

SCTE ISBE CABLE-TEC
EXPO'16

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The Open Encoder Project

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 #CableTecExpo

Essential Knowledge for Cable Professionals™

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Introduction

- The project
- Goals
- Current status

Why the cloud?

- Business rules
- Promise of improved delivery
- Generic compute power and its pricing scheme
- Rapid feature additions

What is Driving us to the Cloud?

Legacy is slow

- Install
- Process
- Change of vendors
- Software release velocity

What is Driving us to the Cloud?

Pace of change is increasing

- Feature requests accumulate quickly
- Need a more "microchange" approach
- Instantiation of new options/reporting

What is Driving us to the Cloud?

Standards are Still Developing

- HDR
- WCG
- 4K
- HEVC

What are the Cons?

Networking

- Multicast versus Unicast streams for input
- Unicast UDP versus implementation of RTSP
- Ironic versus Open Stack

What are the Cons?

Interoperation

- Tying together too many parts with too many controller interfaces is unwieldy
- The amount of time we expend to get a new vendor into our workflows is continuing to grow

What are the Cons?

Too many options for orchestration

- Mesos and Marathon versus Kubernetes
- Docker as a container versus other containerizations
- Rapid changes in the individual segments of the orchestration

What were the Pros?

Resiliency

- Individually, the applications bring their libraries
- Corporately, the ability to stand up and tear down is fast

What are the Pros?

Redundancy

- Failed states can be maintained while spinning up a new instance
- Debugging is much easier
- Moving inside the data center for networking or hardware issues is trivial

What are the Pros?

Ease of Change

- New releases can be stood up beside production for almost no "cost"
- One line code changes can be integrated far faster
- Decrease our length to test (specific tests)

What are the Pros?

Vendor Buy In

- Almost all vendors are moving in the direction of software products
- Of those, Docker containerization is near universal
- Willingness to adapt to our environment
- Caveats....

What is Missing?

Speedbumps on the road to the cloud

- Good software practices
- Unified control
- IPv6
- Standard API
- Standard alarms

What do we do Next?

- Complete the API work
- Continue to test multivendor solutions
- Refine our networking implementations

Conclusions

- We are going to go to the cloud. There is simply too much promise. Whether we complete this project or not is a detail, but as generic compute becomes more prevalent, we'd be foolish not to find a way to put it to work.
- We need to overcome our networking and orchestration challenges

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