



Telco Cloud

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Ribbon Spotlight

Agenda:

- Safe Harbor Statement: Tom Berry, Ribbon IR
- Introduction: Courtney Munroe, IDC
- Prepared Remarks: Tony Scarfo, Ribbon
- Discussion with Courtney and Tony

Telco Cloud

Date: November 18th

Time: 2 pm EST

Transitioning networks to the cloud with cloud-native software to drive new 5G and business service revenues with CI/CD and automation for cost-effective operations



**[Tony Scarfo](#), EVP & General Manager
Cloud and Edge Business Unit**



Moderator:



**[Courtney Munroe](#), Research Vice President
Worldwide Telecommunications Research**



Well Positioned to Address Growing Opportunity

Ribbon is a trusted partner
with telcos

Large service provider and
enterprise base provides
growth opportunity

Deployed in 20 of the top 25
global service providers

Partnering with leading public
cloud providers

Market leader in network
transformation*



We enable secure and reliable
business communications with scalable
cloud and on-premises solutions that
offer elastic costs



Already on the Journey to the Cloud with our Customers

Telco and Mobile

AT&T, verizon, T-Mobile, LUMEN, bandwidth, WINDSTREAM, Bell, TELUS, SaskTel, América Móvil, Telefonica, LIME, SPAIN ICE, marcatel, Digicel, alestra, oi, inter, BT, vodafone, SPR, swisscom, colt, TeliaSonera, TIM, orange, TalkTalk, eircom, Deutsche Telekom, kpn, stc, Türk Telekom, TURKCELL, etisalat, bharti, Jio, VI, TATA, Dialog, OPTUS, Telstra, Singtel, PLDT, NTT, SoftBank, Rakuten, kt, MTS, Rostelecom, KAZAKHTELEKOM, VimpelCom

Multi-System Operators

ROGERS, VIDEOTRON, eastlink, altice, COMCAST, COX, Charter, CABLE ONE, MIDCO, BUCKEYE, BTC, CableOnda, LIBERTY, C&W, Cablemás, vtr, Telefonica, vivo, vodafone, LIBERTY GLOBAL, sky, Ziggo, unitymedia, Virgin, DIGI, RCS & RDS, telecable, HOT, J:COM, HONG KONG TELECOM

Enterprise Verticals

Utilities: BKW, CEMIG, creos, CFE, ALLIANCE, EnBW, edp, EDF

Transportation: DB, Appenzeller Bahnen, CPTM, CO-TELEMATIA, PKP

Government: [Various national government logos]

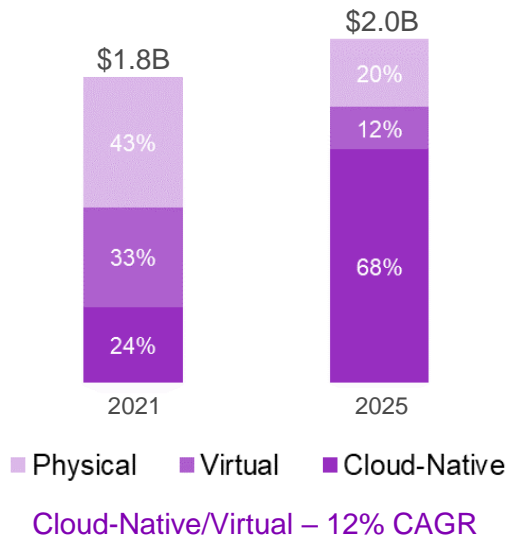
Finance: BANK OF AMERICA, J.P.Morgan, WELLS FARGO, STATE STREET, Ameriprise, Goldman Sachs

Healthcare: NOVANT HEALTH, Cleveland Clinic, UnitedHealthcare, Geisinger, NewYork-Presbyterian, CarePoint Health

Education: SURF, NET, DFN, grnet, PRINCETON UNIVERSITY, UCDAVIS, BAYLOR, PURDUE

Evolution to Telco Cloud Provides Growth Opportunity

\$2B Serviceable Market
3% CAGR



Source: Exact Ventures Forecasting and Ribbon Modeling

WHAT IS THE BUSINESS VALUE?

A FOUNDATION FOR SUCCESSFUL DIGITAL TRANSFORMATION



66%

faster application delivery*



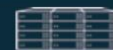
35%

higher developer productivity*



38%

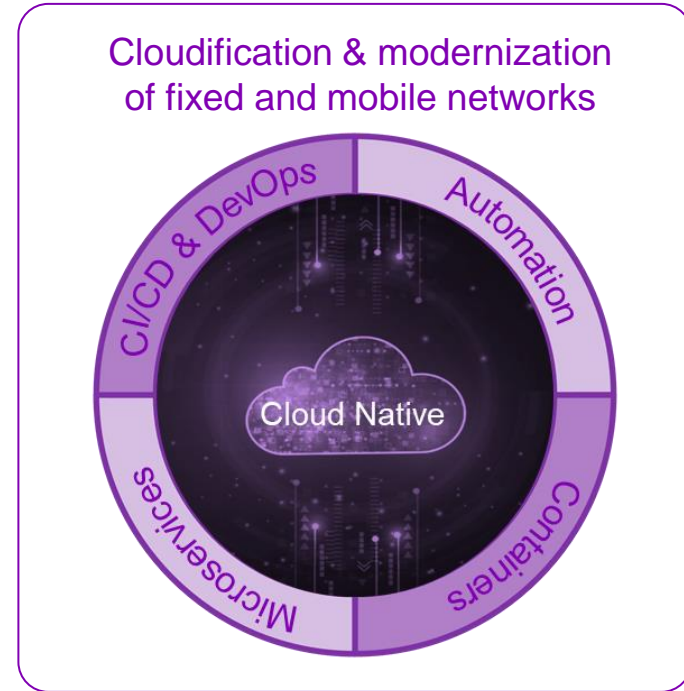
reduction in infrastructure costs*



Source: IDC Customer Study and IBM Red Hat

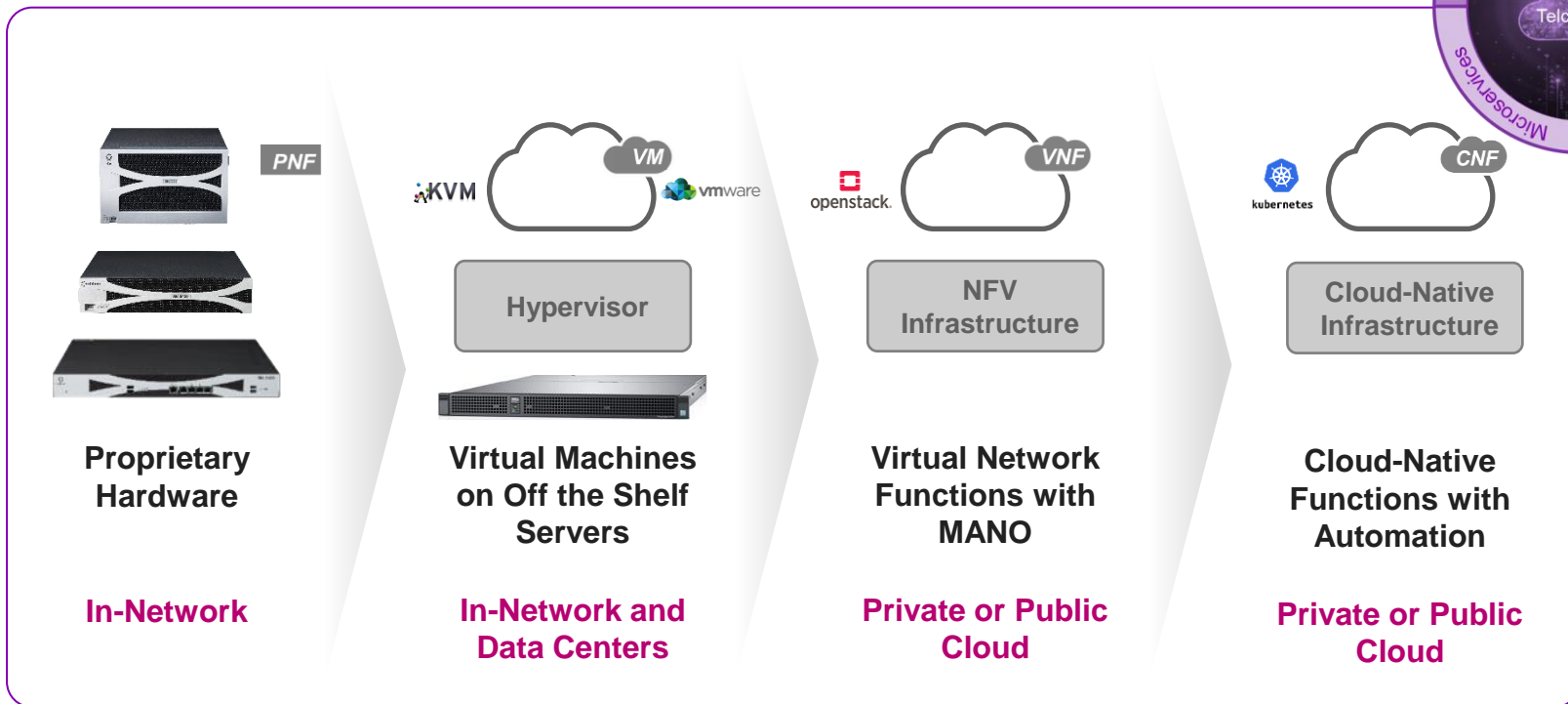
Cloud Native Defined

- Service providers need to drive service revenues with more cost-effective operations
- Cloud Native represents a fundamental evolution in the way that telco networks are built, run and managed
- It involves leveraging virtualized and cloud infrastructure technologies, either private or public with automation and continuous integration and delivery (CI/CD)
- Also involves adoption of cloud business practices becoming more open, dynamic, agile and efficient



Network Evolution to Telco Cloud

Cloudification & modernization of fixed and mobile networks to Telco Cloud



Ribbon Telco Cloud Technology

Virtualized & Cloud-Native Functions

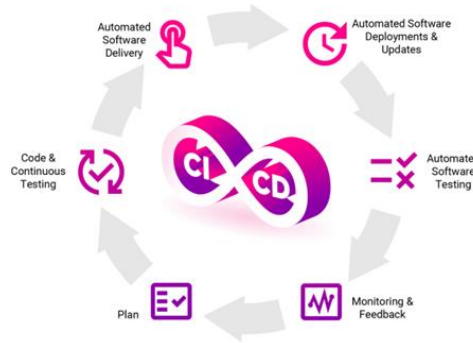


Private
Cloud

Public
Cloud

Hybrid
Cloud

Automation & CI/CD



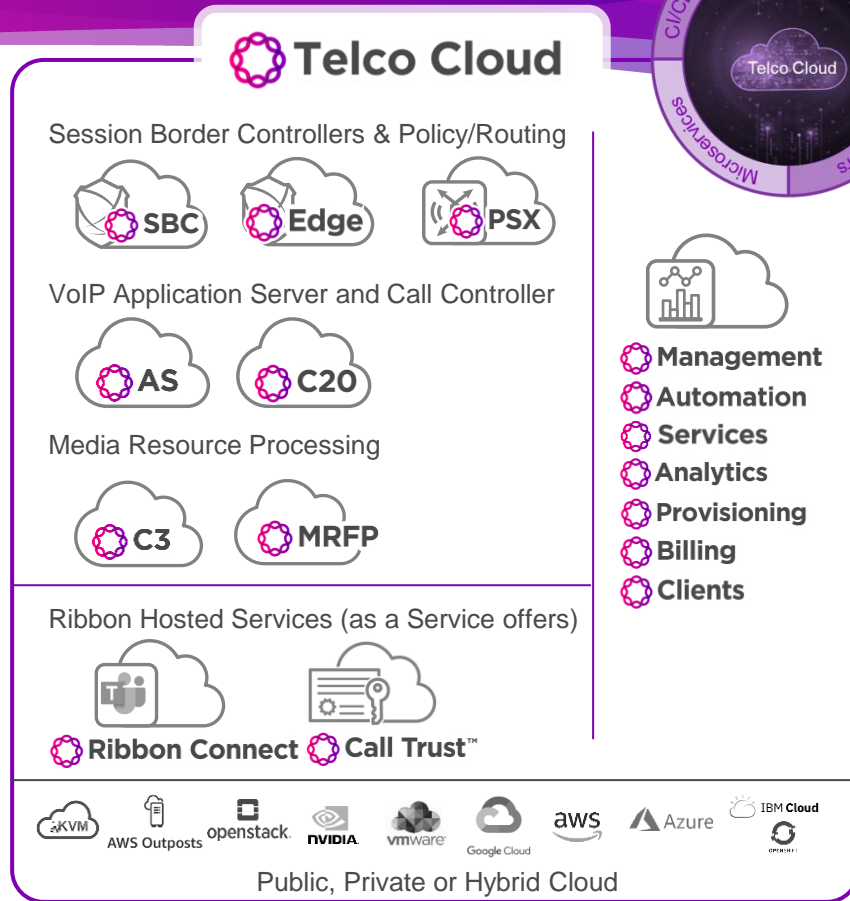
Communications Media Processing In the Cloud



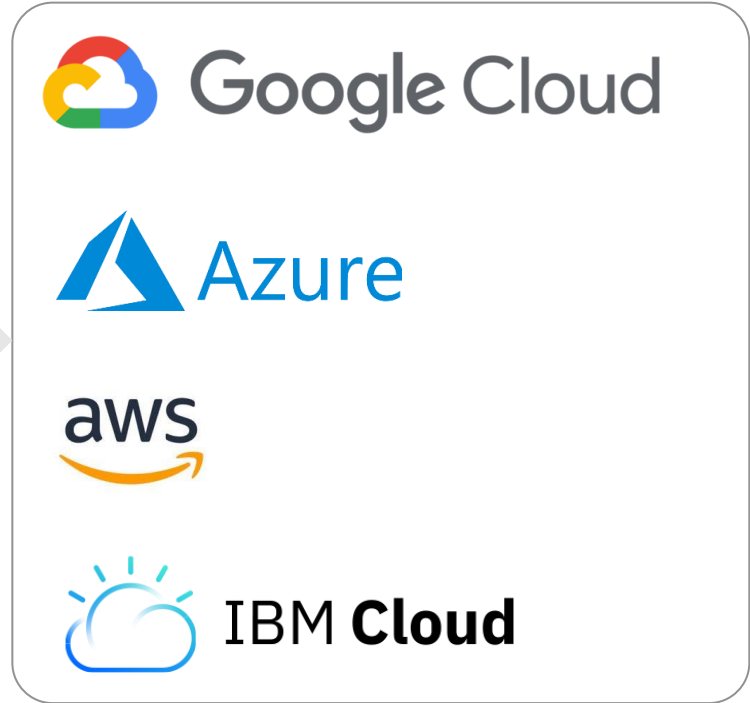
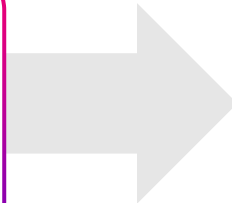
Carrier Class Reliability and Feature Richness

Ribbon Telco Cloud Portfolio

- Extensive network-proven portfolio for telco cloud voice services
- Deployable on private, hybrid and public cloud infrastructure platforms
- Scalable and reliable cloud-native architecture to fit service and network needs
- Designed with automated cloud-native operations and life-cycle management; utilized to operate our own hosted offers
- Analytics-based service assurance and monitoring
- “As a Service” options delivered from the Ribbon cloud

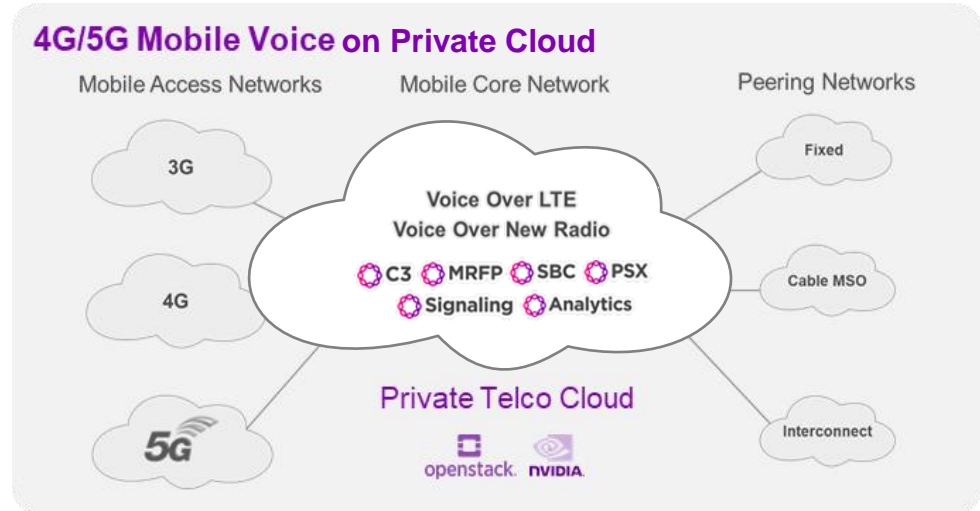


Partnering with Public Cloud Providers and Service Providers



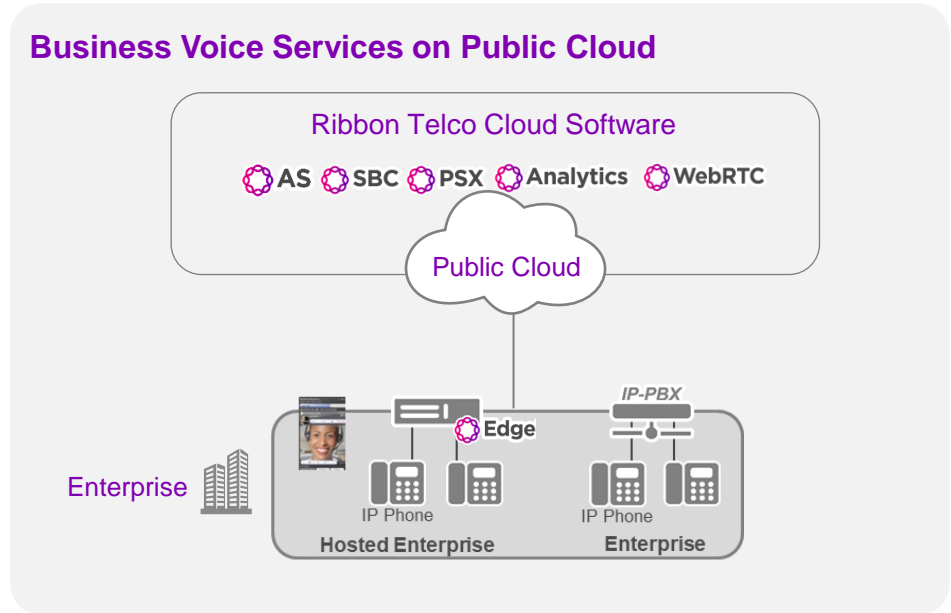
Ribbon Telco Cloud Software on Private Cloud

- Leading Tier 1 Service Provider
- Ribbon software portfolio deployed in the service provider private cloud
- Handling over ten million concurrent sessions for their mobile network interconnect
- Ribbon portfolio also supporting consumer and business voice services in the network
- Specialized media processing in the private cloud



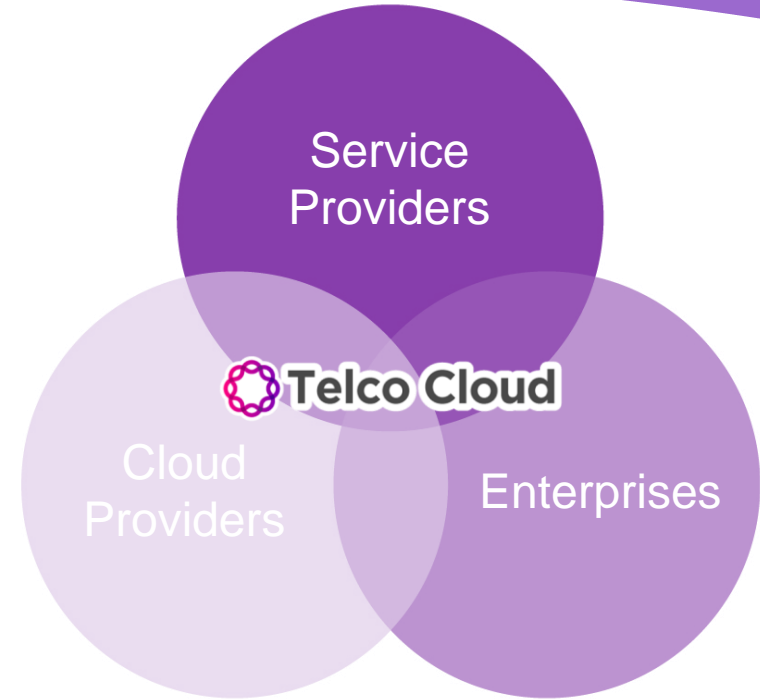
Ribbon Telco Cloud Software on Public Cloud

- Opportunity for Telcos to migrate traditional PSTN voice systems to the public cloud
- Frees up real estate and leverages cloud economics & environmental footprint
- Provides support for traditional PSTN requirements while supporting enterprise digital transformation
- Allows operators to maintain control and benefit from optimization versus total outsource



Summary: Ribbon Winning in the Growing Telco Cloud Space

- ✓ Broad portfolio of telco cloud communications software functions and technology with expertise to aid in this migration
- ✓ Trusted partner with market and network transformation technology leadership
- ✓ Key player in the telco cloud ecosystem partnering closely with our customers and cloud providers



Market migration to Telco Cloud creating new opportunities for Ribbon

Discussion with Courtney and Tony

