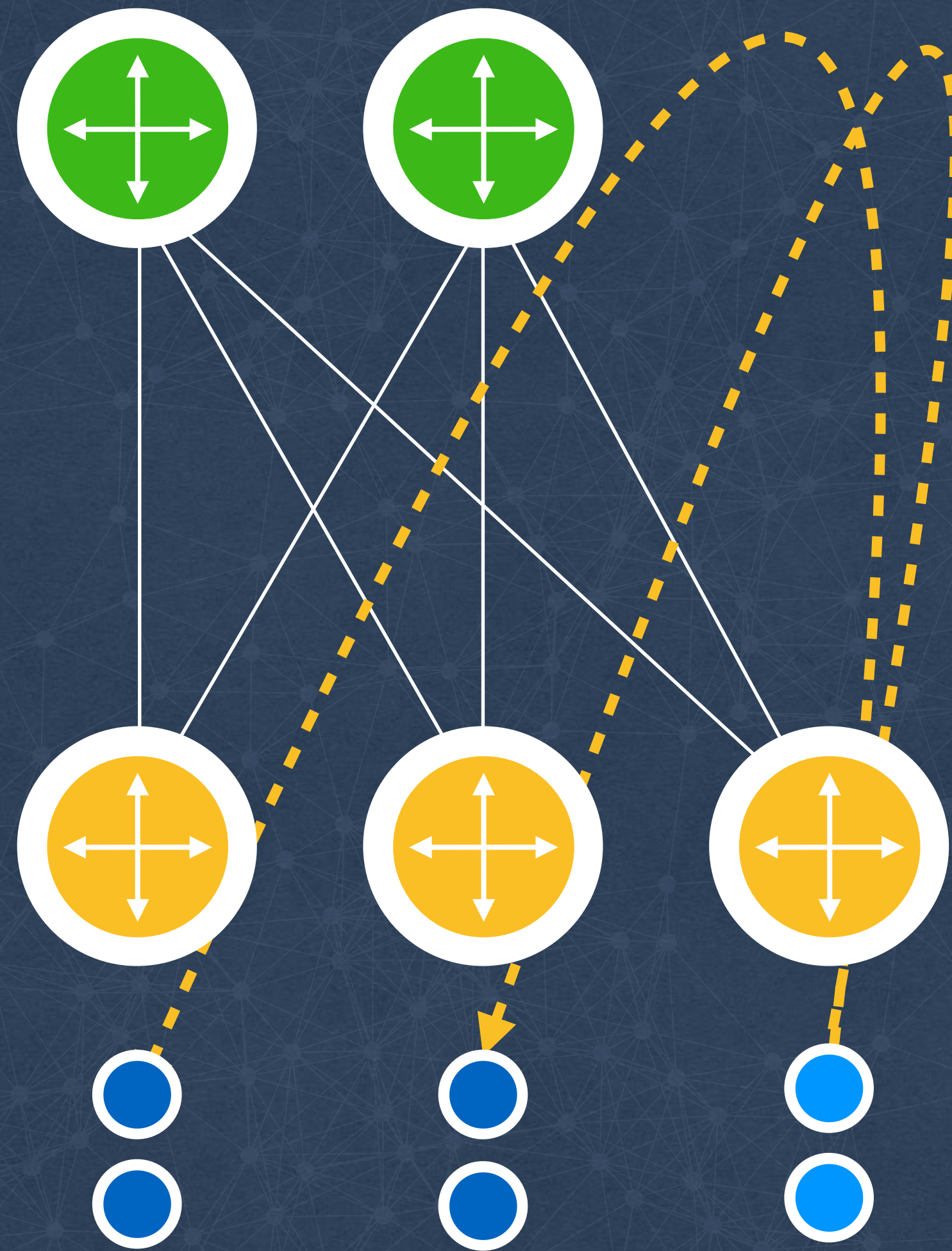


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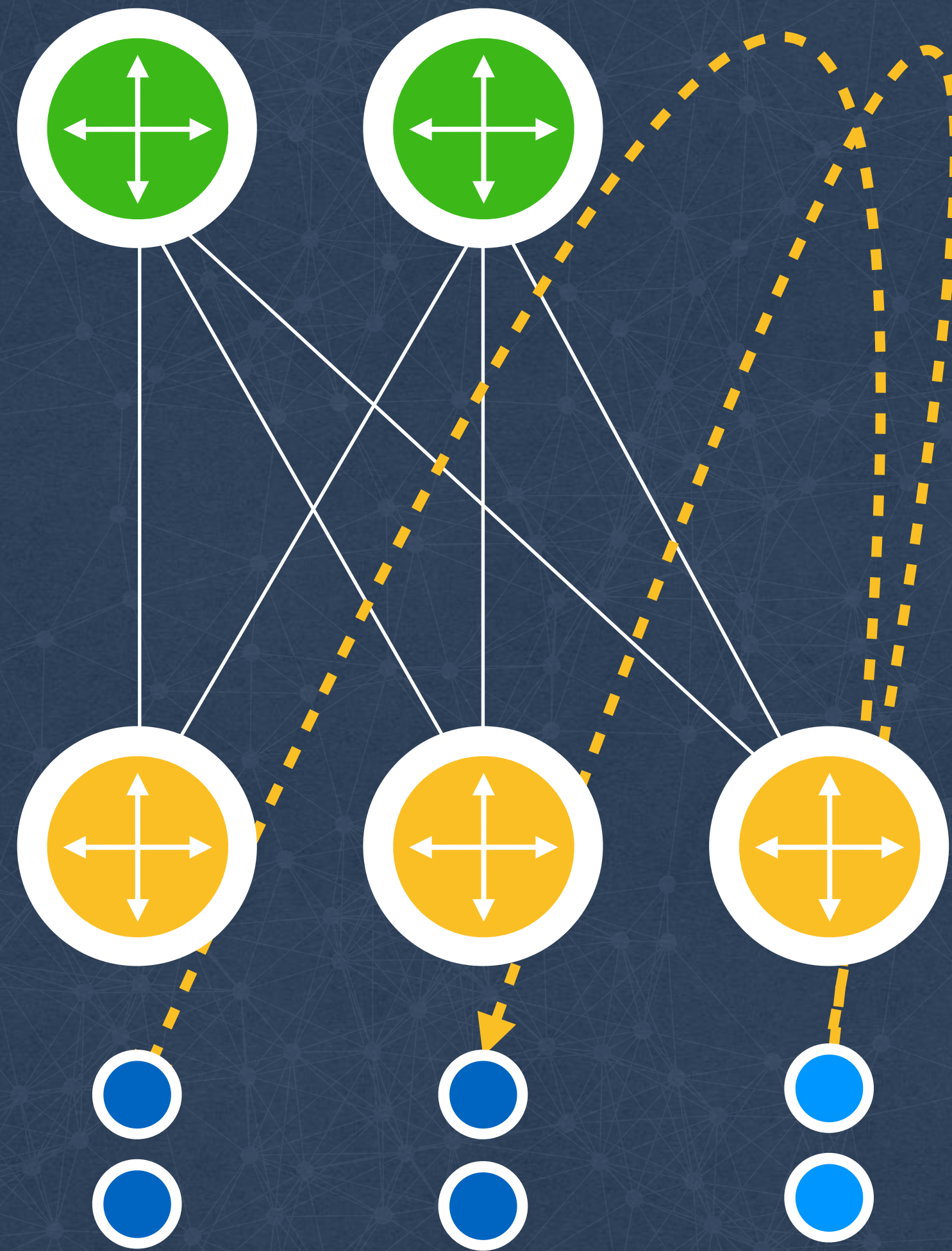
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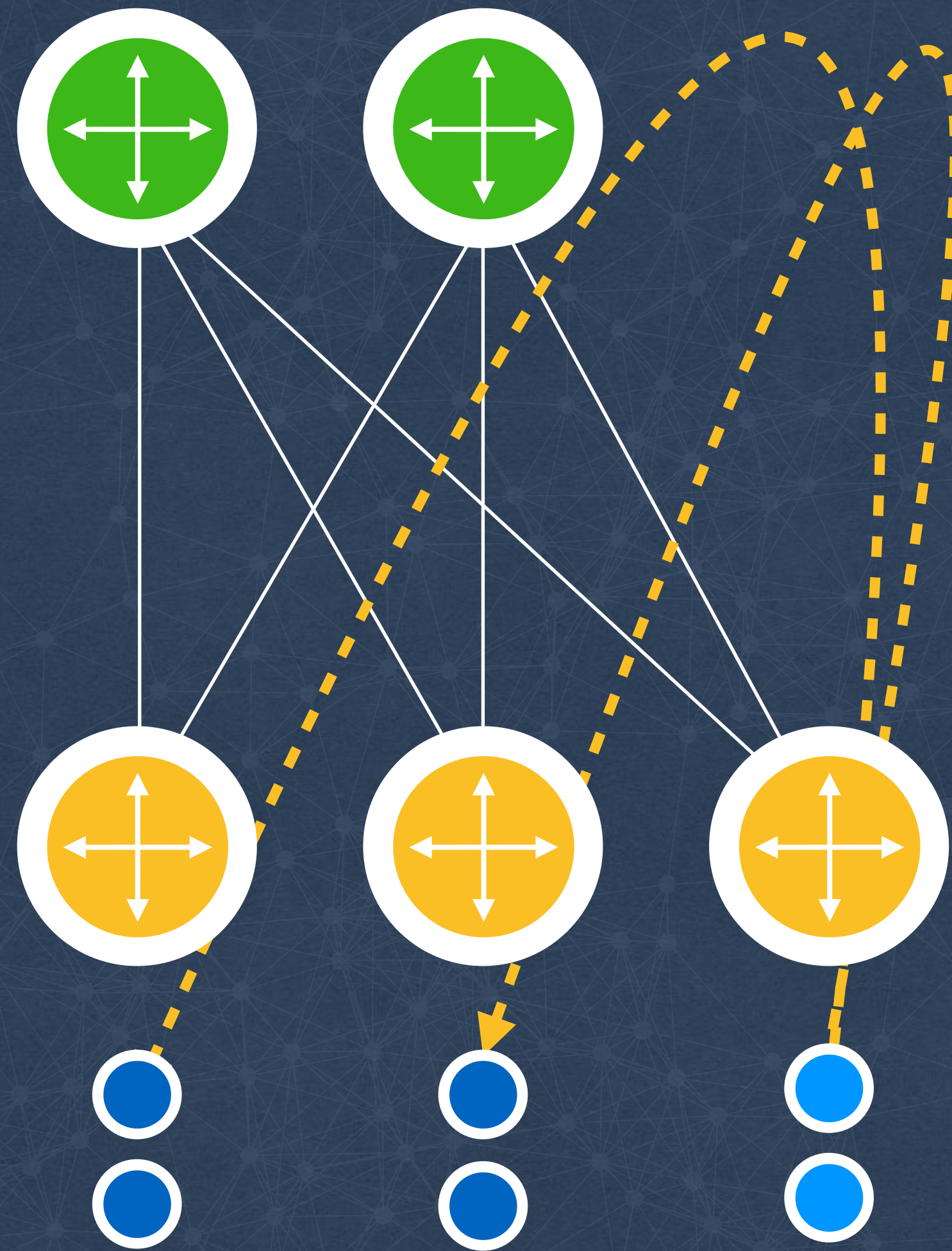
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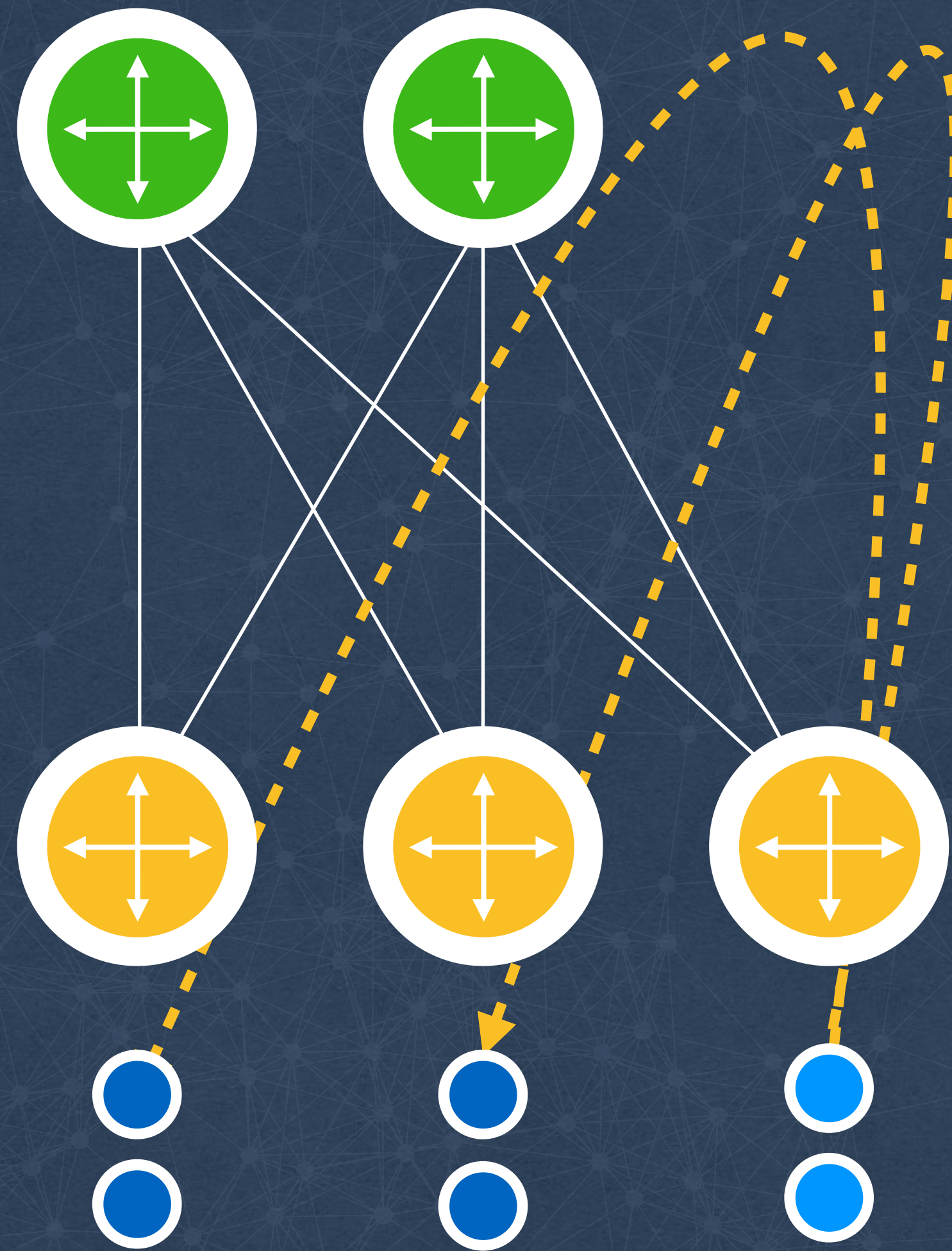
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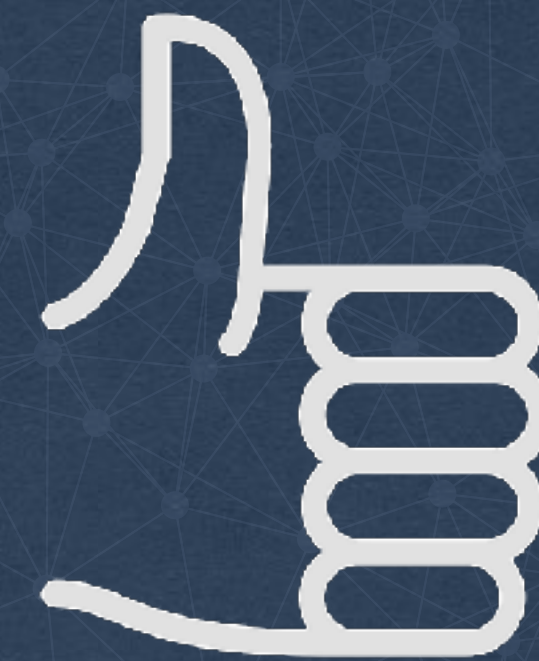
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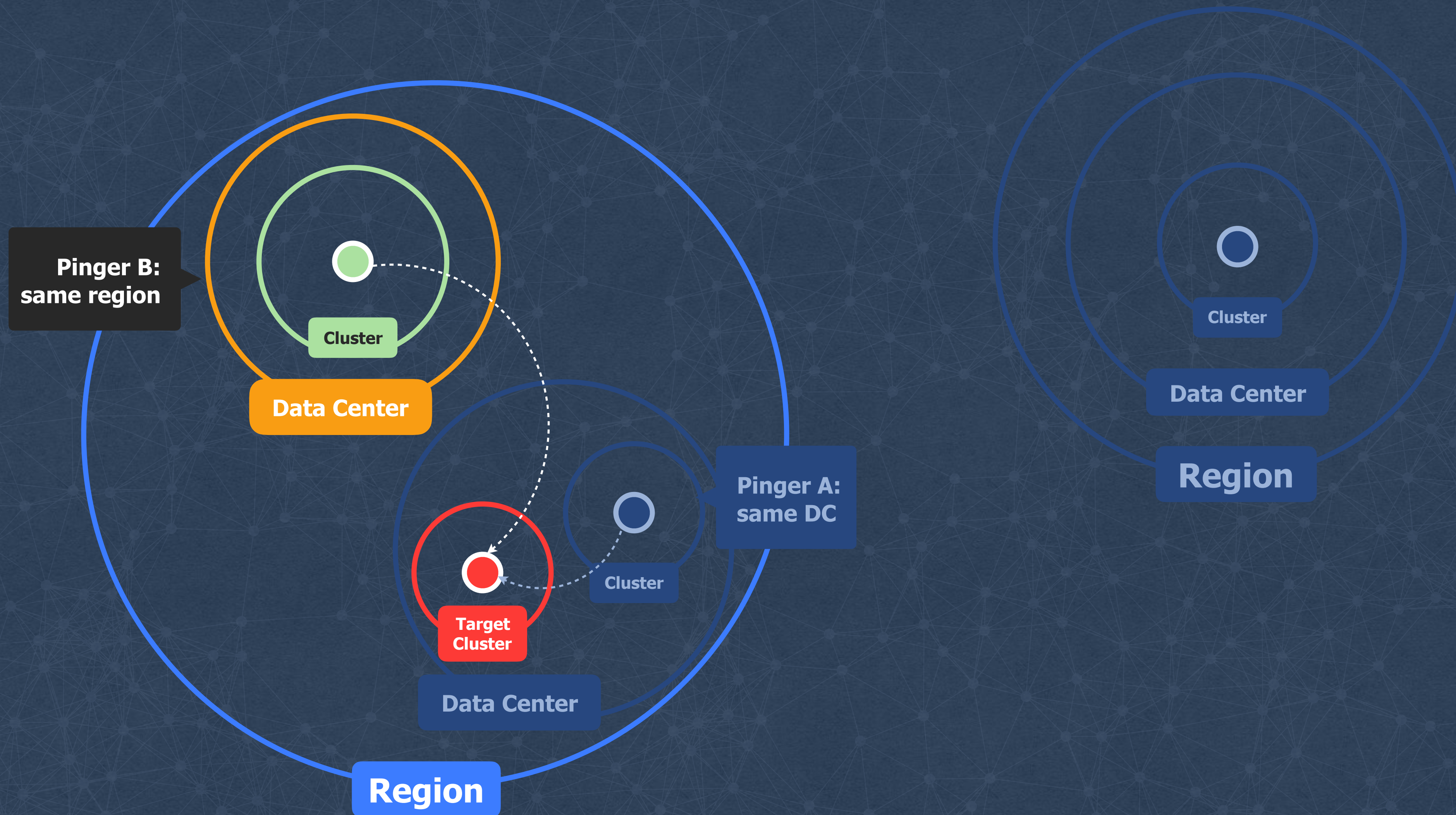
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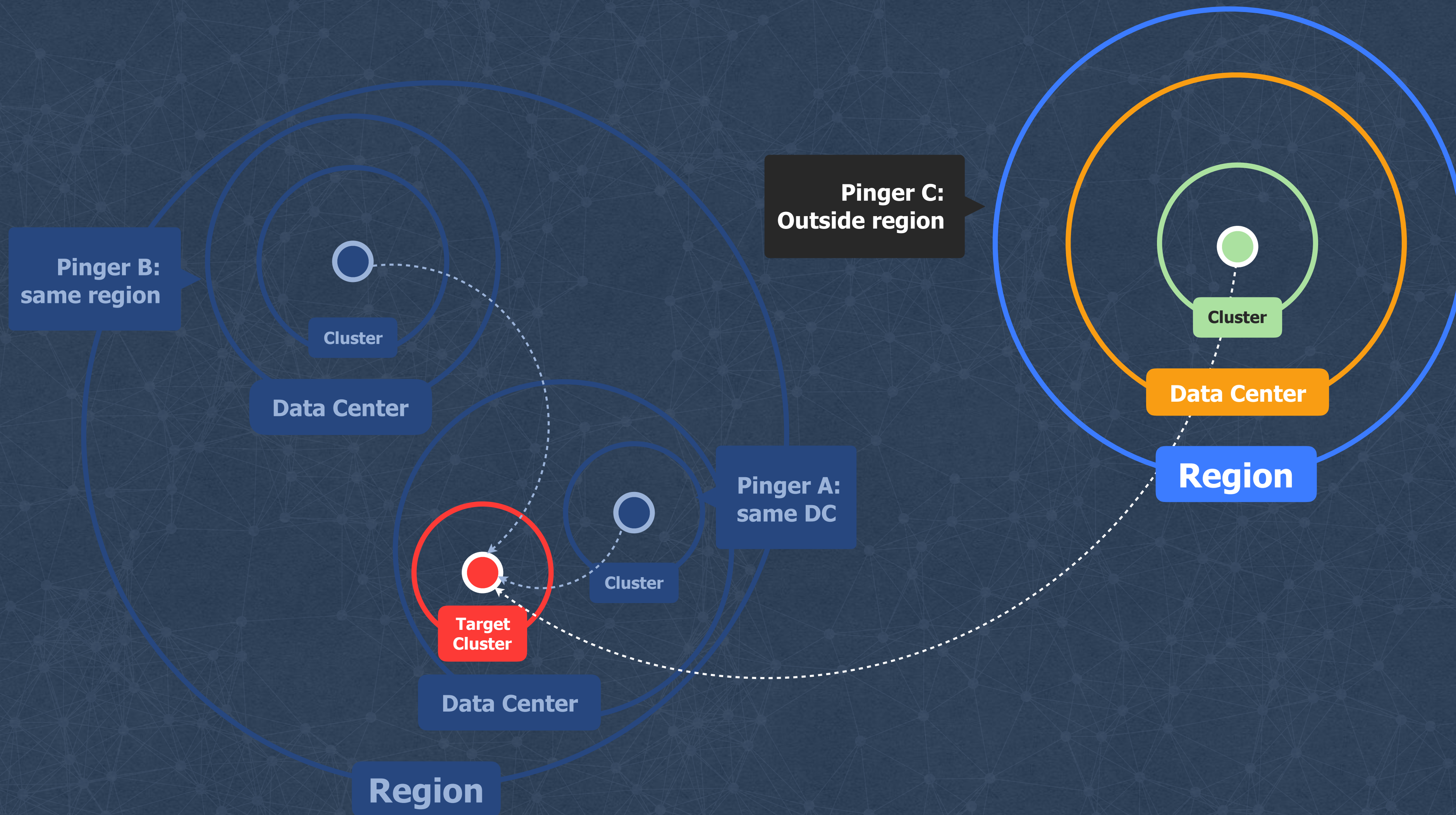
Pinging the clusters



Pinging the clusters



Pinging the clusters



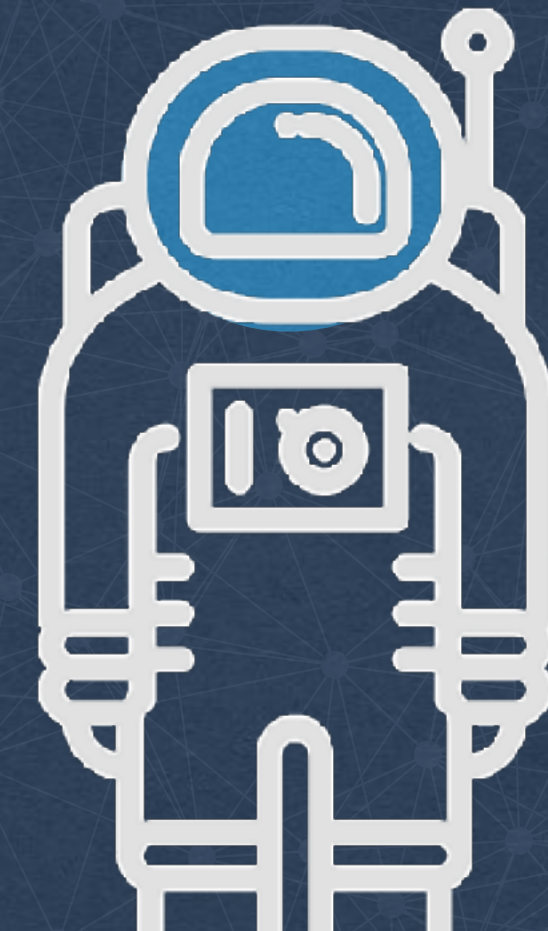
Building an Open Source version



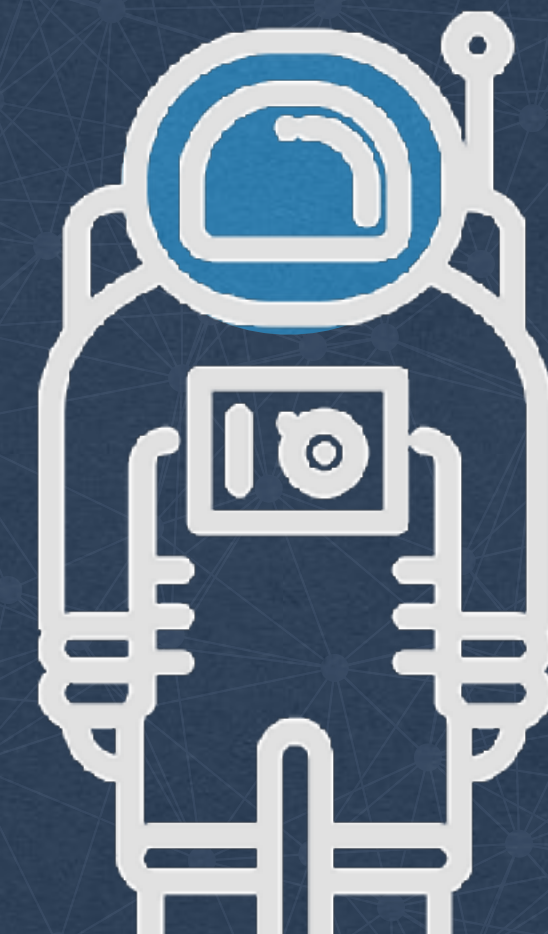
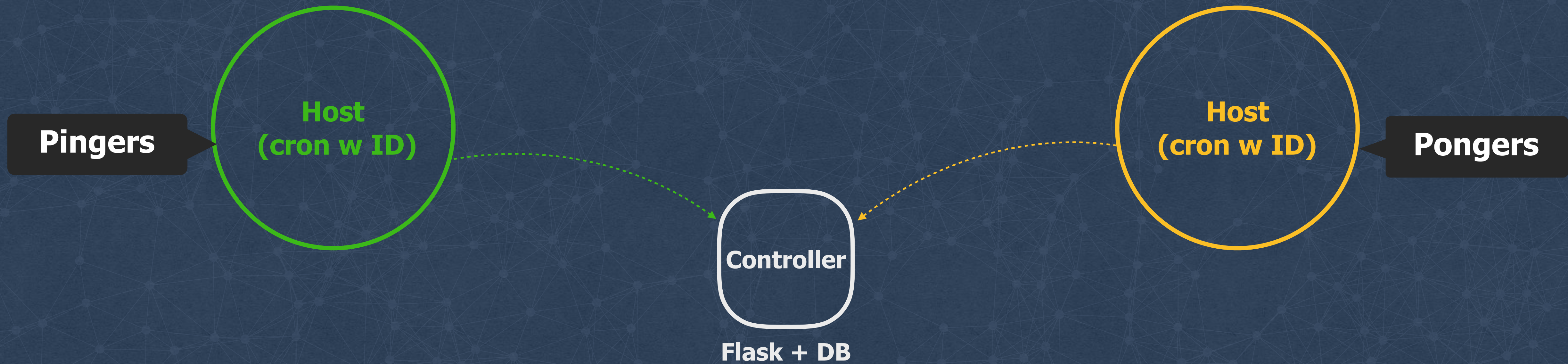
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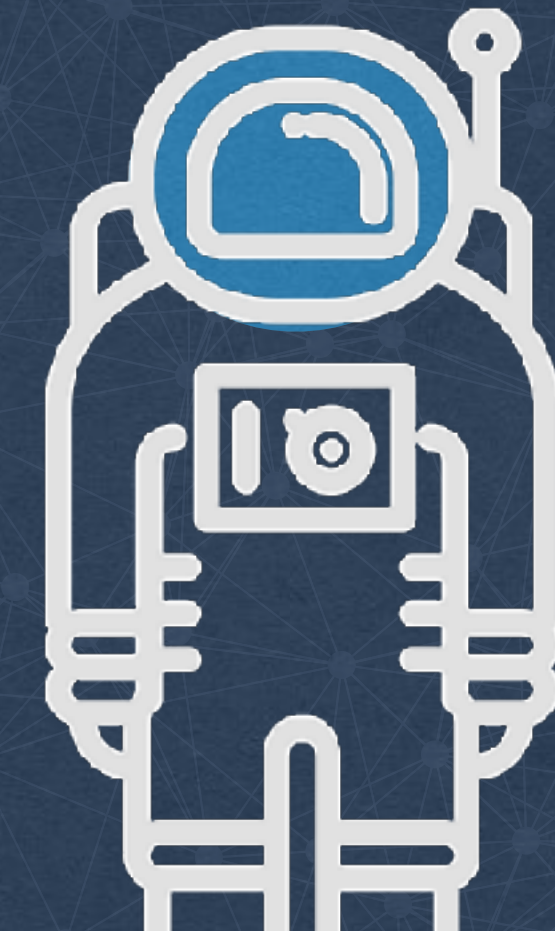
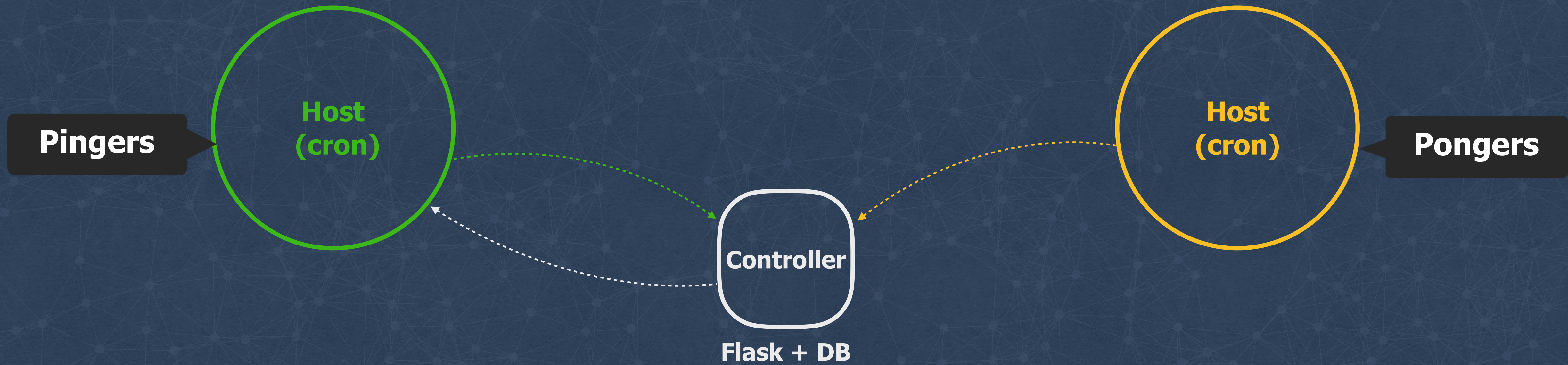
Our solution



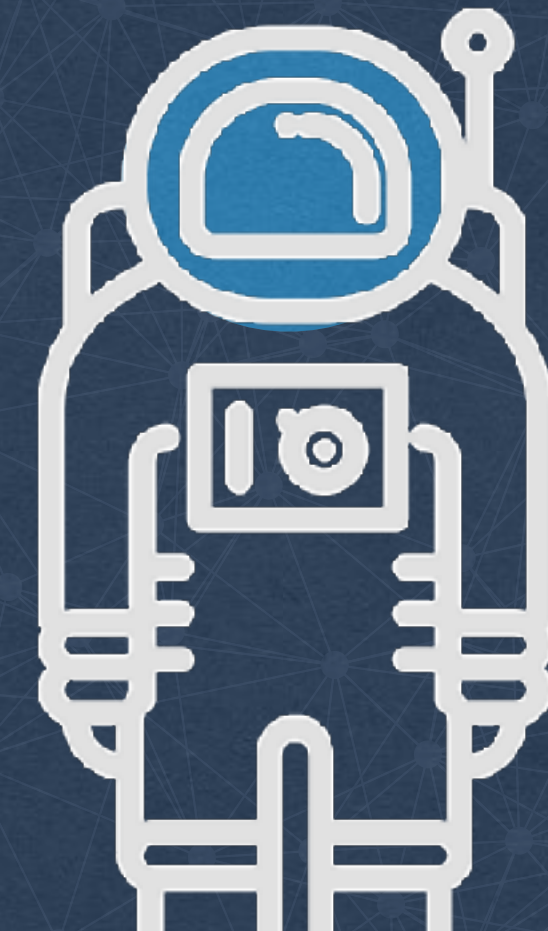
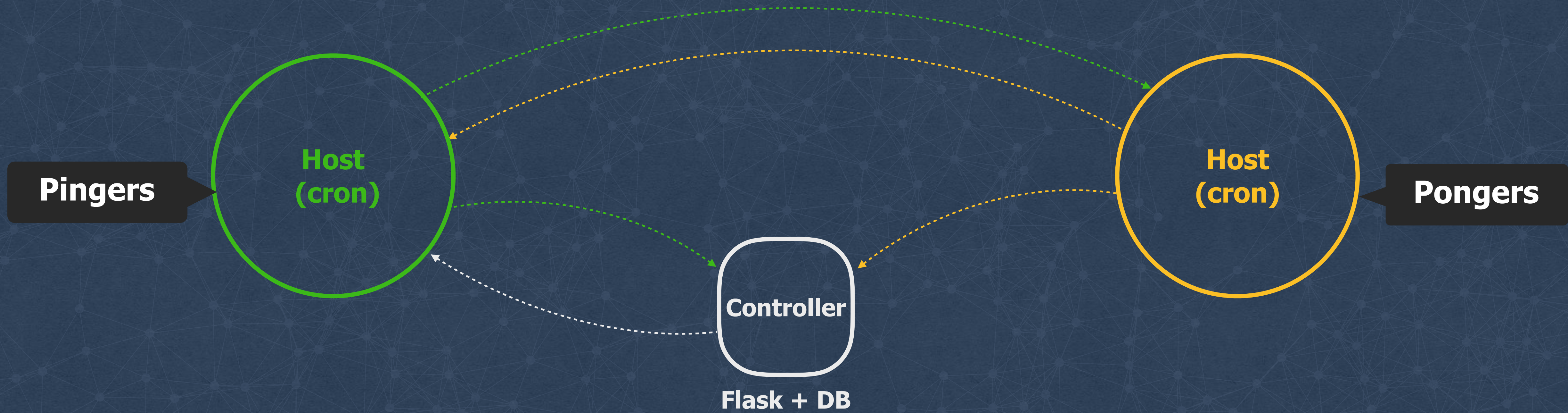
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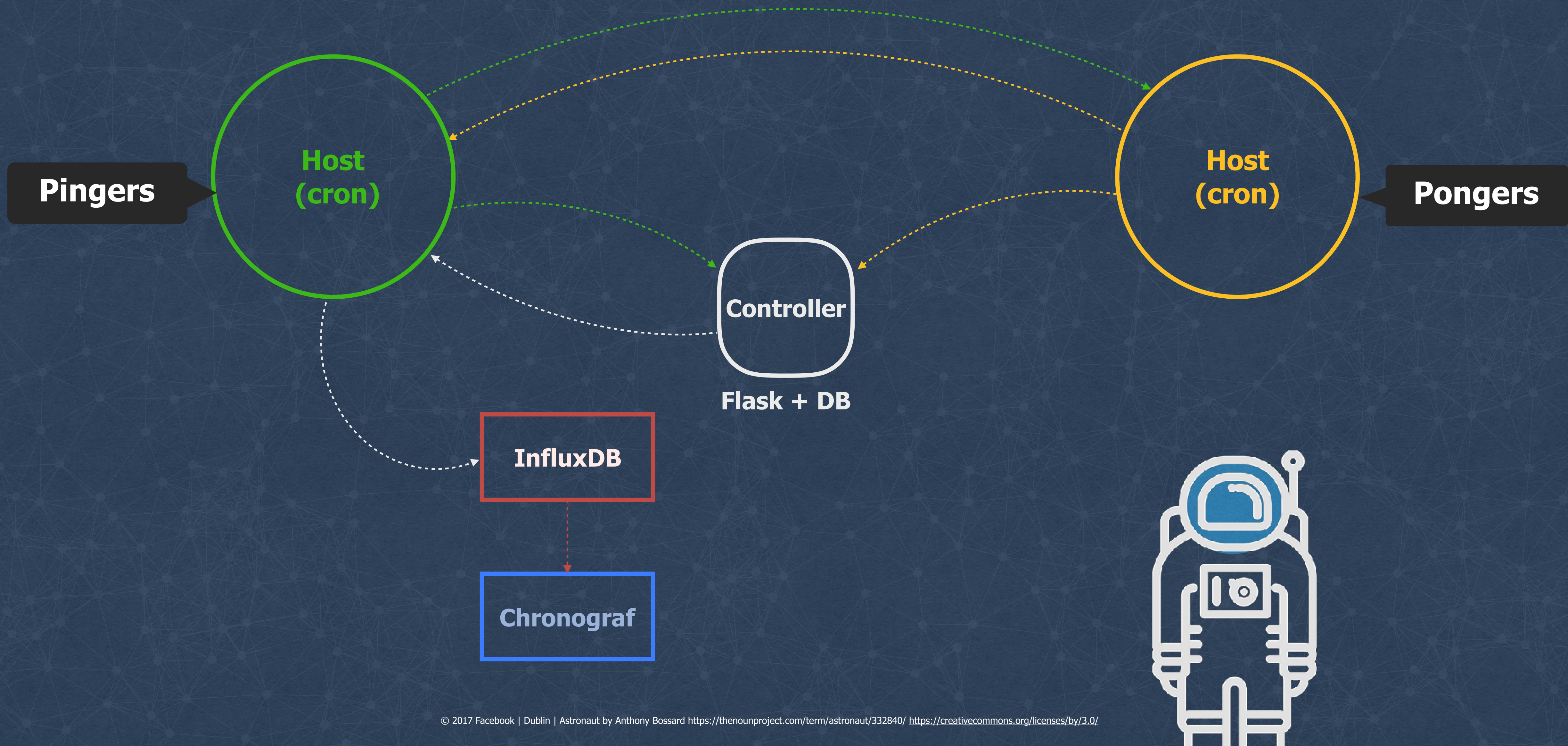
Our solution



Our solution



Our solution





github.com/fbsamples/OpenNetNorad

- Code
- Issues 0
- Pull requests 0
- Projects 0
- Insights

Sample system to manage Uping and Upong (UdpPinger) instances, used to measure / graph network latency and loss on Linux

2 commits 1 branch 0 releases 1 contributor

Branch: master New pull request Find file Clone or download

j-leitao committed on **GitHub** Update README.md Latest commit dd2a32e 15 days ago

chronograf	first commit	15 days ago
debian	first commit	15 days ago
pong_logger	first commit	15 days ago
scripts	first commit	15 days ago
CONTRIBUTING.md	first commit	15 days ago
LICENSE.md	first commit	15 days ago
PATENTS.md	first commit	15 days ago
README.md	Update README.md	15 days ago

Code

Issues 0

Pull requests 0

Projects 0

Insights


Branch: master

OpenNetNorad / debian /

Create new file

Find file

History

 j-leitao first commit

Latest commit 54306fe 17 days ago

..

 [libfolly-dev_57.0-1_amd64.deb](#)


first commit

17 days ago

 [libfolly57.0_57.0-1_amd64.deb](#)


first commit

17 days ago

 [thrift_1-1_amd64.deb](#)

first commit

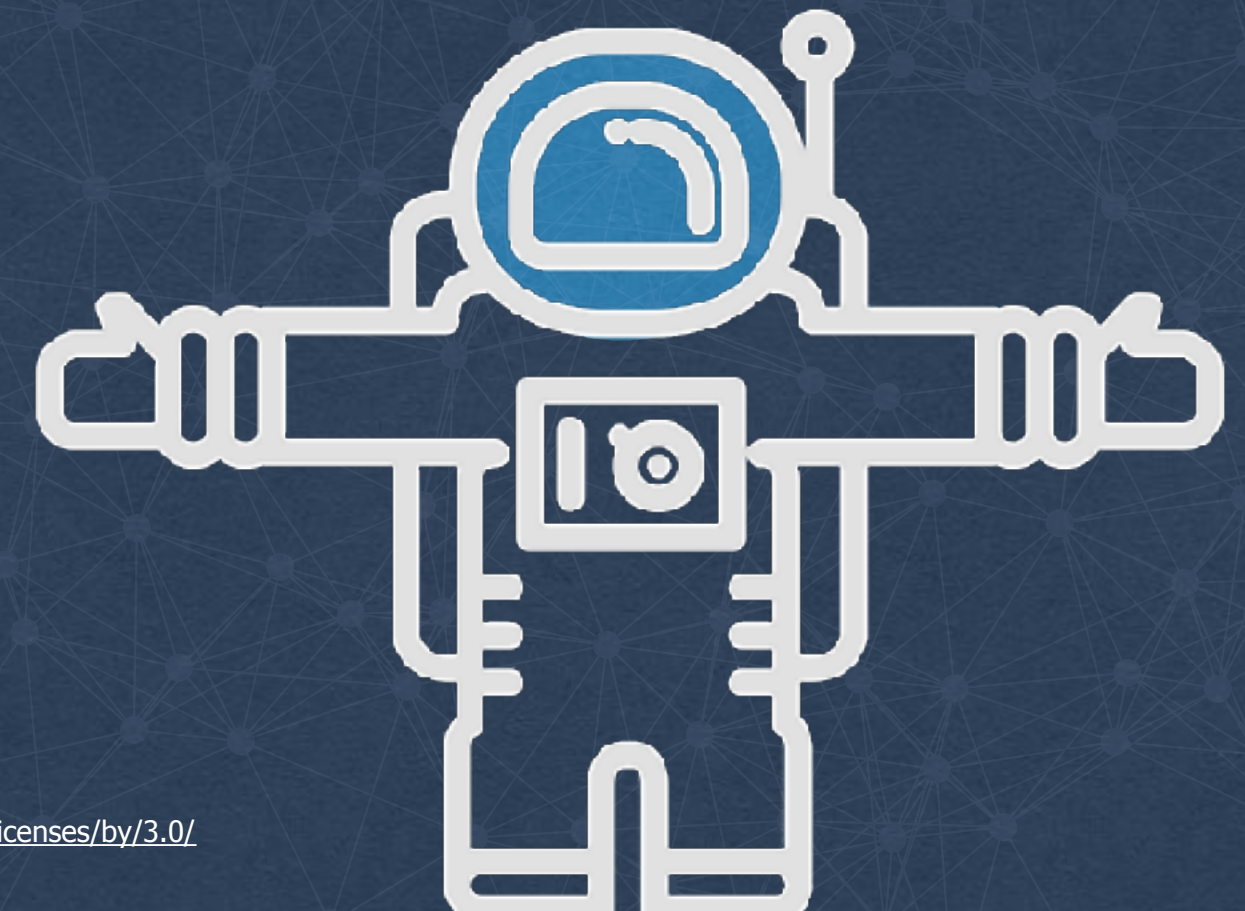
17 days ago

 [udppinger_1-1_amd64.deb](#)

first commit

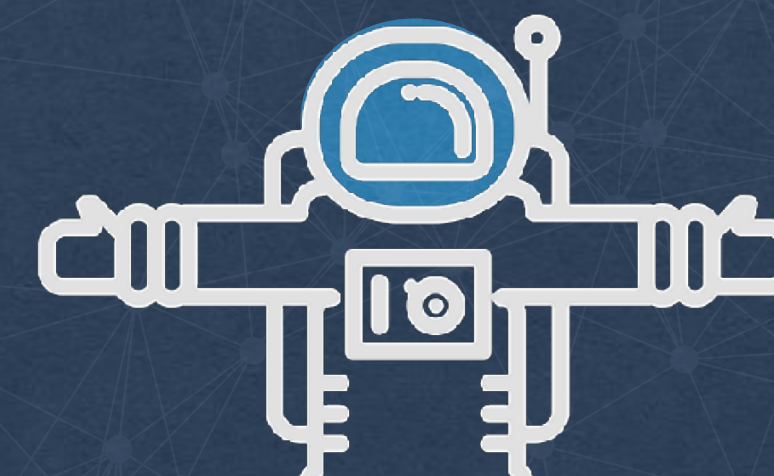
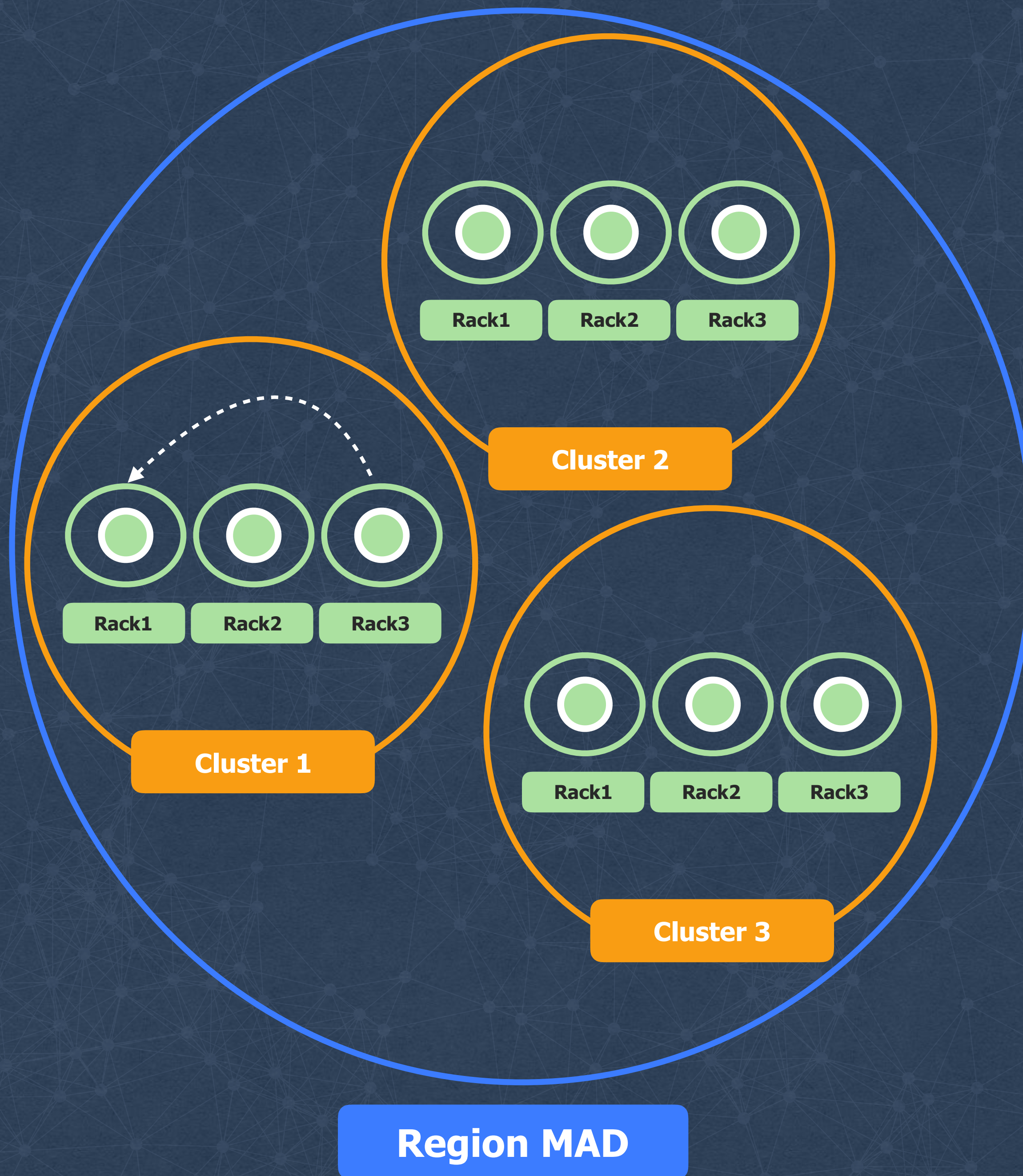
17 days ago

Demo

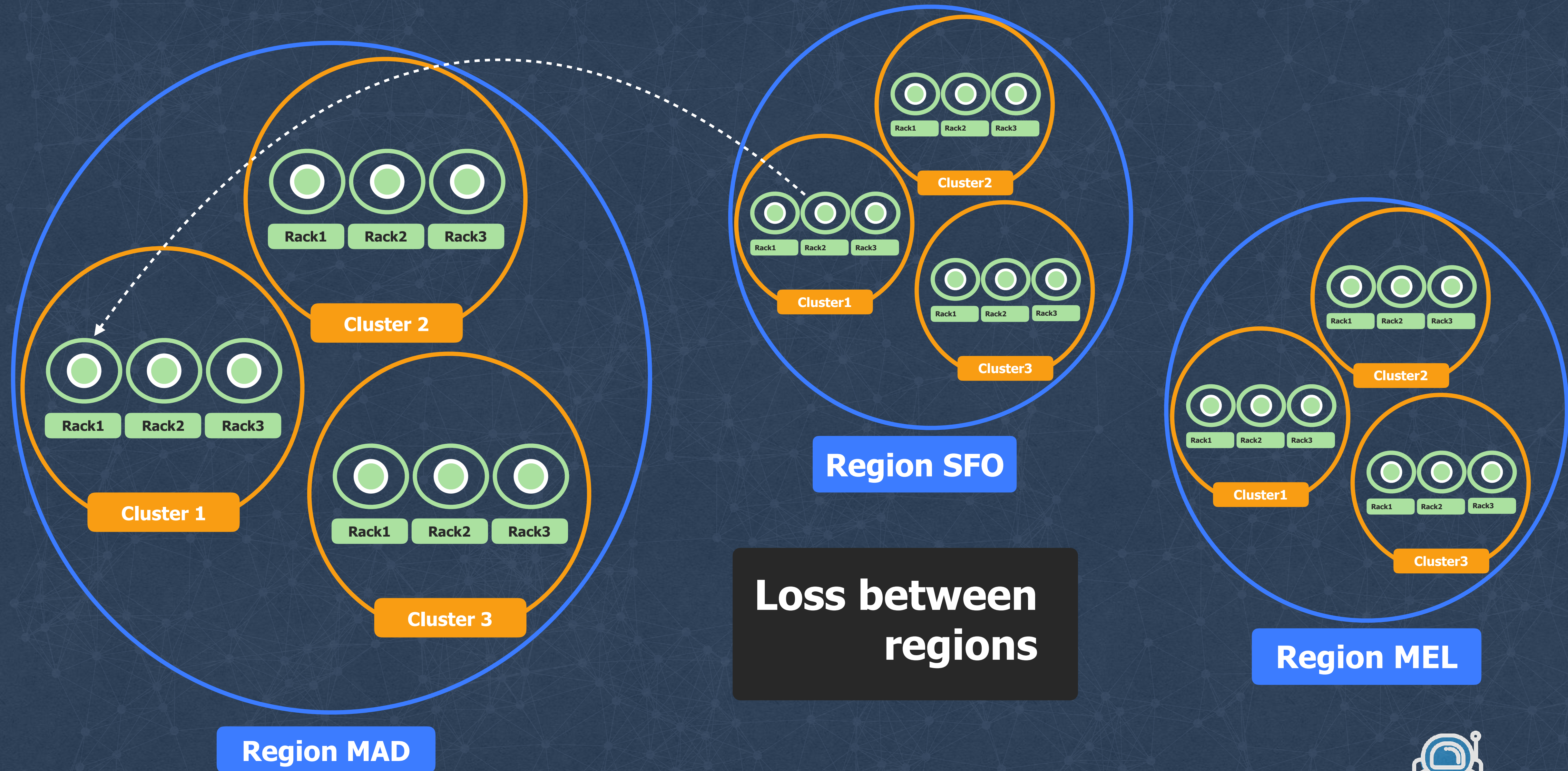


Demo

**Loss within
the same
cluster**



Demo





Q&A

