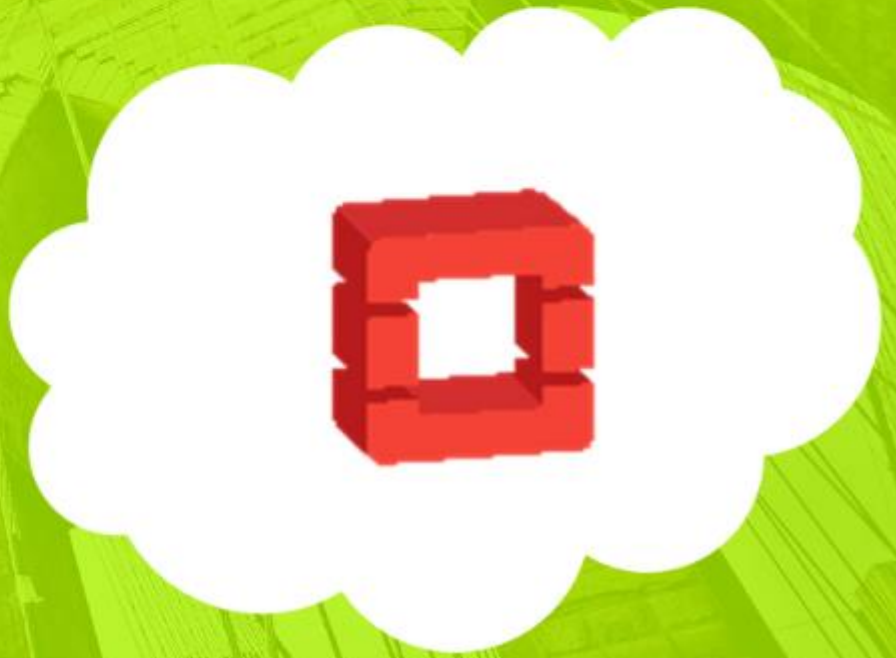
www.TelecomTutorial.info

Introduction

Telco Cloud



Journey to

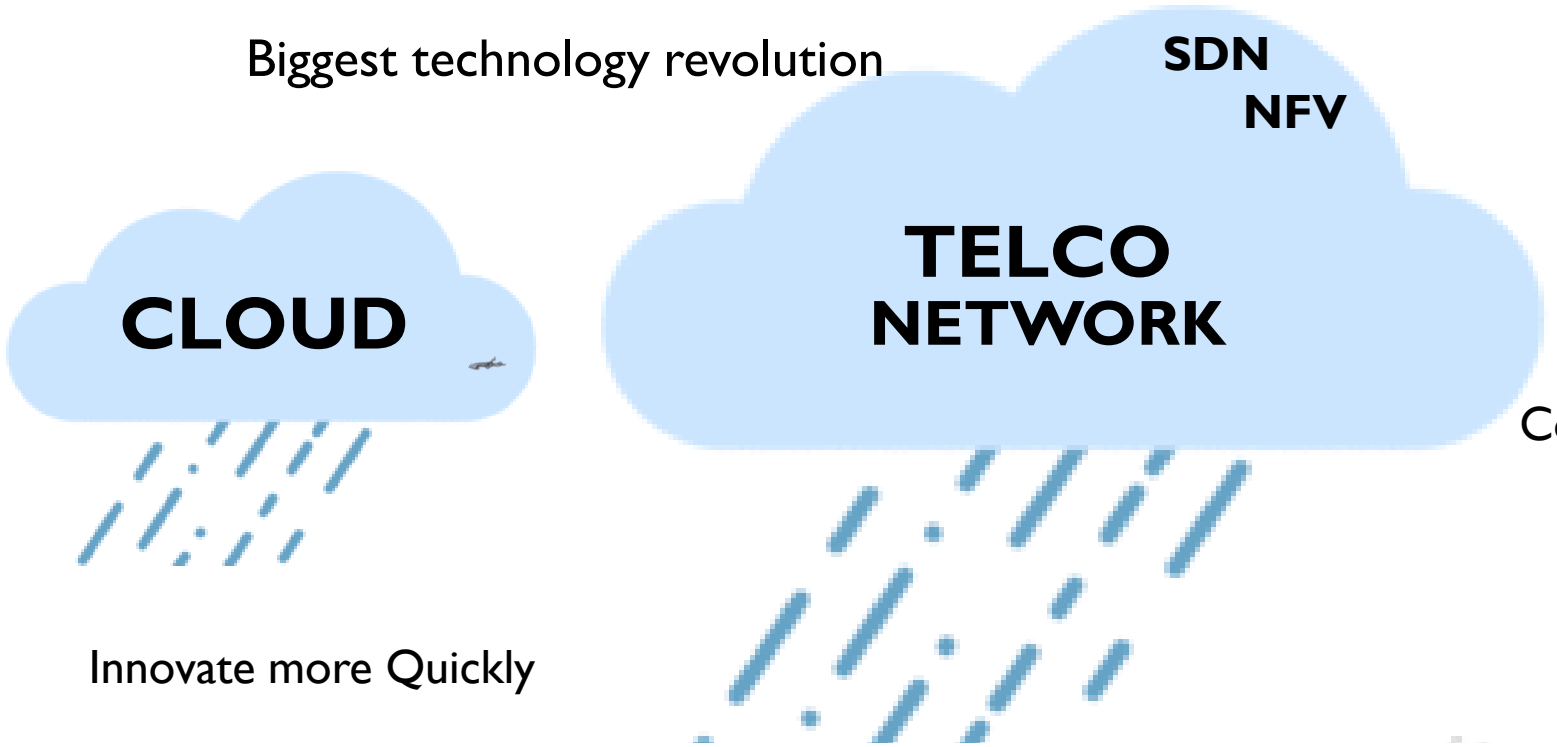
NFV - SDN

Change the way Networks are Deployed

Biggest technology revolution

SDN
NFV

Change the Business Model of Telecom



Change the way Consumers are enabling services on the fly

Innovate more Quickly

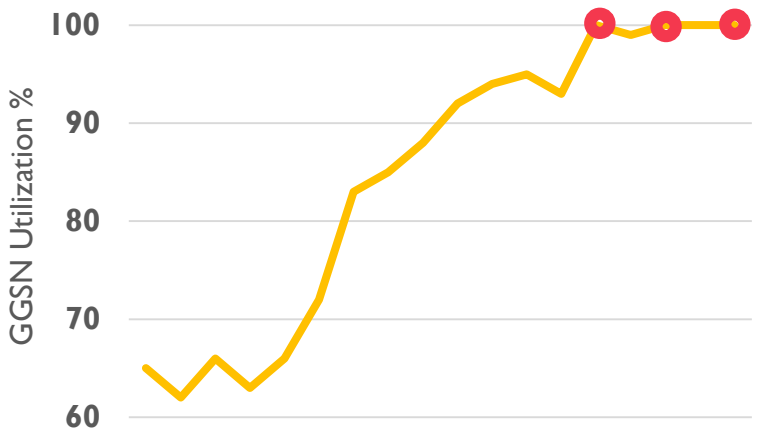
No Dedicated Hardware	Shared Resources	Convenient Access from anywhere	Rapid Expansions & Elasticity	On-Demand Network Access	Offered as Networks, servers, storage, App and services

- ***What is Cloud ?***
- ***Why Cloud is necessary for Telcos ?***
- Demystifying Cloud :-
  - ***NFV***
  - ***SDN***
  - ***Hypervisor Vs Container***

Why Cloud Network are required in Telecom ?

Traditional Networks

Internet



Fix Capacity : Example 150 Gbps

Cloud Network ?

SDN

SDN

SDN

On-Demand
New GGSN
New Location

150 Gbps + 100 Gbps
On-Demand
Compute

NFV

Why Telco Cloud ?

Problem of Telco Operators

Lack of Scalability

- Problem with Scale In / Scale Out
  - Uncontrolled and unpredictable traffic explosion *(Matches , Events)*

Lack of Adaptation

- Challenges with
  - *New Technology (4.5G / 5G / IOT) , New Functionality (New Links Interface) , New Business Model*

Lack of Flexibility

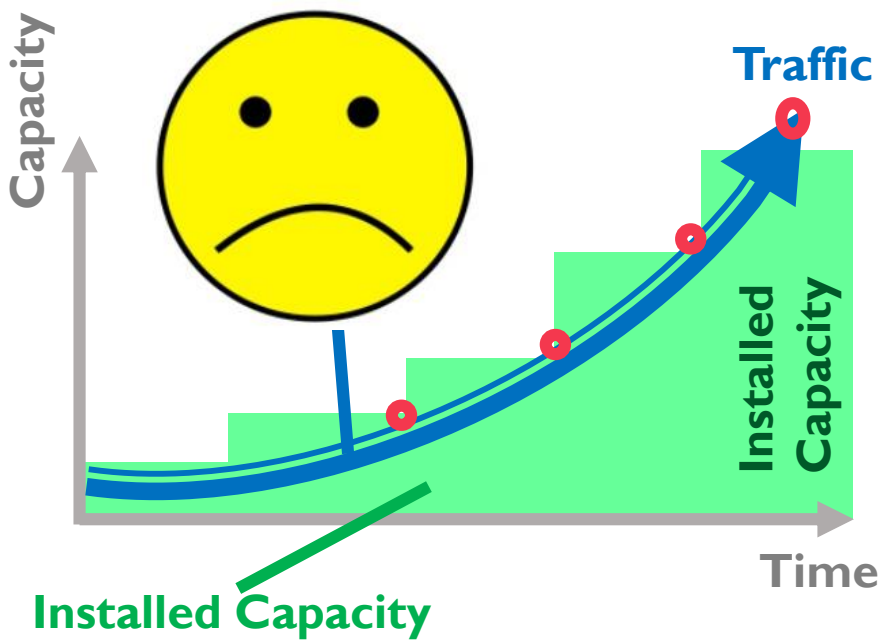
- Uneven Utilization *(Congestion leads to Poor Customer experience)*
- High Cost *(AMC of Multiple Nodes ,TCO is high due to utilization)*

Lack of Speed

- Slow to Change & Innovate (Feature Parity between Vendors)
- Time to Market for new services is High
- Dynamic Requirements can't be met such as Regulatory & Business etc..

Traditional Network

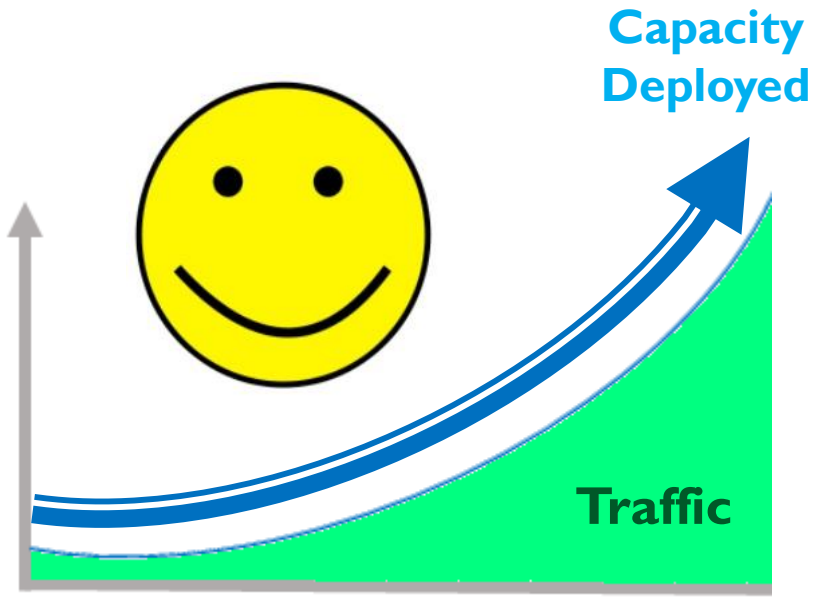
Get Right Capacity at Right time



Traditional Network

Demand either leads or lags the installed capacity

Average Util : 60%



Cloud Network

Get Right Capacity at Right time

Average Util : 85%

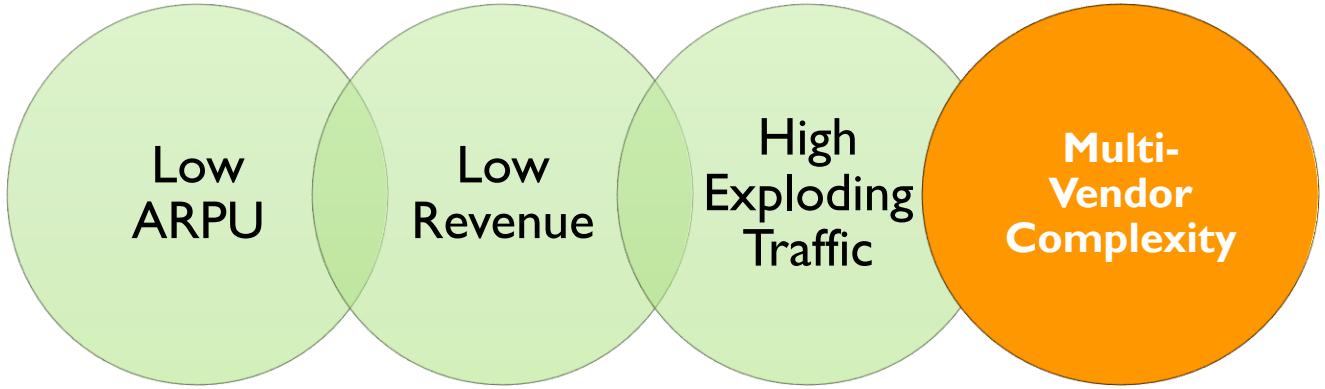
Why Telco Cloud ?

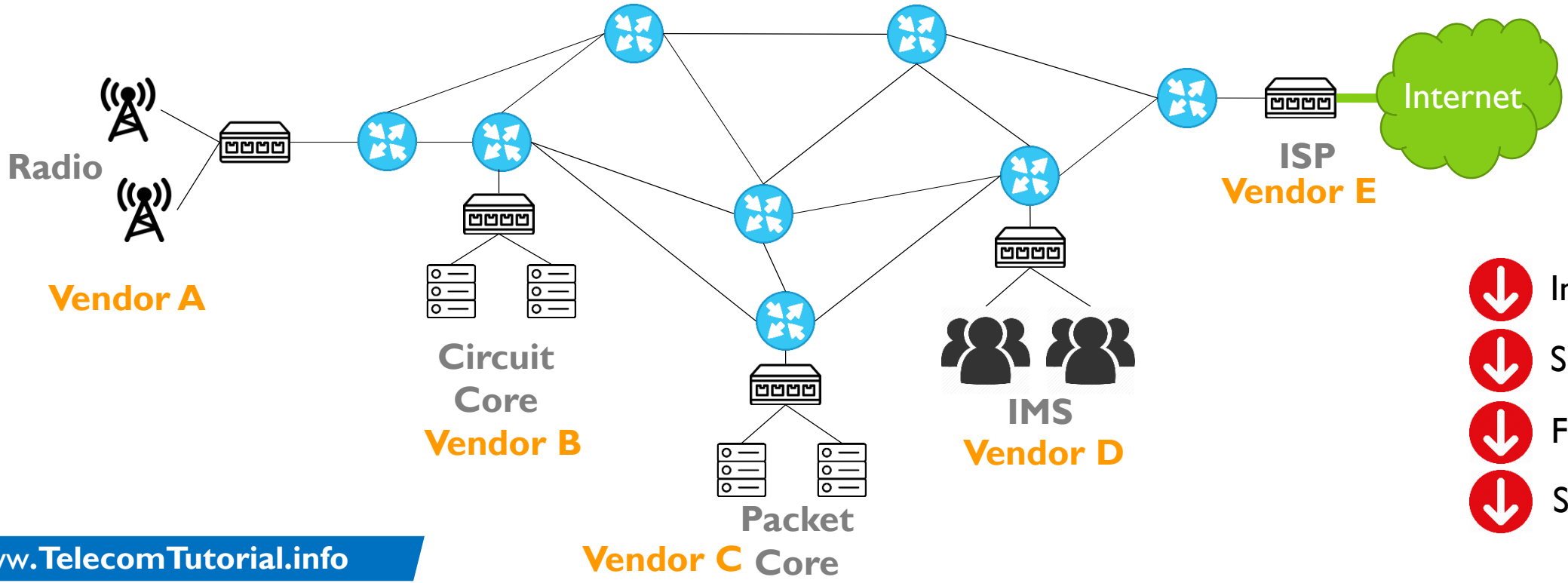
Traditional Network

Vendor Specific Deployment

Purpose Built dedicated hardware

Problem of Telco Operators

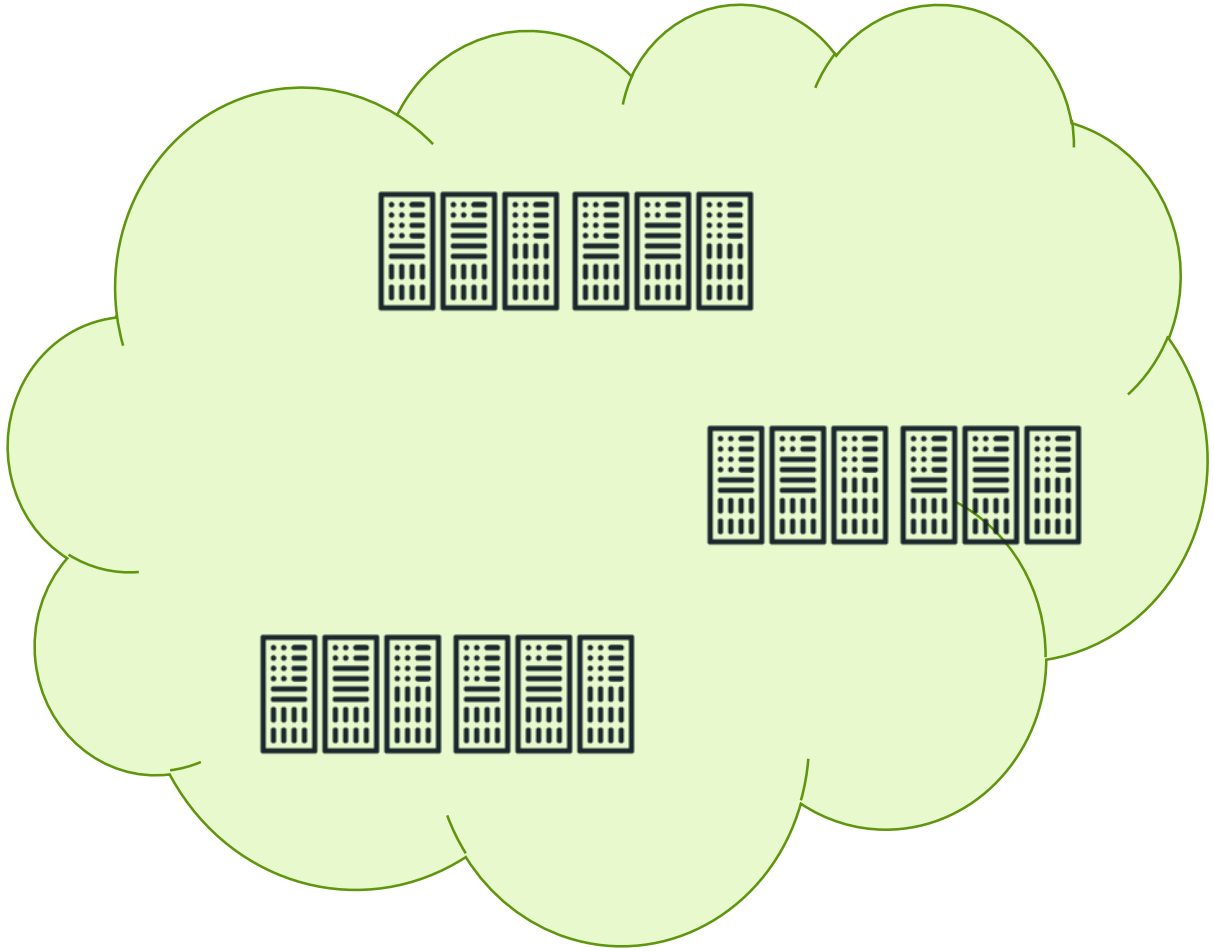




- Innovation
- Speed
- Flexibility
- Scale

How Telco Cloud Helps ?

- Cost Reduction & Uptime
  - Better Utilization of Resources , Max Re-Use
  - Avoid Vendor Lock-in
  - Better Network Management will reduce OPEX
  - improve TCO through centralization, automation and efficiency
  - Better Uptime with Standardized Hardware
- Network Flexibility
  - Scale Service UP & Down Quickly
  - On Demand Network Resources
- Ease of Business
  - Ability to respond quickly to customer Demands , Create New Services on the fly
  - Rapid Deployment of New Services
  - Innovations are Welcome



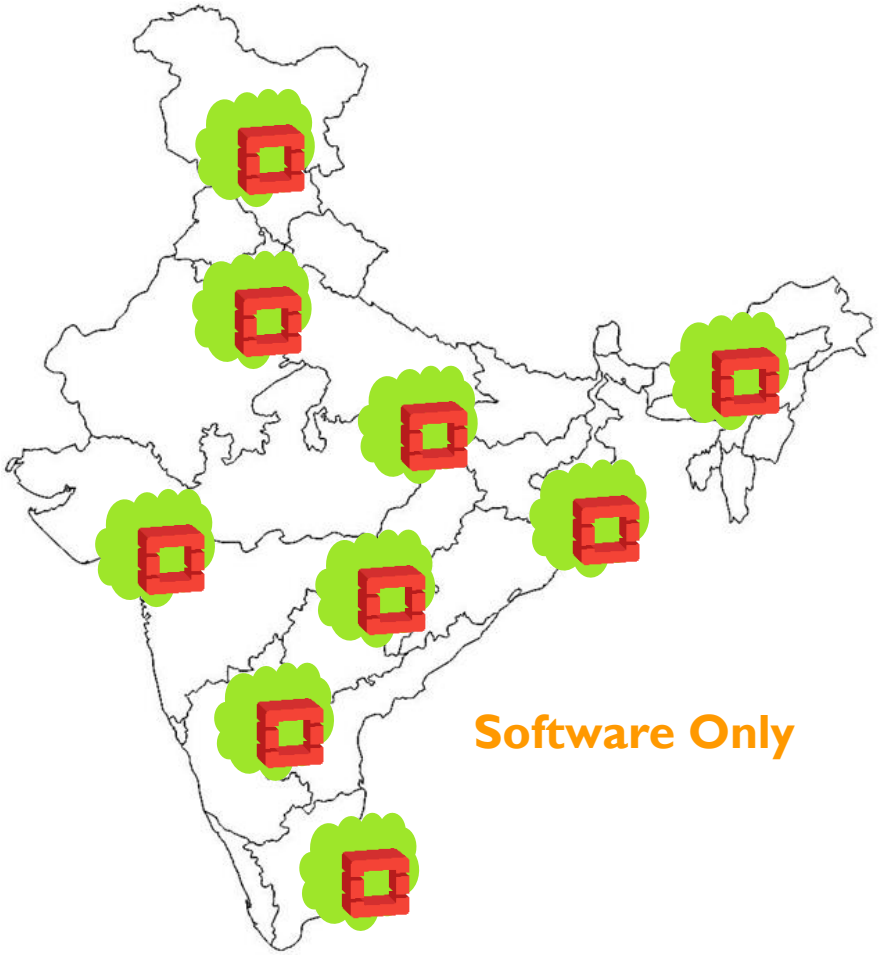
Telco Cloud

Highly programmable & Automated Networks
Competitive with OTTs on Agility

Solution ..

Hardware + Software

Future

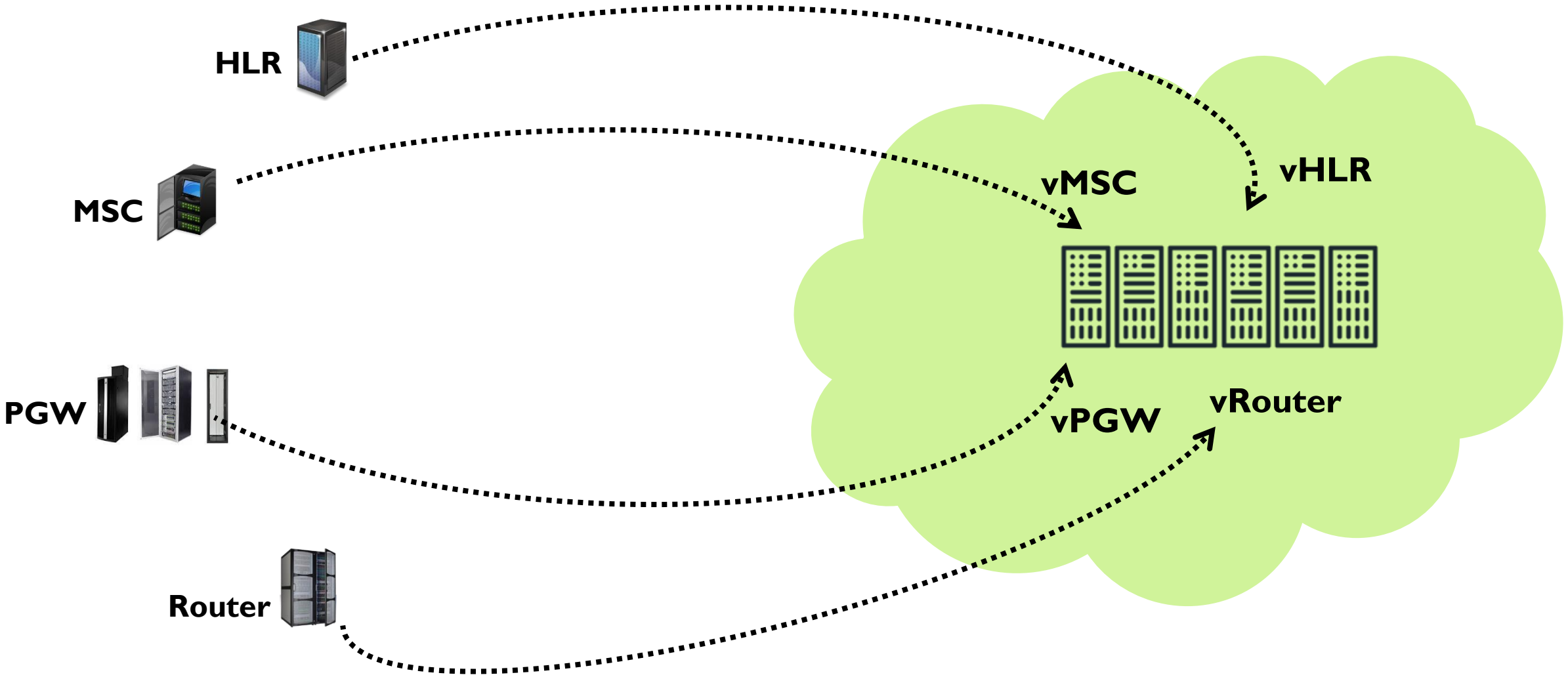


Software Only

Specialized Appliances

Generic Hardware

Solution ..


HLR
MSC
PGW
Router
vMSC
vHLR
vPGW
vRouter
Specialized Appliances
Generic Hardware

What is Cloud ? Why Cloud ?

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Telco Cloud