TOPGUN

multi terabit DPI

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About me

Leo Yuriev

- programming for 20 years
- sometimes while hacking

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BigBrother Matrix R&D is…

PETER-SERVICE

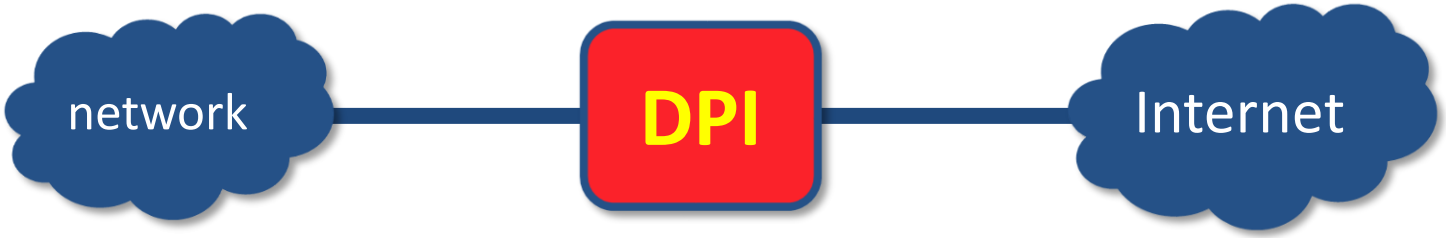
20 years
solutions for telecom
full lifecycle
≈ products serves 100M clients
≈ 1K employees

Agenda

1. ethics and legality
2. why & what for ?
3. how does it work ?
4. use cases
5. let’s **HACK** ?

WTF DPI?

http://en.wikipedia.org/wiki/Deep_packet_inspection



1. raw packets, a lot of…
2. inline or on-copy
3. flow ≈ from SYN to FIN

ethics and legality…

1. DPI – is just a method, **no bullshit**
2. ethics & legality – is **completely** defined by a task and purpose
3. peeped in the payload – got a DPI
4. 100500+ use cases

topgun – why & what for ?

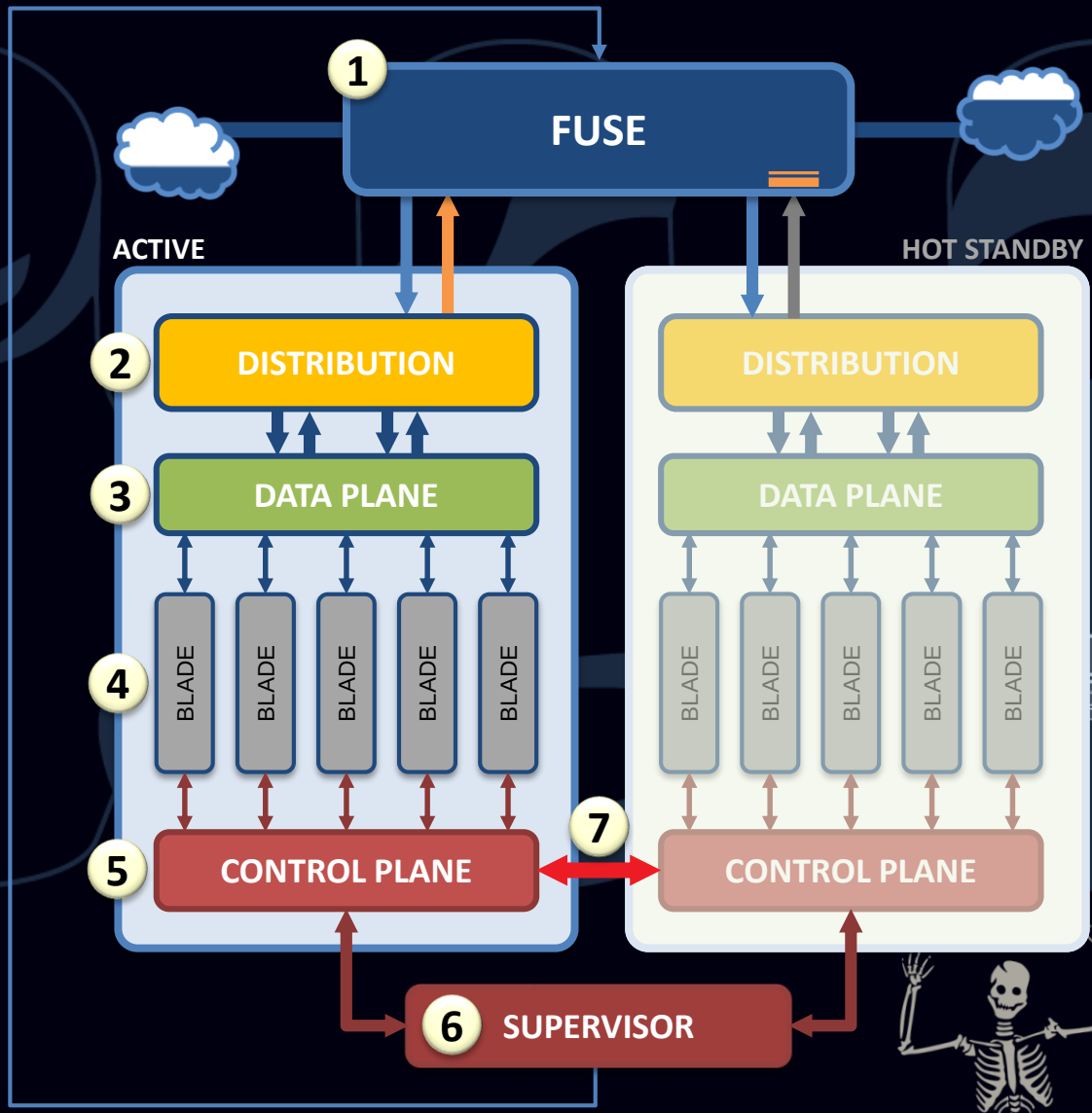
1. competitors have problems
2. fixed scope, poor scalability
3. depending on a hardware, vendor lock-in, beetles ;)

topgun – how does it work ?

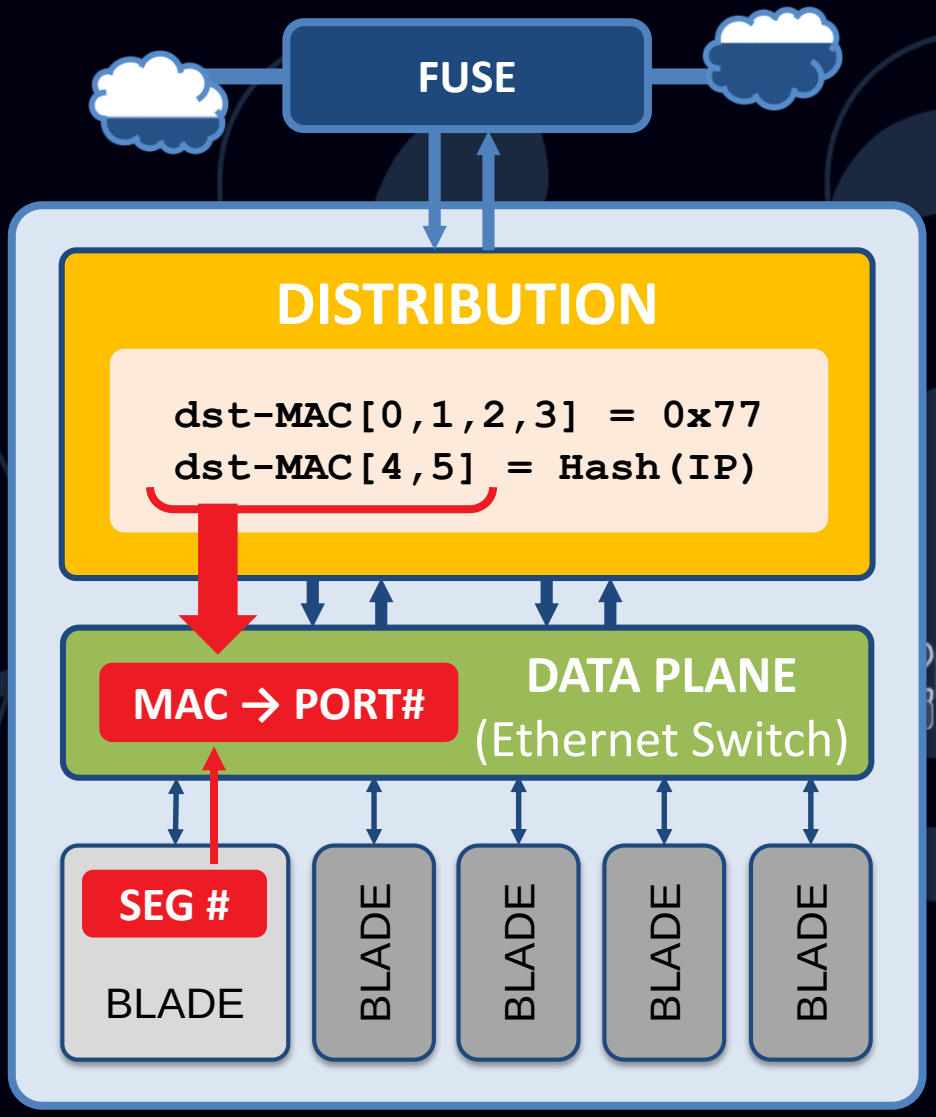
just awesome cool ;)

1. MAC rewrite + L2
2. Swarm Intelligence
3. FSM with replication

skeleton

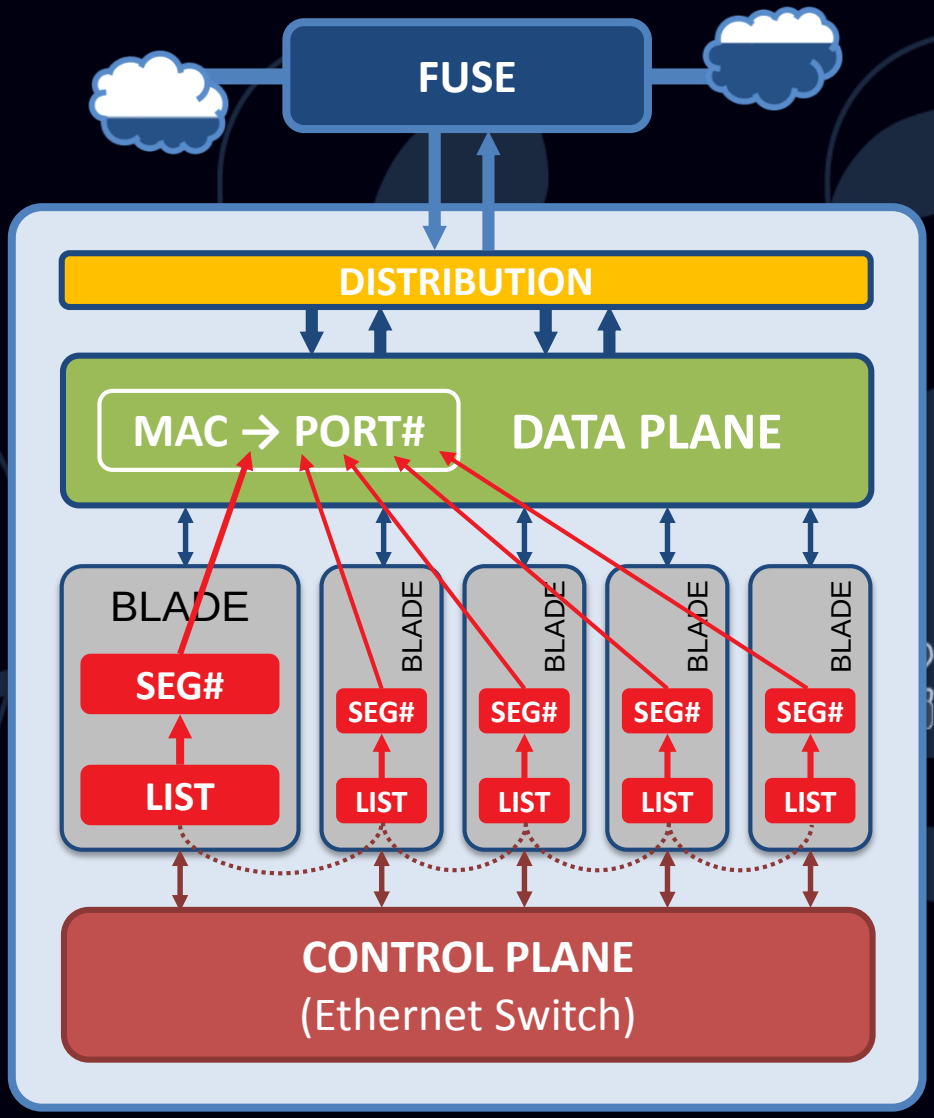


workload distribution

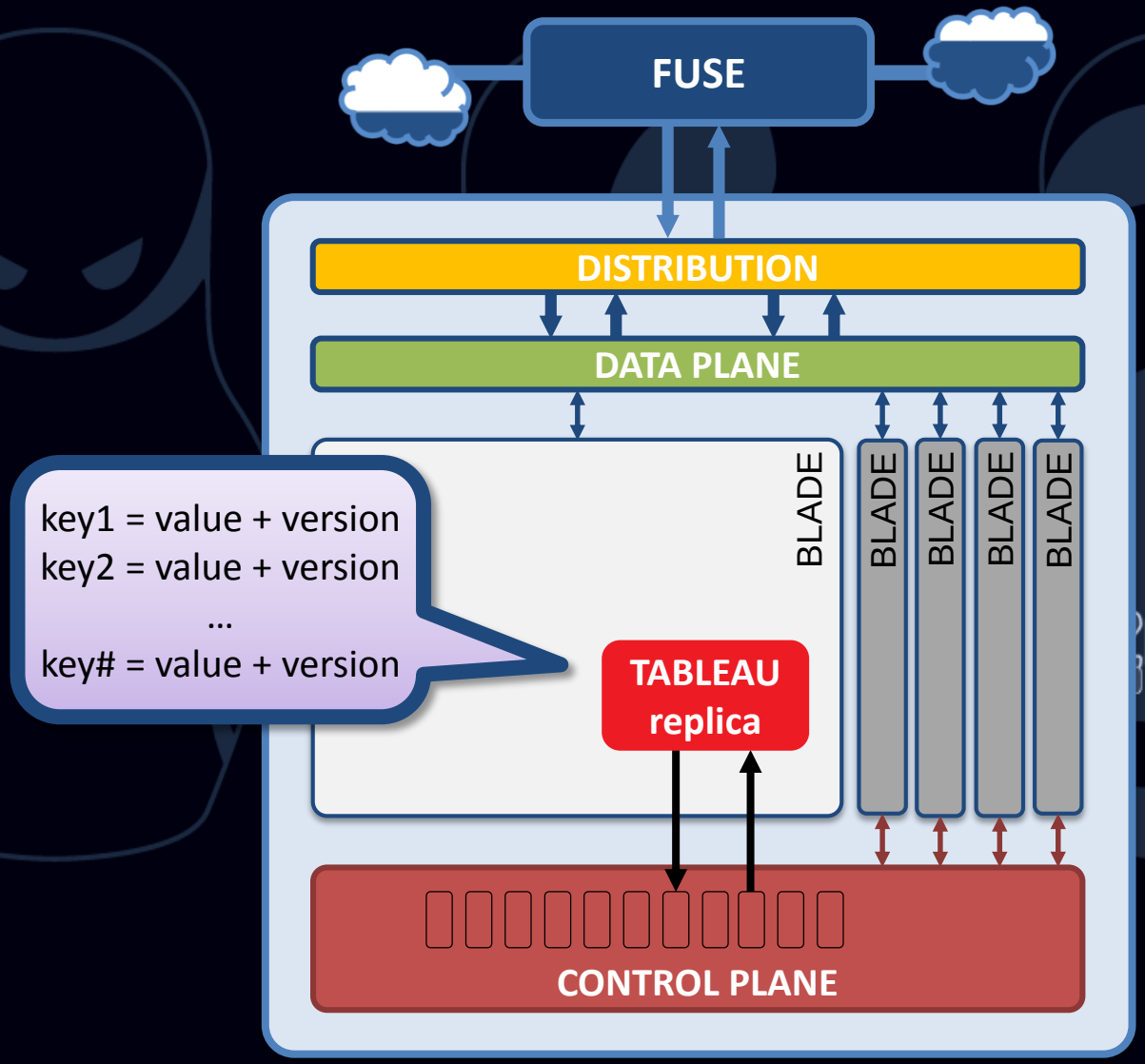



swarm intelligence

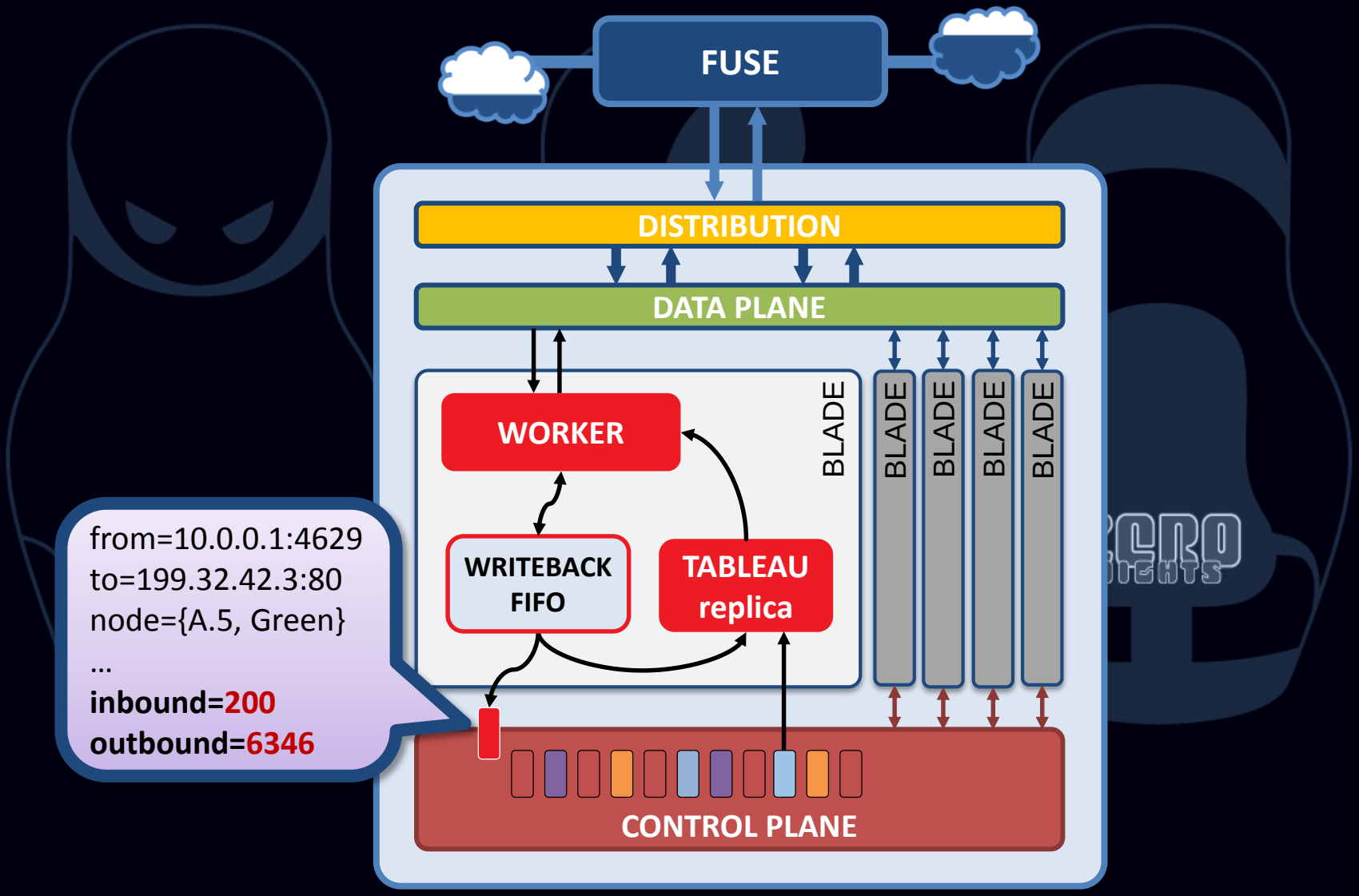
swarm #1: balancing



swarm #2: tableau



swarm #3: do it



topgun – where to buy…

oops, offtopic !

1. no product now
2. details
3. currently just talking

topgun dpi will...

Monitoring & Protection

IDS / IPS,
Transport / Signalling,
Overload

GSM / UMTS / LTE

PCEF, TDF, ...

Control

QoS, Policing,
Shaping, Filtering

+100500...

Useful Protocol Detection

Shaping

Deep Filtering

commodity hardware

wide application scope

extend by demand on the fly

let’s HACK ;)

1. cherry-pick single worker
   …by known hash-distribution
   © Alexander Lyamin %)
2. SYN flood
3. IP-fragment flood
4. deceive classification
5. bypass HTTP filtering
6. **your turn…**

topgun – main benefits

1. **elastic**: performance scalability, wide application scope
2. **expandability**: by demand, on the fly, just connect hardware
3. **enhancement**: by demand, non-intrusive two-step, new soft in a new server