



**riverbed<sup>®</sup>**

# Bringing Branches Closer to the Cloud

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# Your Stronghold



“They have a cave troll...”



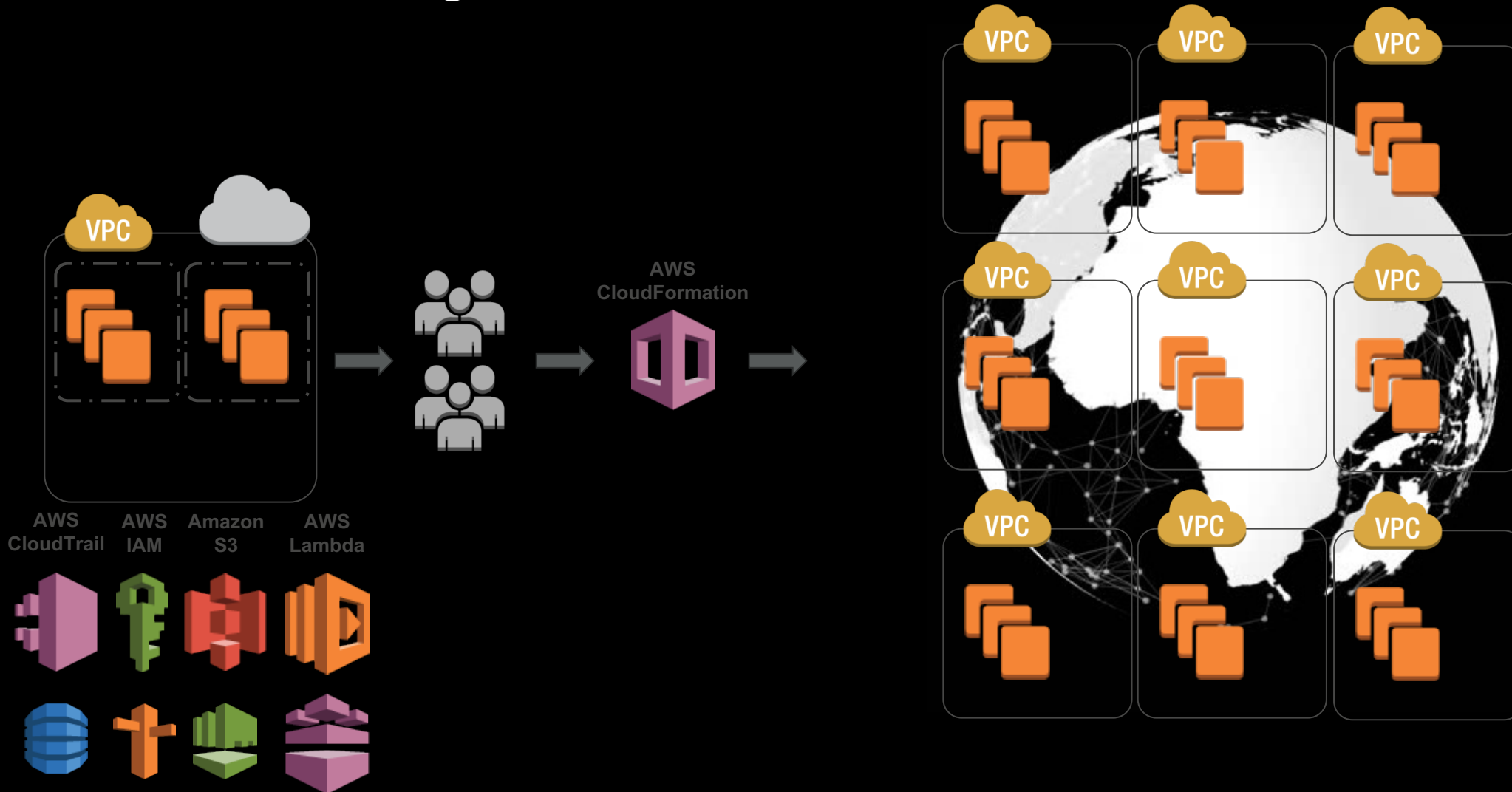
# The Promise



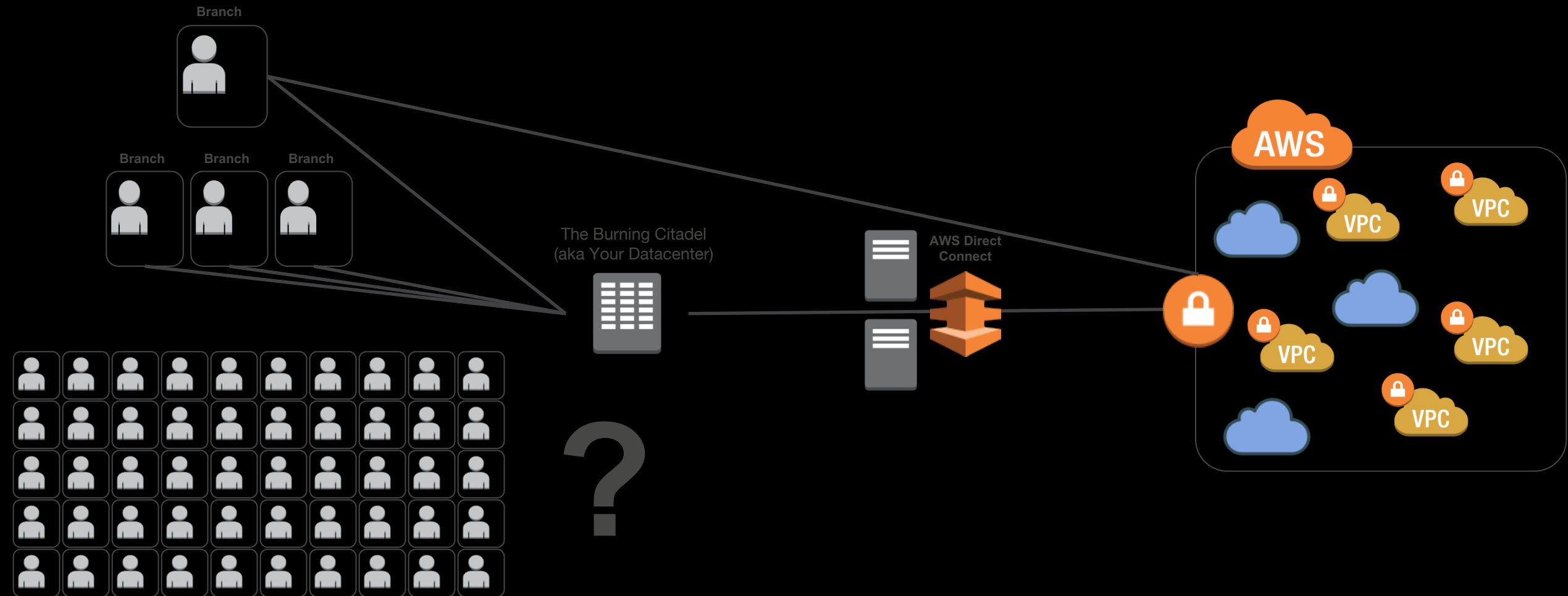
# An Admin's Tale



# There & Back Again



“I don't know half of you half as well as I should like; and I like less than half of you half as well as you deserve.”





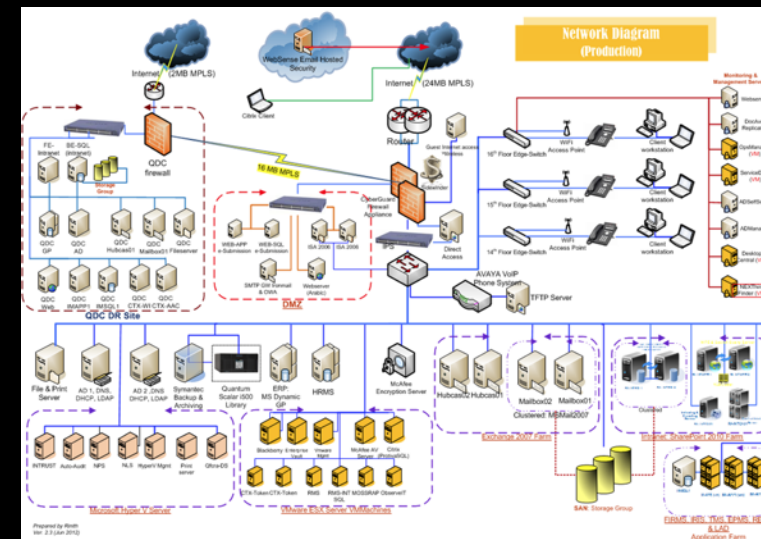
# But they were all deceived...

```
*May 5 21:24:25.059: ISAKMP:(0): processing vendor id payload
*May 5 21:24:25.059: ISAKMP:(0): vendor ID seems Unity/DPD but major 69 mismatch
*May 5 21:24:25.059: ISAKMP (0): vendor ID is NAT-T RFC 3947
*May 5 21:24:25.059: ISAKMP:(0):Input = IKE_MSG_INTERNAL, IKE_PROCESS_MAIN_MODE
*May 5 21:24:25.059: ISAKMP:(0):Old State = IKE_I_MM2 New State = IKE_I_MM2

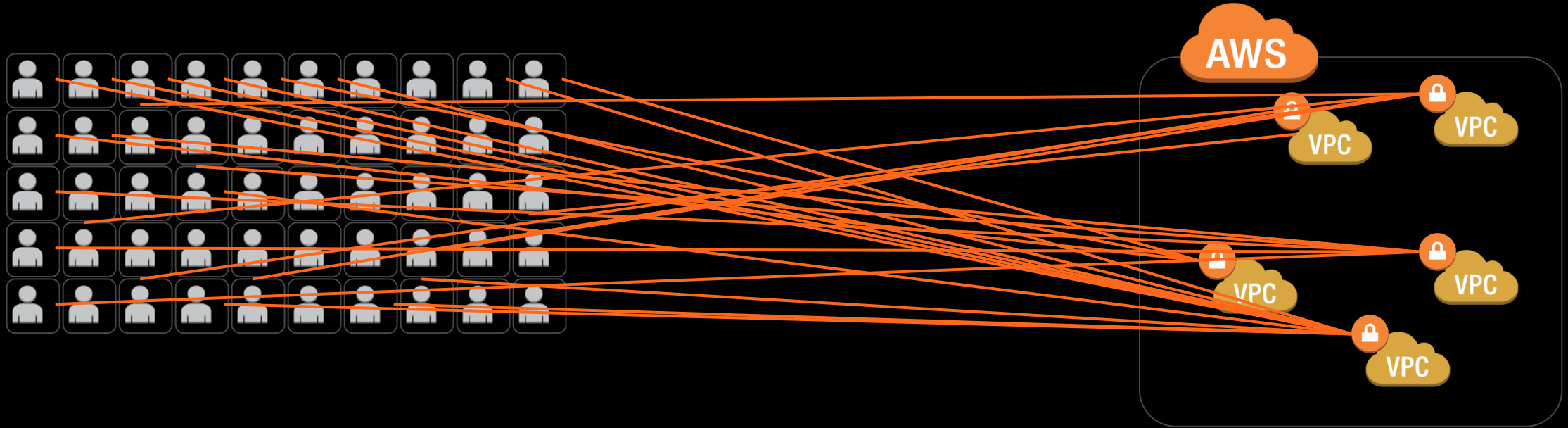
*May 5 21:24:25.063: ISAKMP:(0): sending packet to 172.17.1.1 my_port 500 peer_port 500 (I) MM_SA_SETUP
*May 5 21:24:25.063: ISAKMP:(0):Sending an IKE IPv4 Packet.
*May 5 21:24:25.063: ISAKMP:(0):Input = IKE_MSG_INTERNAL, IKE_PROCESS_COMPLETE
*May 5 21:24:25.063: ISAKMP:(0):Old State = IKE_I_MM2 New State = IKE_I_MM3

*May 5 21:24:25.107: ISAKMP (0): received packet from 172.17.1.1 dport 500 sport 500 Global (I) MM_SA_SETUP
*May 5 21:24:25.107: ISAKMP:(0):Input = IKE_MSG_FROM_PEER, IKE_MM_EXCH
*May 5 21:24:25.107: ISAKMP:(0):Old State = IKE_I_MM3 New State = IKE_I_MM4

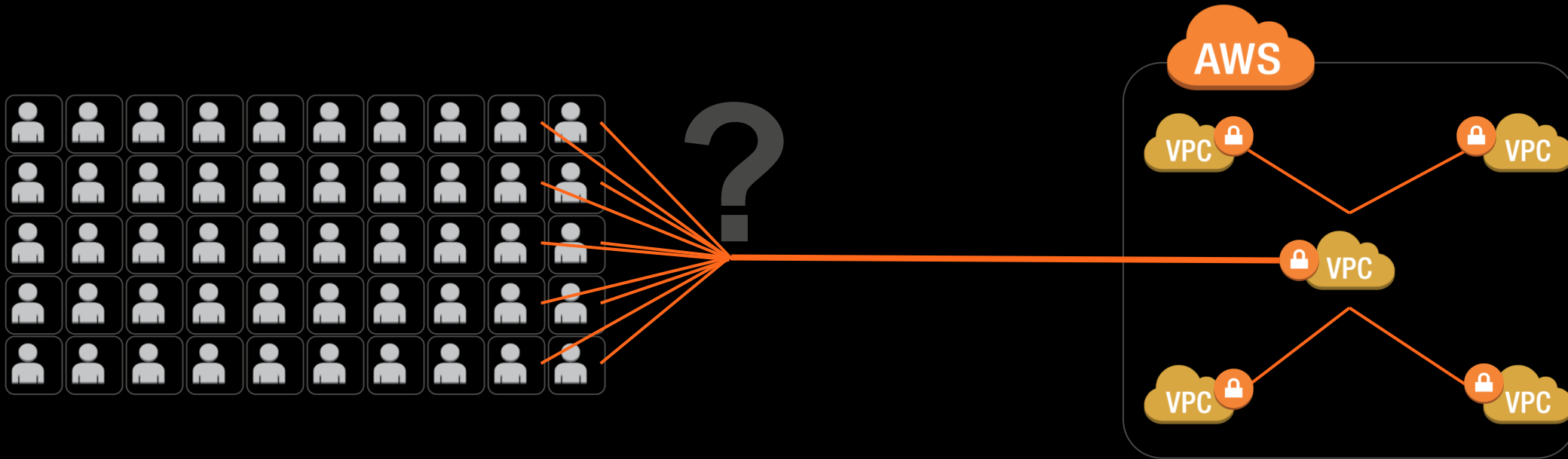
*May 5 21:24:25.107: ISAKMP:(0): processing KE payload. message ID = 0
*May 5 21:24:25.151: ISAKMP:(0): processing NONCE payload. message ID = 0
*May 5 21:24:25.151: ISAKMP:(0):Found ADDRESS key in keyring LabKeyRing
*May 5 21:24:25.151: ISAKMP:(1002): processing vendor id payload
*May 5 21:24:25.151: ISAKMP:(1002): vendor ID is Unity
*May 5 21:24:25.151: ISAKMP:(1002): processing vendor id payload
*May 5 21:24:25.151: ISAKMP:(1002): vendor ID is DPD
*May 5 21:24:25.151: ISAKMP:(1002): processing vendor id payload
*May 5 21:24:25.151: ISAKMP:(1002): speaking to another IOS box!
*May 5 21:24:25.151: ISAKMP:received payload type 20
*May 5 21:24:25.151: ISAKMP (1002): His hash no match - this node outside NAT
*May 5 21:24:25.151: ISAKMP:received payload type 20
*May 5 21:24:25.151: ISAKMP (1002): No NAT Found for self or peer
*May 5 21:24:25.151: ISAKMP:(1002):Input = IKE_MSG_INTERNAL, IKE_PROCESS_MAIN_MODE
*May 5 21:24:25.151: ISAKMP:(1002):old State = IKE_I_MM4 New State = IKE_I_MM4
```



“It’s the job that’s never started that takes the longest to finish.”



# A Map, Does Not Execution Make



# Right Approach, Wrong Side.



# Solution: Software Defined WAN

**SD-WAN**

**virtualizes**

existing and future

**network infrastructures,**

**connects**

datacenters, cloud services, branches

and field employees.

# Solution: Software Defined WAN

Agile  
Simple  
Policy Driven  
Application Defined

# Customer Story

## GHD has a complex IT landscape

- 10 countries
- 8,500 employees,
- 3,000 business and technical applications
- own private cloud.

## Task:

The rapid integration of 50 small, remote sites. (DBTC)

## Challenge:

- Provide access to a myriad of applications/services in their cloud environment
- Rapid deployment of branch networking solutions
- Ensure seamless collaboration amongst project teams spread across the globe

# The Riverbed Solution

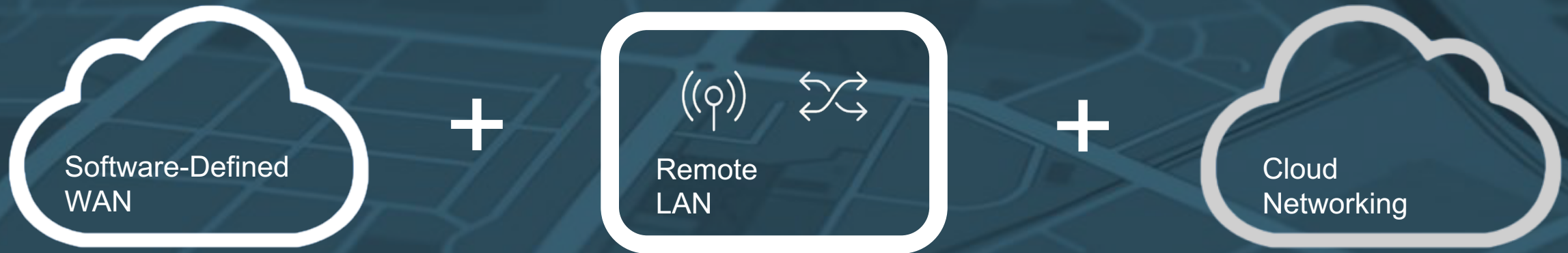




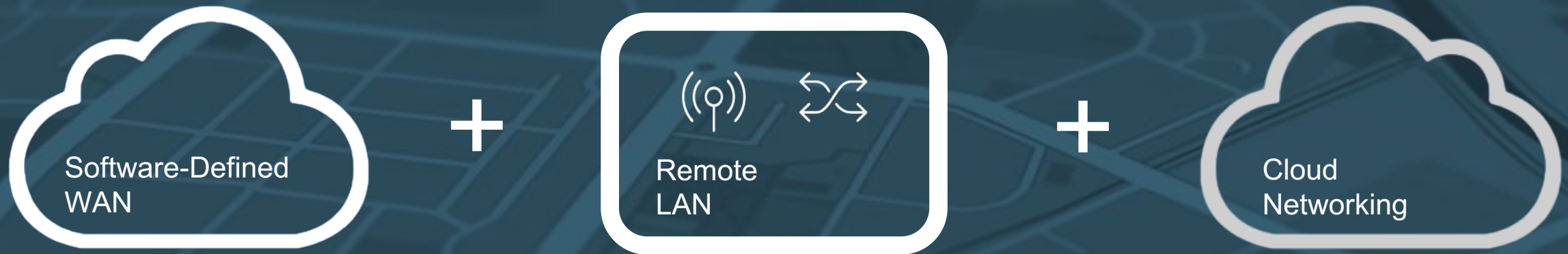
# The Riverbed Solution



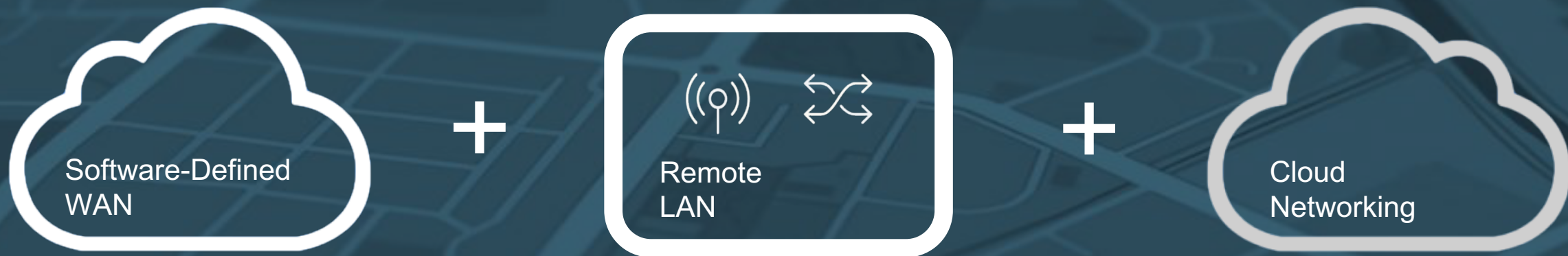
# The Riverbed Solution



# SteelConnect™



# SteelConnect™



SD-WAN + Remote LAN + Cloud  
Connectivity Solution

Application-Defined Networking  
for the 21<sup>st</sup> Century

# Riverbed® SteelConnect™

## System Components

### Secure SD-WAN Gateways



Branch Gateways  
Model 130(W) / 330 / 1030 / virtual



Amazon Web Services  
Microsoft Azure



Data Center Gateways  
Model 5030

### Branch LAN & WLAN Accessories



LAN Switches  
Model S-12 / S-24 / S-48



Wireless Access Points  
Model AP-5 / AP-5R

### SteelConnect™ Manager



- Dashboard
- Organization
- Network Design
- Sites
- Clusters
- WANs
- Uplinks
- Zones
- Portals
- ClassicVPN
- AWS
- Azure
- Routing
- Users
- Applications
- Rules
- WiFi
- Appliances
- Ports
- Devices
- Visibility

# Amazon Web Services

Accounts **Import VPCs** Deploy Instances

## US East, Ohio [us-east-2]

 VPC **vpc-3cfd0d55** | CIDR 172.31.0.0/16 |  Main AWS Account



Subnet **subnet-49bc7920** CIDR 172.31.0.0/20

Subnet **subnet-ff425187** CIDR 172.31.16.0/20



 VPC **Angelo OHI1** | vpc-55ff5c3c | CIDR 10.15.0.0/16 |  Main AWS Account

Subnet **Angelo OHI1 (Public)** [subnet-9239fde9] CIDR 10.15.10.0/24

## US West, N. California [us-west-1]



 VPC **Default VPC** | vpc-2c6bad49 | CIDR 172.31.0.0/16 |  Main AWS Account

Subnet **subnet-4b7fa12e** CIDR 172.31.16.0/20



 VPC **Angelo CAL1** | vpc-e116bf84 | CIDR 10.6.0.0/16 |  Main AWS Account

Subnet **Angelo CAL1 (Public)** [subnet-c30ade9a] CIDR 10.6.10.0/24

## US West, Oregon [us-west-2]



 VPC **Development** | vpc-119de774 | CIDR 10.50.0.0/16 |  Main AWS Account

Subnet **Development** [subnet-e0135885] CIDR 10.50.10.0/24, 2 instances

 VPC **Security** | vpc-1a9de77f | CIDR 10.51.0.0/16 |  Main AWS Account

Subnet **Security A** [subnet-1e234a69] CIDR 10.51.10.0/24, 2 instances

Subnet **Security B** [subnet-e1b02c85] CIDR 10.51.11.0/24

 VPC **PaloAlto Bastion** | vpc-7c135b1b | CIDR 172.16.42.0/23 |  Main AWS Account

Subnet **PaloAlto\_DMZ\_external** [subnet-601e7807] CIDR 172.16.43.192/28, 1 instance

- Dashboard
- Organization
- Network Design
- Routing
- Users
- Applications
- Rules
- WiFi
- Appliances
- Ports
- Devices
- Visibility



↔
✕

### CapeTown to AWS-DE-Angelo-FRA1

[Uplink](#) ▶ [Internet](#) ▶ [Uplink](#)

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**Tunnel Status**

✓ **Normal**

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**Throughput**

**Outbound**

**416.0 bps**

102.1 bps	110.6 bps	102.1 bps	102.1 bps
Urgent	High	Normal	Low

**Inbound**

**416.0 bps**

102.1 bps	110.6 bps	102.1 bps	102.1 bps
Urgent	High	Normal	Low

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**Path Quality**

**Latency (Round Trip)**

91 ms	91 ms	91 ms	91 ms
Urgent	High	Normal	Low

**Jitter**

0 ms	0 ms	0 ms	0 ms
Urgent	High	Normal	Low

**Packet Loss**

0%	0%	0%	0%
Urgent	High	Normal	Low

### AWS-DE-Angelo-FRA1 Insight

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**Tunnel Status**

✓ **26 Connected**

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**Appliance Status**

SDI-AWS

✓

SDI-AWS

✓

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**Information**

Long Name: **eu-central-1 / vpc-bf6ec4d6**

Address: **Frankfurt, DE**

Time Zone: **Europe/Berlin**





# SteelConnect™

[www.riverbed.com/steelconnect](http://www.riverbed.com/steelconnect)

Bring  
the  
Cloud  
**Closer**

