











Best African wholesale carrier

#### **Connecting Africa to the world**



### IPv6 At Liquid – The history



- IPv6 first looked at in 2008
- IPv6 block applied for in 2008
- First initial deployment in 2009
- First customer turned up on IPv6 in 2012
- Currently IPv6 deployed natively in South Africa, Zambia, Zimbabwe and London
- IPv6 is always deployed all the way to the edge



# The IPv6 strategy



- IPv6 is not optional, an add-on, or anything "special".
- All hardware purchased and deployed must be IPv6 capable
- IPv6 deployed as part of the standard rollout procedure.
- Where replacing / upgrading / rebuilding sections of the network, IPv6 always forms part of the thought process.
- Where networks are gained through acquisition IPv6 deployment is done as soon as practically possible



# The challenges



- Access networks are a major challenge, with legacy hardware that will probably NEVER be upgraded to support IPv6. (V-SAT platforms, legacy switching gear etc)
- Protocol immaturity there is STILL no VPNv6, LDP6, MPLS-TEv6 etc.
- Where rebuilding / upgrading networks acquired through acquisition deployment can be complicated by the shear scale of the currently deployed networks and the wide disparity in vendor hardware.
- Customer adoption can be slow because of lack of resources, skills, and the realization that IPv6 is actually necessary.
- V6 features are STILL sometimes licensed as "optional extras" by vendors, pushing up the cost



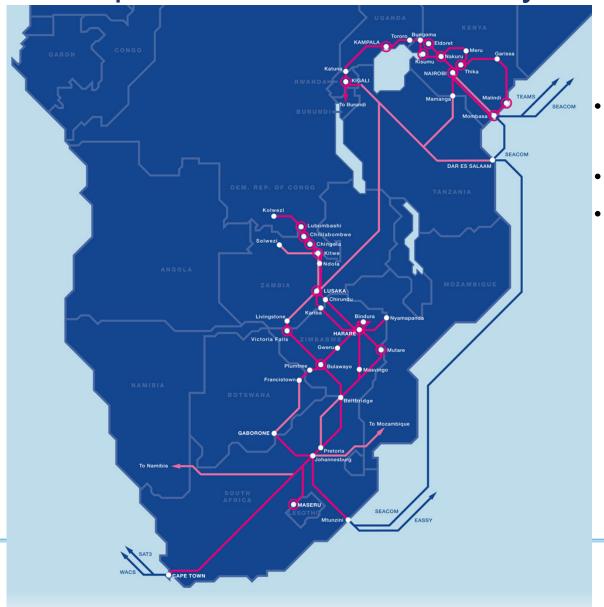
#### IPv6 Plans – Where next



- IPv6 between South Africa and Kenya on the direct circuits was enabled this morning!
- A new high speed IP network (10gbps+ on the backbone in most places) is in the process of being built between Mozambique, Tanzania, Kenya, Uganda and Rwanda which will link to the main Liquid international backbone this will support IPv6 natively from day one, to the edge.
- As stated, IPv6 is viewed as just another mandatory protocol, don't treat it as special, treat it as normal.



Liquid Telecom Connectivity Map





- Active connections to 5 sub sea cables.
- Redundant routes.
- One Network.





Thank you



