



2016 杭州·云栖大会
THE COMPUTING CONFERENCE

云栖社区
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Banyan NetViz

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<http://www.banyanops.com>

2016
The Computing Conference

主办单位:



战略合作伙伴:



扫码观看大会视频



NetViz is Redefining Network Analytics for Cloud-Native Applications



Outline

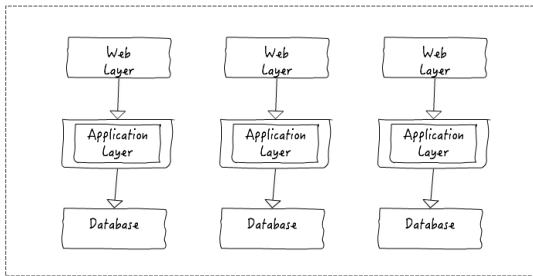
- Background and Motivation
- Banyan NetViz Platform
- Persona 1: Cloud Service Operators
- Persona 2: Security Architects
- Persona 3: Developers
- Summary and Conclusions



Cloud-native services are exploding

Traditional Infra

Datacenter



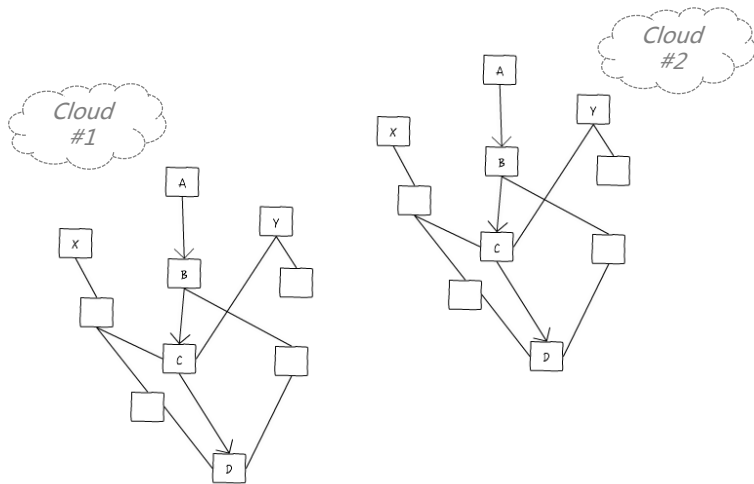
Simple, three-tier applications

Handful of services to manage

Web, AppServer, Database

Well-defined perimeter, separation of duty

Modern Infra



Distributed, dynamic, micro-services

Number and types of services exploding

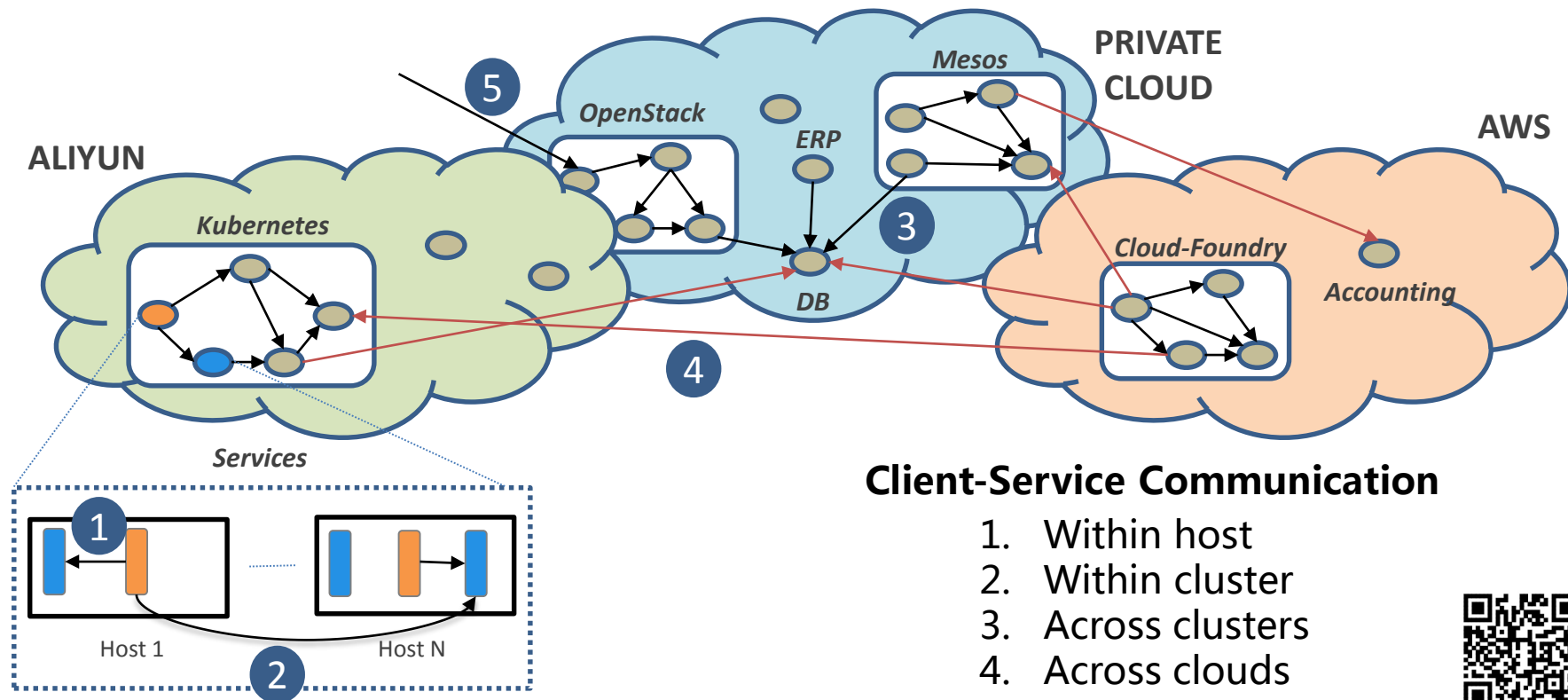
NoSQL DBs, Hadoop, Logging, Monitoring, Cloud Native

Multiple clouds, not just trusted internal network



扫码观看大会视频

Modern Enterprise Infrastructures



Cloud-native Services: Challenges

1

Security

“Blind-spots” in your network

- Hidden clients, intra-host communication, cross-cloud communication, ephemeral clients

2

Availability

Troubleshooting network issues is a nightmare

- Too many moving parts, rapid deployments, cascading failures

3

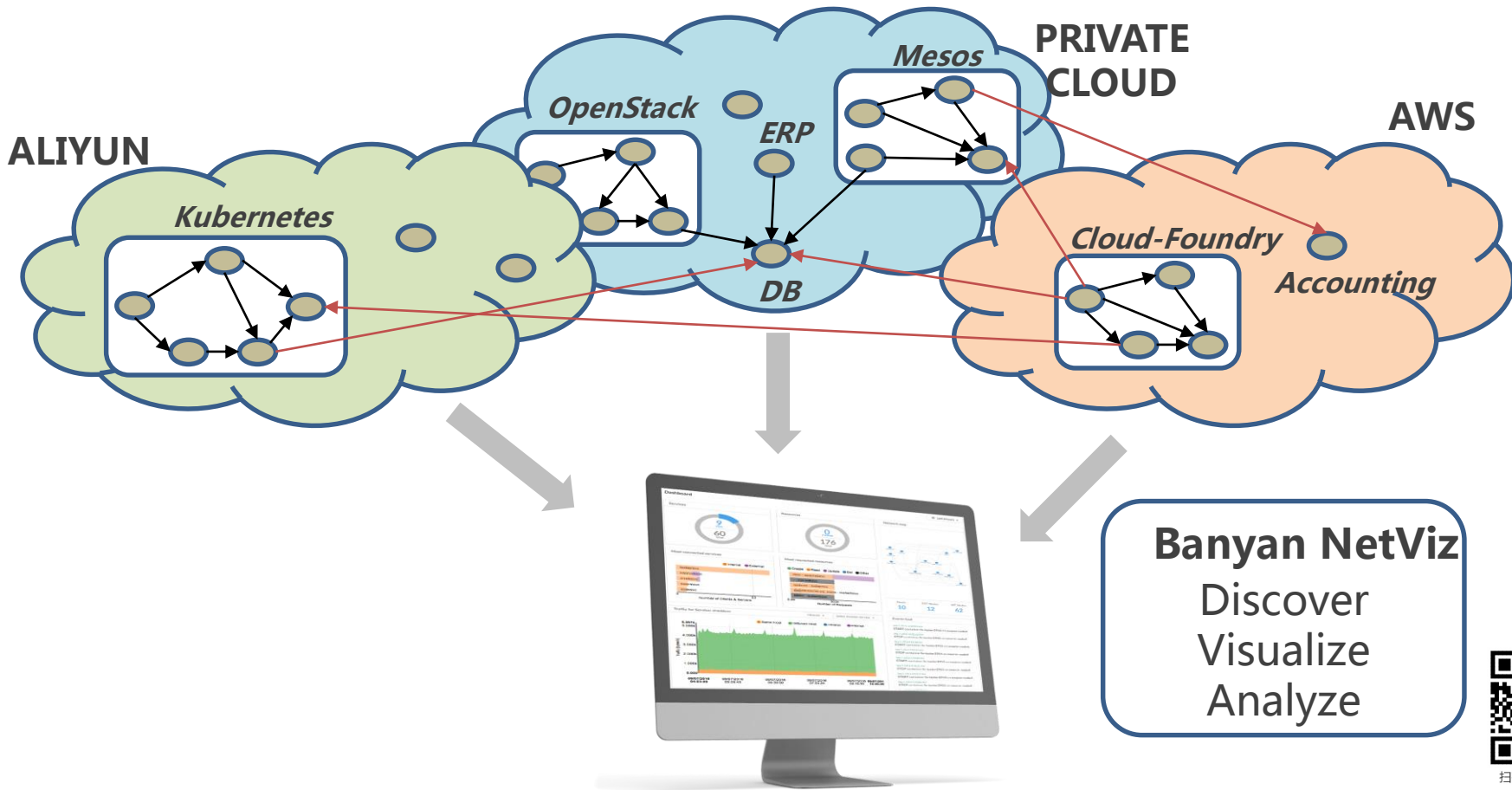
Performance

Pin-pointing performance bottlenecks due to network problems is hard

- Complex microservice interactions, new hops/latencies by breaking up services



Introducing Banyan NetViz



Background: Container Evolution.

- Physical -> Virtual -> Containers
- Containers closer to processes than VMs
- IBM, Sun, Linux, ...



Background: Microservices

- Monoliths -> Multi-tier Apps -> Microservices
- CORBA, SOA



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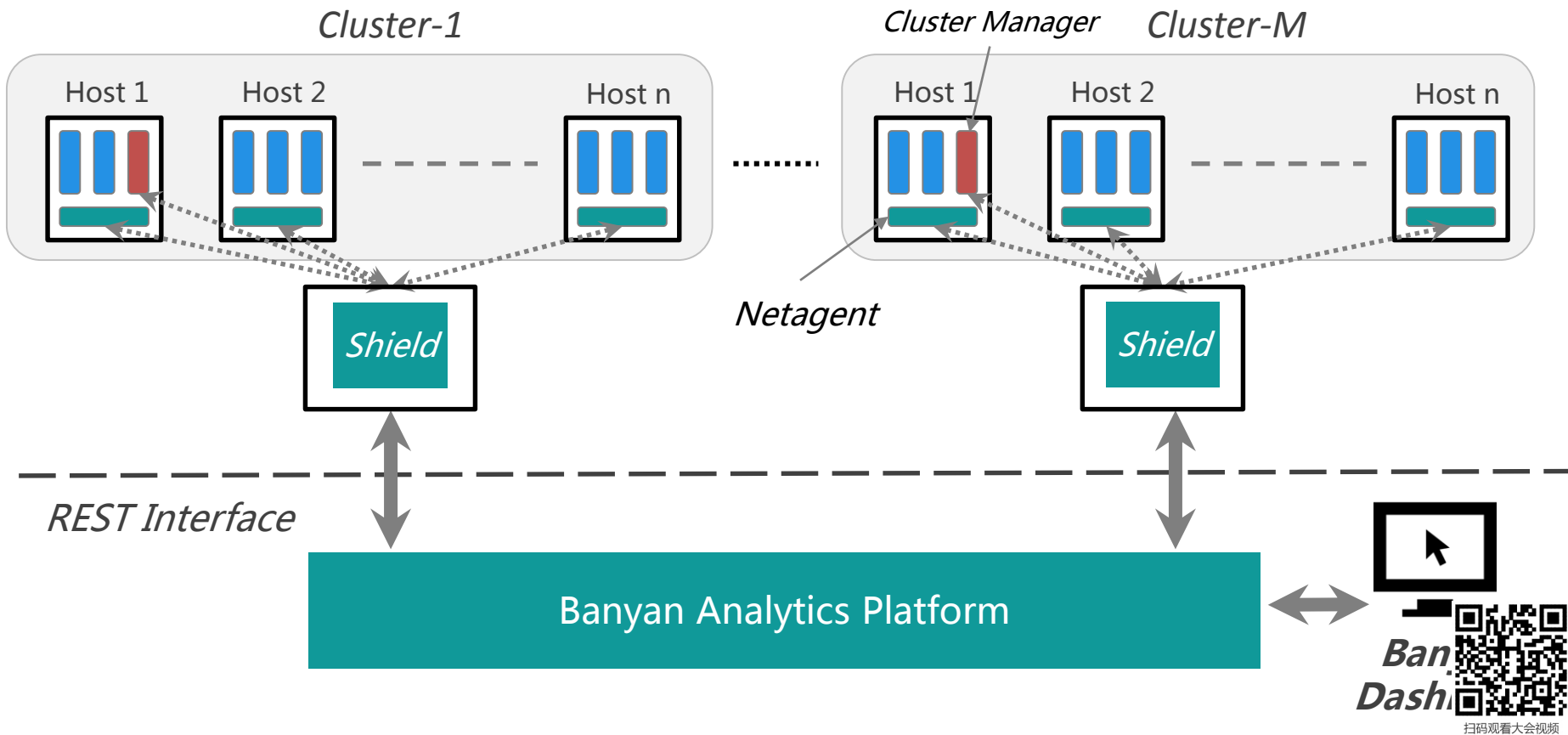


Banyan NetViz Platform

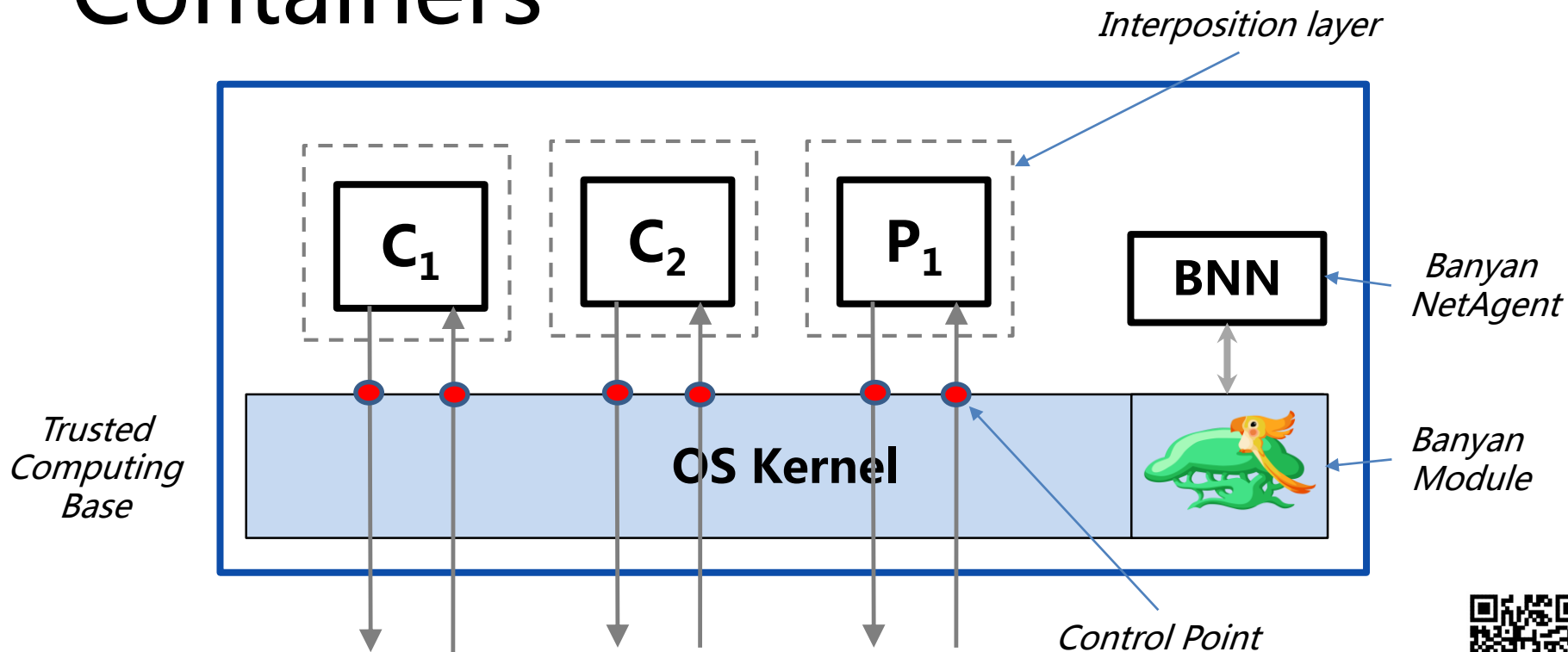
- Single pane of glass for all services
 - Old or new services
 - Within/across clouds
- Infrastructure and Application independent
 - Old or new infrastructures, any network layer
 - Portable across clouds
- Developer-oblivious
 - Transparent to applications (no code changes needed!)
 - Protocol, language agnostic



System Architecture



Interpose Processes and Containers



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Cloud-Service Operators

- Discover services
 - In all clusters, across clouds
- Visualize in multiple ways
 - Physical and logical views
 - Real-time and historical
- Analyze issues
 - Trouble-shooting downtime



Operations Demo



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Security Architects

- Get visibility into your blind spots
 - Hidden/ephemeral clients, intra-host/external communications, etc.
- Understand the “Encryption map”
 - Which links are TLS encrypted, version, cypher-suite, certificate authority, etc.
- Track suspicious activities
 - External-traffic locations/transfers, unauthorized clients, etc.





Security Demo



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Developers

- No changes to application, config files, libraries, etc.
- L7 visibility
 - HTTP and MySQL transactions (Throughput, RespTimes)
 - L7 Resources (e.g., top uris, tables, etc.)
- Visualize interactions with shared services across clouds
- Drill down to the process level for solving performance problems, etc.



Developers Demo



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Summary and Conclusions

- NetViz is not a typical monitoring platform
- Single pane for Network Analytics targeted at IT Admins, Developers, and Security Architects
- Application and infrastructure independent platform
- NetViz is just the beginning
 - We are working on several fronts, most notably security

Contact team@banyanops.com for more details!



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THANKS

