

# Programmable Networking Our Journey

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Alibaba Cloud


E-Commerce

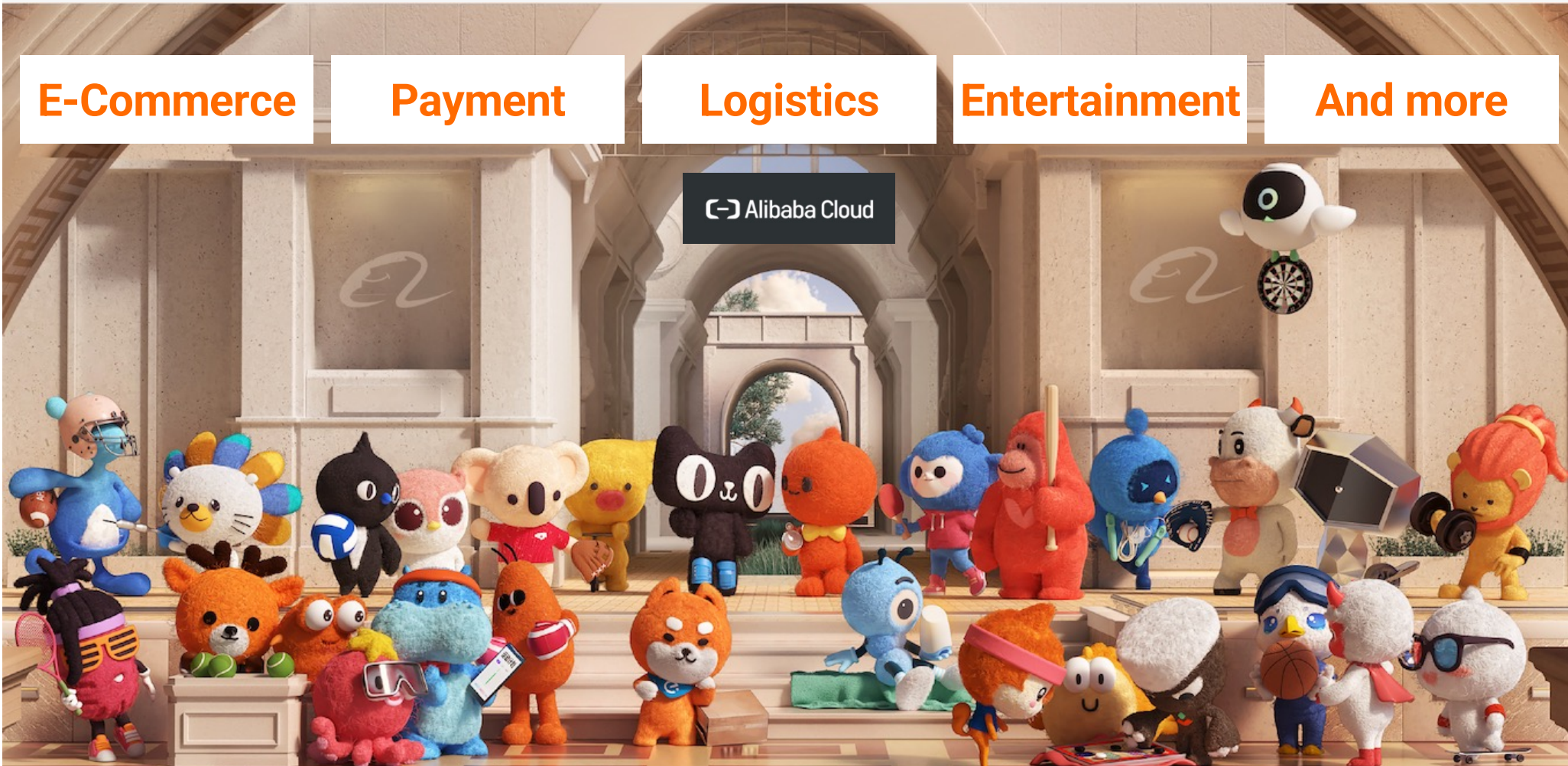
Payment

Logistics

Entertainment

And more

 Alibaba Cloud





# Alibaba Cloud

## Services

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Compute  
Storage  
Networking  
Databases  
CDN  
AI  
...

## Reach

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60+ regions  
20+ zones  
70+ countries  
6 continents



Global Infrastructure

# Networking in the Era of Cloud Computing

## Is the enabler of the growth

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- Scale
- Bandwidth
- Low latency
- High availability
- Flexibility
- Economics
- Reach
- ...

## But with antiquated tools and mindset

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- Pair-wise
- System oriented
- OPS/management framework
- ...

# Our Journey on Network Programming

## Partnership



2016

- Telemetry
- Datapath programming
- P4

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2017

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## Gateways

2018

- Hybrid cloud gateway
- Edge gateway
- Flow control

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## Hardware, Community

2019

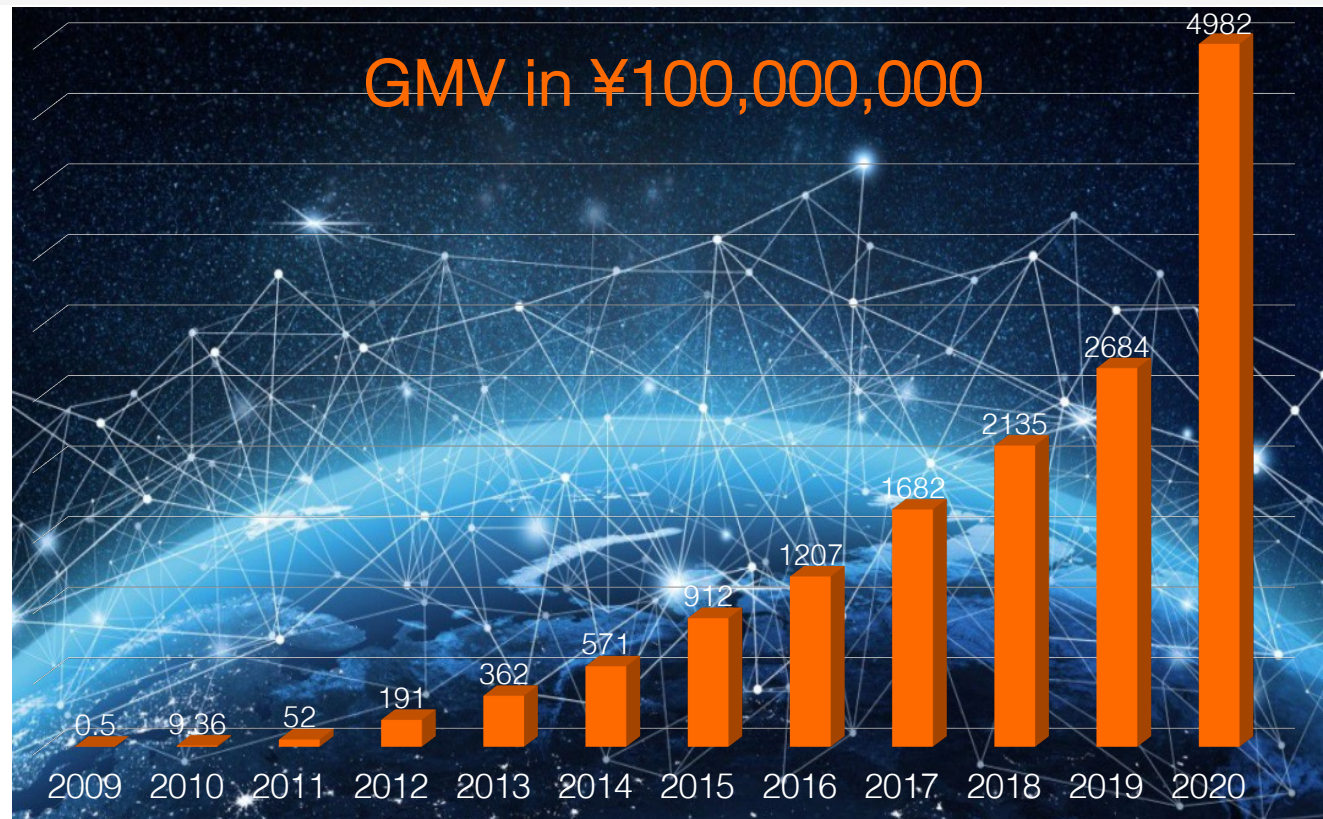
- Dedicated hardware
- Unified OS platform
- Advanced tooling
- More scenarios
- Community



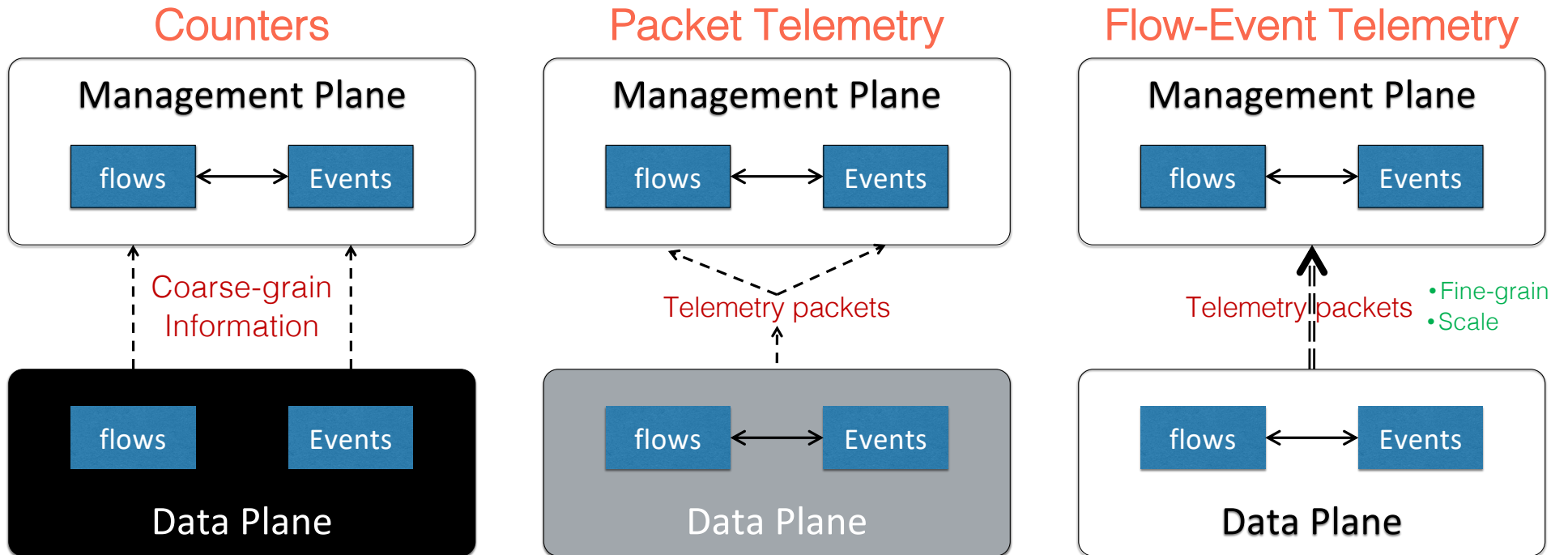
# Supporting 11.11



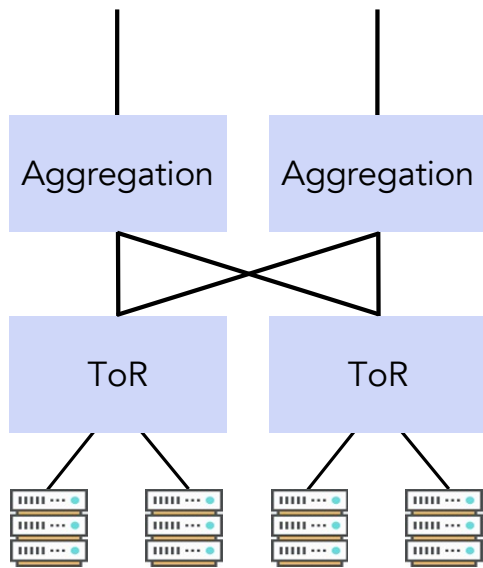
- Largest hybrid cloud
- Terabits per second
- Virtualization, Security
- Global reach



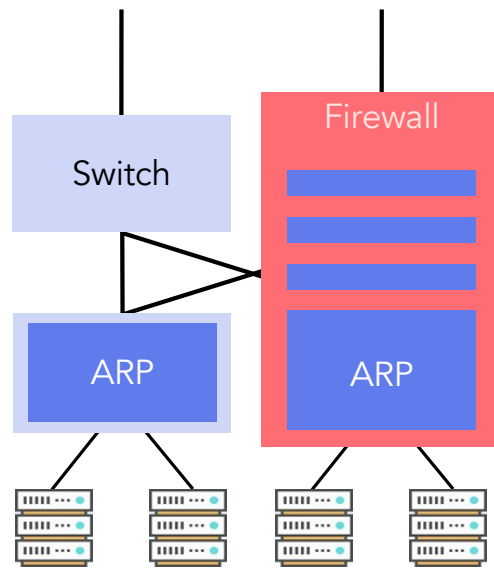
# NetSeer: Flow-Event Telemetry



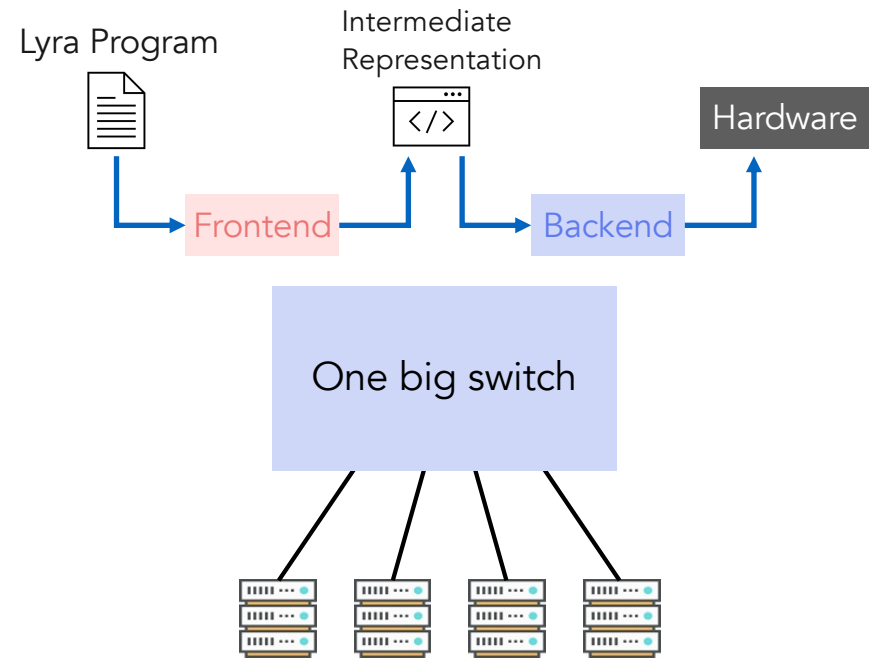
# Lyra: One Big Pipeline Abstraction



Per-switch model



One-big-pipeline model



One-big-switch model

# Our Holistic Approach



## Platforms

- Dedicated hardware
- Unified OS



## Applications

- Gateways
- Flow control(HPCC)
- Flow-Event Telemetry



## Tools

- Compilers to reach platform independence
- Network wide verification

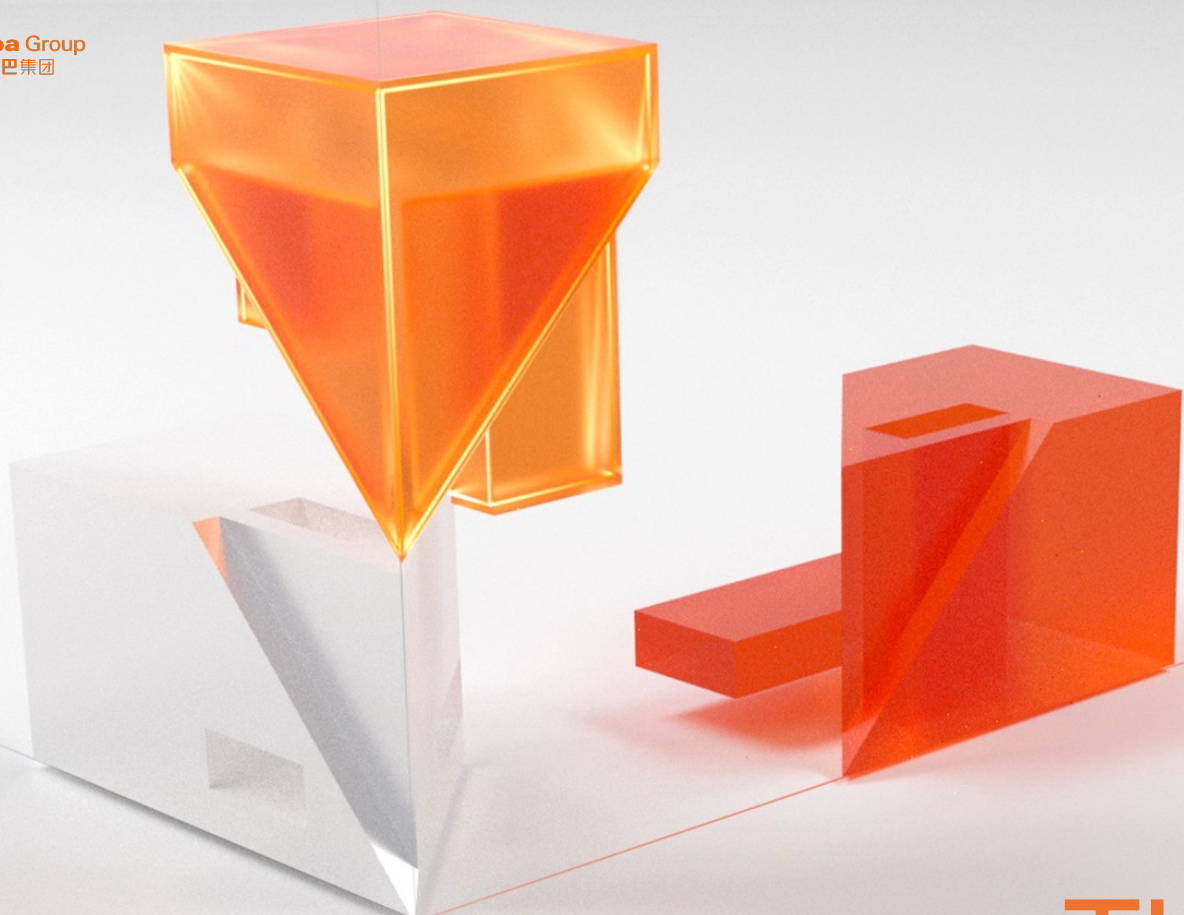
Communities

An abstract graphic featuring a large, stylized orange shape that resembles a letter 'U' or a similar curve. The shape is composed of multiple overlapping layers, creating a sense of depth and movement. The colors range from bright orange to a lighter, almost white, at the bottom. A thin white line extends from the bottom of the shape towards the bottom left corner. In the bottom left corner, there are two small spheres, one yellow and one red, connected by a thin red line. The word "Summary" is written in a white, sans-serif font across the middle of the orange shape.

Summary

We are still just starting





THANK YOU