Reliance Jio

Lightning Up
The Digital Services Ecosystem In India

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Agenda

1. Reliance Jio-Overview
2. Drivers for Network Transformation and Key Principles
3. Jio Fixed Line Network Evolution Approach
4. SDPON Architecture
Reliance Jio: A Catalyst for India’s Digital Transformation

- 400+ Mn 4G Mobile Subscribers
- 20 Mn Home pass, 7+ Mn Home Connect
  Target: 50 Mn Homes and 20 Mn Enterprise
- 7.5 Exabyte Monthly data Traffic
  Avg per mobile user: 17 GB  per FTTh user: 260 GB
- All IP, All 4G, VoLTE Network
- World’s Largest IPv6 Network
- 500k Miles Optical Fiber Network
- Unique Service Bundles
  Broadband, Voice, Video, IOT, TV, OTT apps, Security
  Content, Cloud Storage, Collaboration apps

*Rounded off numbers*
Drivers for Network Transformation

**Demand from Consumer and Digital Society**
- AR/VR
- Metaverse
- Web 3.0
- Smart Homes
- UHD Content
- Digital Banking
- Online Gaming
- E-education
- Wearables
- Healthcare
- OTT/On-Demand Content
- E-Commerce

**Demand from Business and Industry**
- Connected Transport
- Drone Surveillance
- Industry 4.0
- Industrial Robotics
- E-Sports
- Smart Grids
- Private Network
- IoT Ecosystem
- Smart Cities
- Digital Transformation
- E-Governance
- Global Collaboration

Gaming, VR/MR, New Devices/Gears, Apps, Drones, Robots will continue to drive the Network Usage

Need of Flexible, Programmable Multivendor Network to meet customer demands with minimum Capex, Opex
Key Principles of Network Transformation

1. Disaggregation
   - Prefer Merchant Silicon based hardware
   - Manage Co-exitance of Blackbox & Whitebox
   - Reduce Number of SKUs

2. Cloud native Software Centric Platforms
   - Microservices based, cloud Infra agnostic Software Architecture which is scalable and elastic
   - Adopt open platforms and open interfaces as much as possible

3. Convergence of User plane and Centralization of Control Plane
   - TCO based decision making
   - Distribute and Converged User plane
   - Transition towards centralized Control plane

4. Intelligent Orchestration and Automation
   - Plug and Play new vendor Integration
   - Maximize Automation of Network Build, Operate ad customer experience.
   - Real time Network and Service management

Cloud Infra and E2E Security are Key Building Blocks of Network Architecture Transformation
Jio Fixed Line Network Evolution Approach
Start Disaggregation from Customer devices, move up towards Converged Fixed and Wireless Architecture

1. Cust Prem devices
   - Jio Home Router (inbuilt ONT module)
   - Jio Set top box
   - Jio CPE for Small Enterprise
   - Jio SDWAN CPE for Medium and Large Enterprise

2. OLT
   - Black box OLT
   - Co-exist
   - VOLTHA Control & User plane
   - WB OLT
   - User plane
   - WB OLT1
   - User plane
   - WB OLT2
   - VOLTHA Control

3. BNG
   - Black box BNG
   - BNG Control plane on COTS h/w
   - Black box BNG-User Plane
   - Whitebox BNG-User Plane

4. Converged Wireless & Fixed POD

Centralized Control plane
Distributed User plane
OLT-U BNG-U UPF Content & Apps

Solution
- Converged & Distributed User plane of Mobility and Fixed line
- Deliver Ultra Low latency use cases

Status
- Roadmap
- Solution Validation stage
- Production Ready (In Field trial)
- In Production

Status
- Leverage existing user plane
- Enable Interworking
- Use SCI, CPR, Mi

Solution
- Radisys CBAC Software
- Whitebox H/w
- Management System

Status
- Software on Jio Whitebox
- Multiple ODM hardware
- Volume driving the cost economics
Jio SDPON Architecture

- Open Network Design Enabling OLT Vendor Neutrality and Deployment Flexibility
- Access Network Agnostic – GPON/XGSPON/NG-PON2
- Service Agility and OPEX Savings with Highly Programmable SDN Control
- Micro-Services Software Enabling Scalable Network Growth
- Centralized Management Enabling Flexible Tiered Services and Network Slicing
- Network Hardened Solution Aligned with Open Communities
- Future Proof with Cloud Native Design

Jio Orchestration Platform

Vendor Blackbox OLT

Vendor EMS

Vendor Specific Interface

Jio Whitebox OLT

Radisys Management System (RMS)

Software Defined PON (Connect Broadband Access Controller)

SDN Controller

VOLTHA

OPEN OLT Adaptor

Rest API/Open Interface

Open Interface

Open Interfaces

Cloud native S/w

Scale and Feature parity

Pluggable new H/w

Serving Home, Enterprise and Small cell Backhaul
Thankyou