

The background of the slide is a dark blue grid with a pattern of binary code (0s and 1s) in a lighter blue color. In the center, the text "IPv6" is written in a large, white, outlined font. The text is enclosed within a white, stylized circular frame that resembles a gear or a network node.

IPv6

That is why Rabobank has IPv6

External facing IPv6

Friso Feenstra Network Specialist



Rabobank

Why IPv6



2014 investigation:

- Is IPv6 necessary for our corporate websites (www.rabobank.nl)
- Is IPv6 necessary for our internal network

Why IPv6



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My expectation:

NO !!!!

No IPv6

Why IPv6



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internal addressing:

private (17 million addresses)

external addressing:

Rabobank IP space

145.72.0.0/16 (65.000 addresses)

Internet for office

NAT₄₄ to provider IP space

Migration costs

time and money

Migration

Risk

Why IPv6



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Still investigation for

Are there reasons for IPv6 for Rabobank?

Investigation: Why IPv6



- What happens with IP addresses for
 - Web sites
 - Third parties
 - Customers
- If we stay on IPv4 will we miss something
- Can we postpone migration for the coming years:
 - Other parties can get the experience
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But what about financial web sites in countries with little IPv4 space???

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For the coming years no problem:
Communication with NAT
or proxy in DMZ

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New customers?
New networks?

Investigation: Why IPv6

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- New networks – new customers
 - G₃ / G₄
 - Wifi
 - New area's
 - Mergers
- IPv₄ NAT is used as solution
 - Expensive solution
 - Not for all customers
 - Recovery after disruption
- Alternative: IPv6 + IPv₄ NAT
 - Because all main content is available on IPv6

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Is that a
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Investigation: Why IPv6

More customers behind IPv4 NAT. Problem??



Rabobank

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- Security Operations Centre

"The majority of the SOC tooling for protection of customer traffic becomes unreliable of unusable"

Reason: Tooling is often based on IP addresses, for instance blocking one IP address leads to blocking whole groups of customers

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- VCM (Virtual Channel Monitoring), within FEC

"More then 15% customers traffic behind provider NAT is not acceptable"

Investigation: Why IPv6

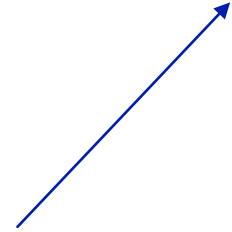


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- Features
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 - Web sites
- That we need!!!

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When will we know this
How much lead time do we have
Is this enough

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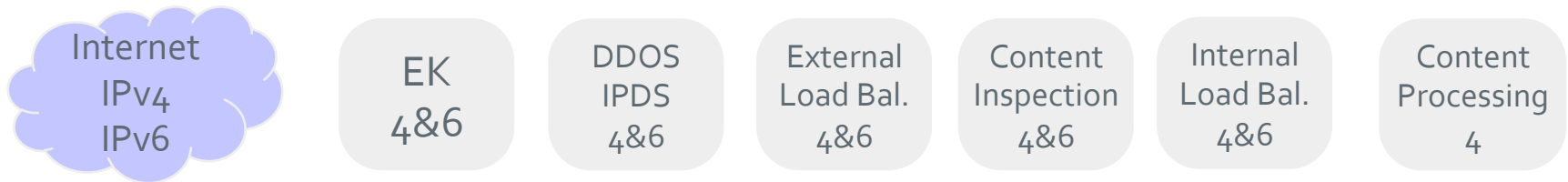
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Approach

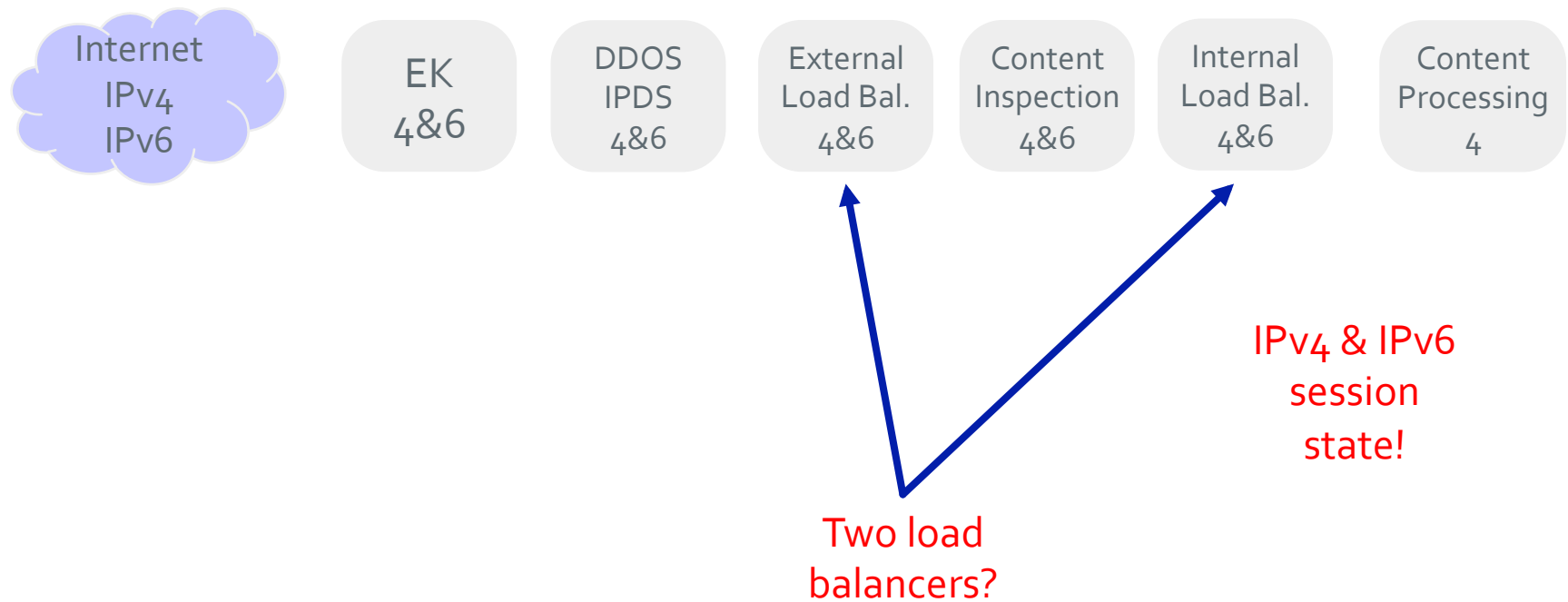


- External facing IPv6 project
 - Started Q2-3 2015
 - IPv6 until external Load Balancer
 - Multiple departments involved
 - Networking (tooling, training and technical aspects)
 - Security Operations Centre (monitoring, DDOS mitigation, IPDS, etc.)
 - VCM (rapporting, fraud prevention, anti-physing), etc.
 - Project per department for department acvities with governance project for communication and time lines
 - Finished www.rabobank.nl → 2a02:cc4:2000::10
- IPv6 internal project
 - Planned to start in 2017
 - Three levels (network, platform, applications)
 - Target network + platform → dual stack; applications is possible IPv6

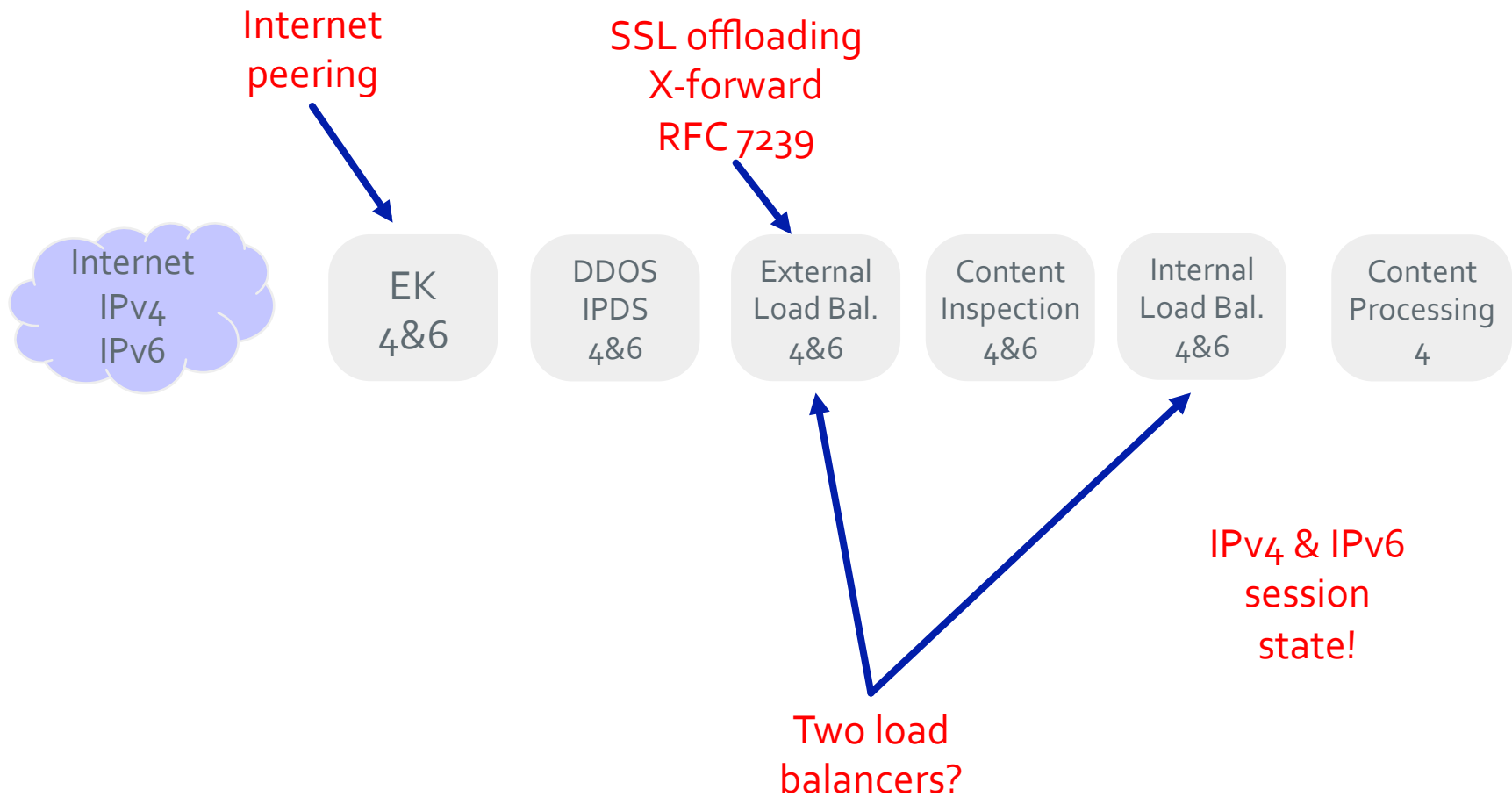
Topology for main external facing Rabobank web sites



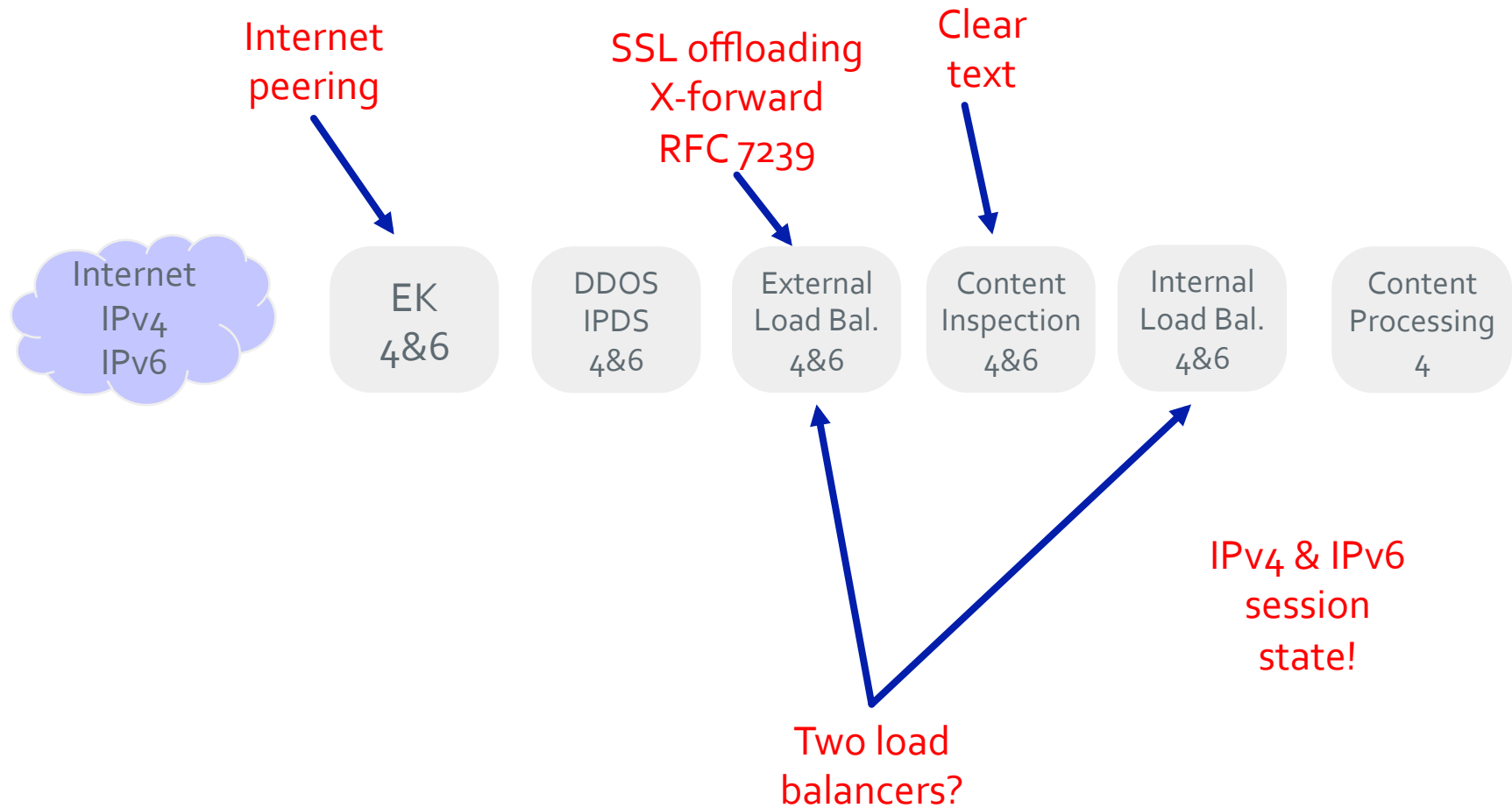
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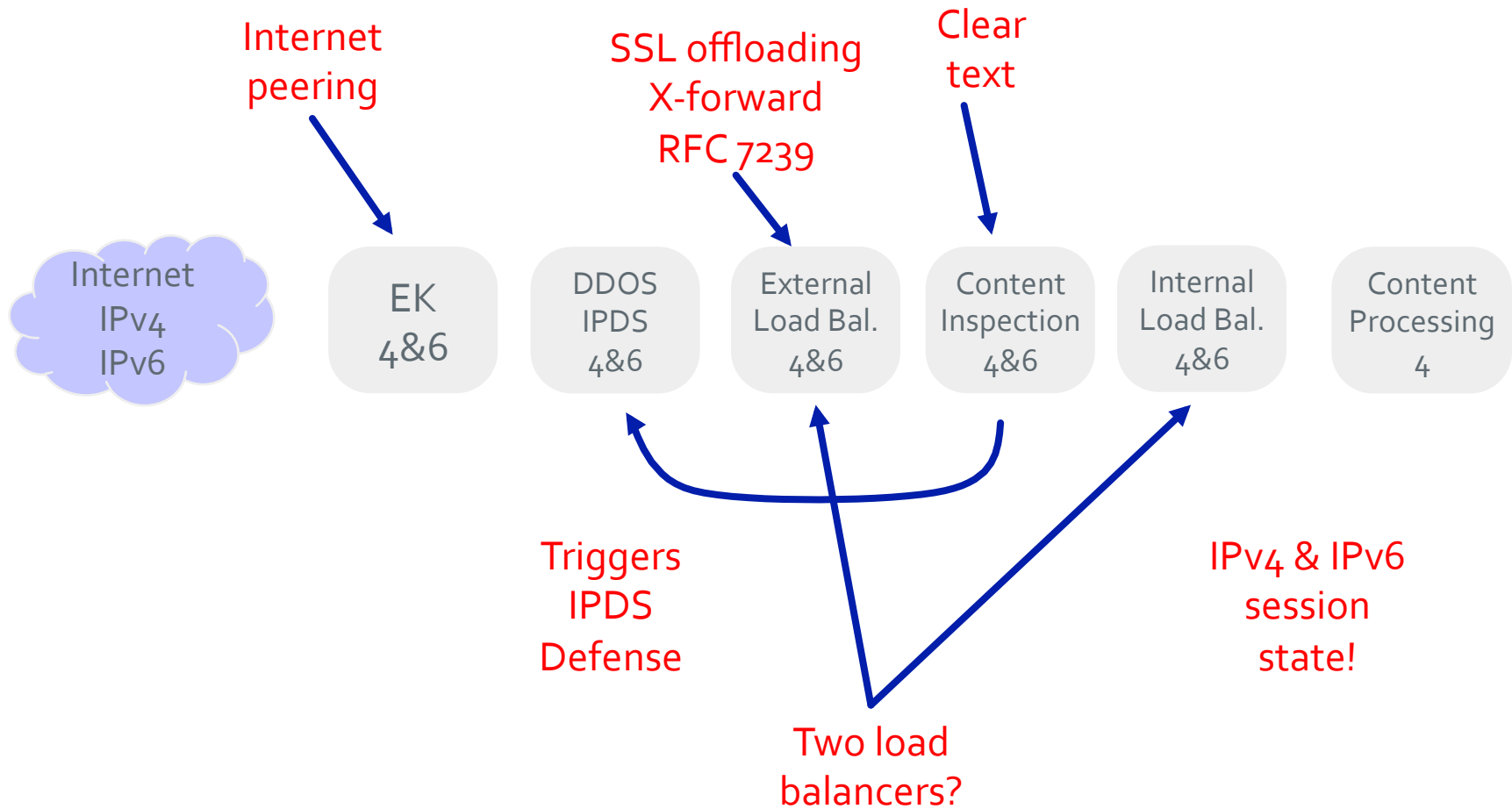
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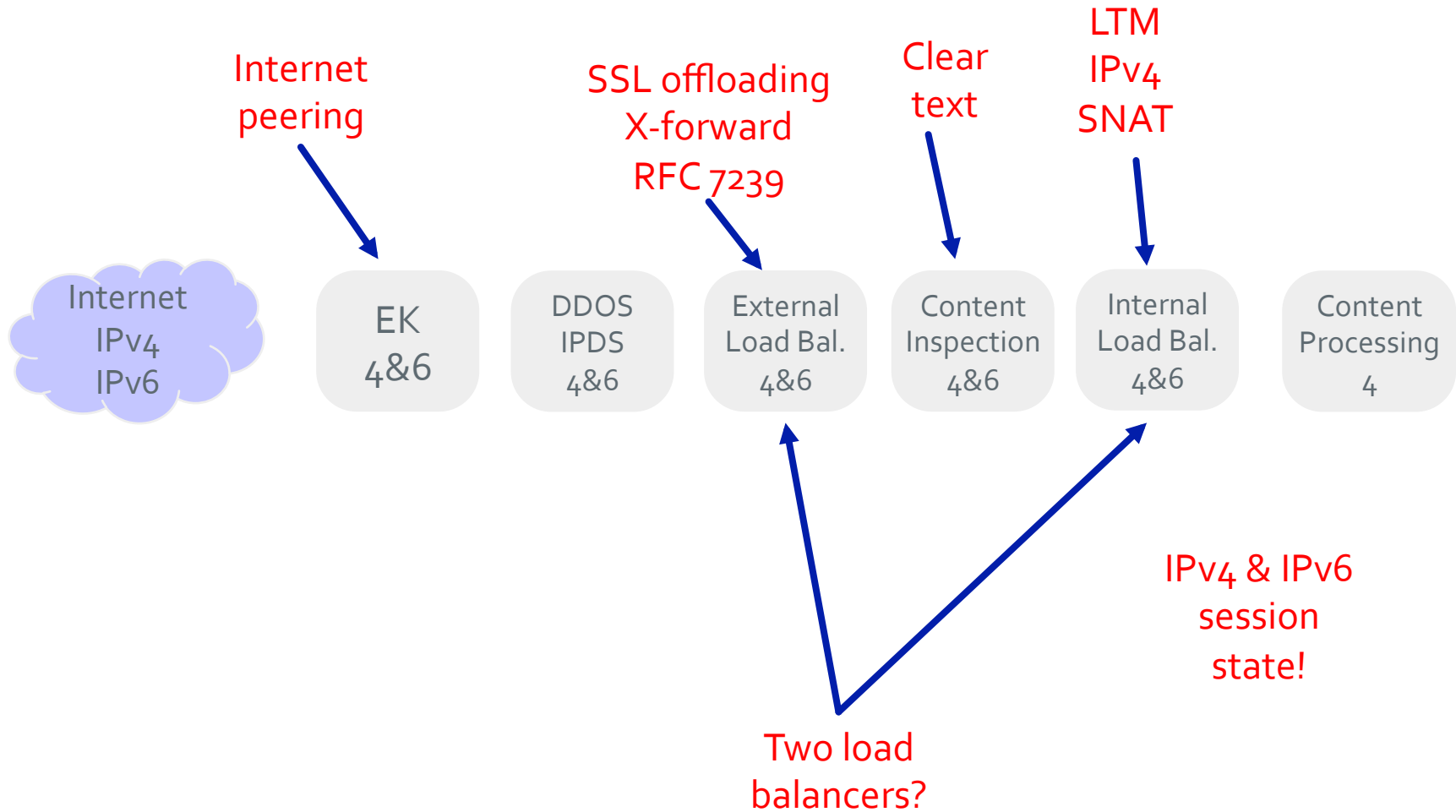
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Q&A???