CDN CACHE DISTRIBUTION THROUGH RINEX

CASE STUDY: AKAMAI @ RINEX

AFPIF 2015, BY **GHISLAIN NKERAMUGABA**

24-28 AUG, MAPUTO, MOZAMBIQUE

BACKGROUND

- RINEX – Rwanda Internet Exchange AS37224
- Officially managed by RICTA since FEB 2014
- RICTA manages as well the RW ccTLD since SEP 2012
- RICTA is a not-for profit private organization, limited by guarantee

BACKGROUND

- AKAMAI, approached during AFPIF 2013
- AKAMAI represented a HUGE portion of "imported" content within Rwanda
- AVG speed: 350-500 Mbps
- The problem/challenge: Even if we bring AKAMAI, HOW RINEX WILL FINANCE THE TRANSIT LINK?

THE SOLUTION

- RINEX to officially manage the AKAMAI cluster, BUT to "host" it within an ISP [one RINEX peer]
- Tender: Winner = lowest $$/Mbps of cache [paid peering model]
- Test phase: to evaluate transit ratios/levels
- AKAMAI cache content to ONLY be redistributed through RINEX
- RINEX WOULD ONLY GET $$$ on port fees [IX model]

TECHNICAL ASPECTS
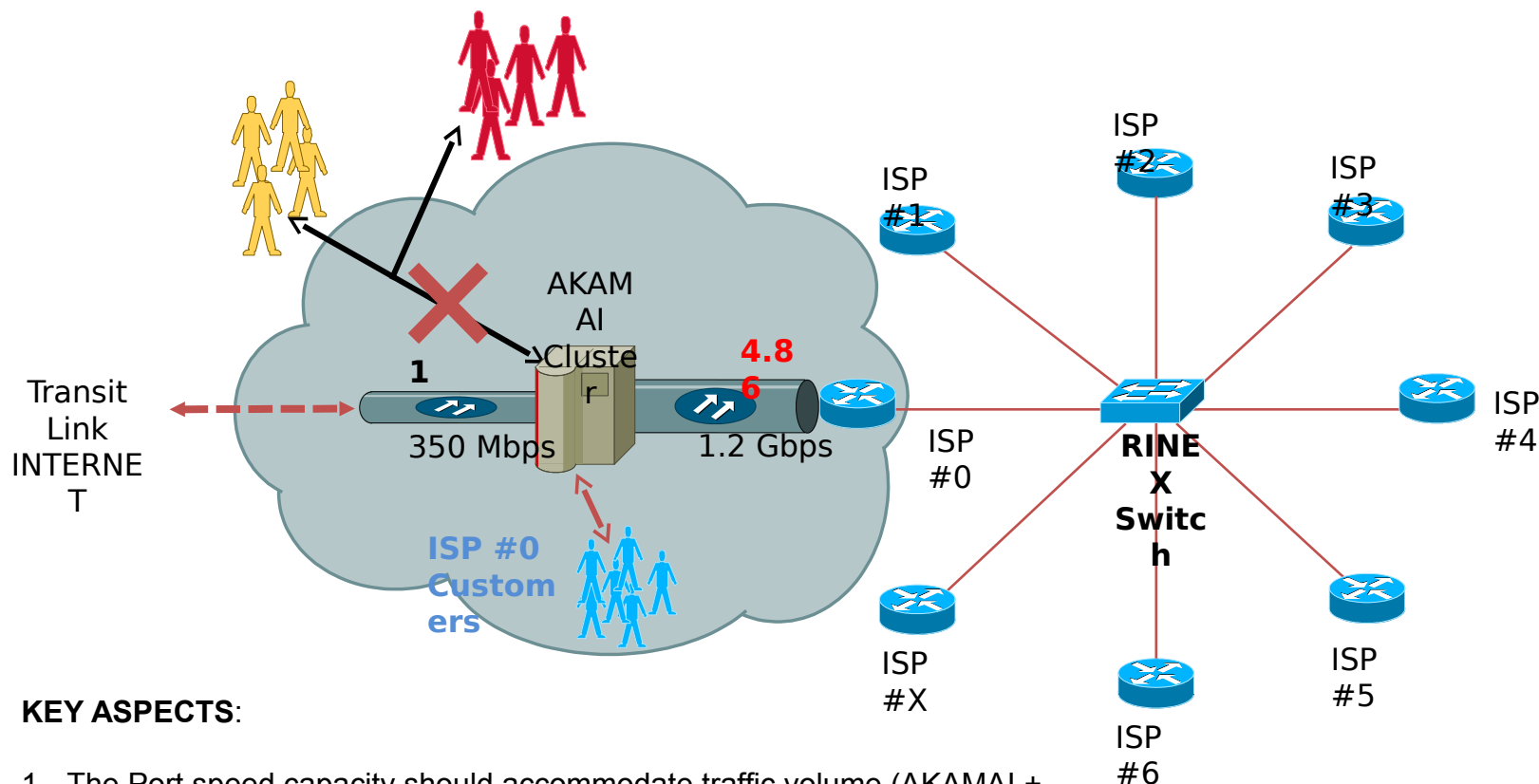
KEY ASPECTS:

1. The Port speed capacity should accommodate traffic volume (AKAMAI + Other)
2. **ISP #0** is responsible in availing traffic statistics to RICTA (Supervision), and to all ISPs that are accessing AKAMAI cache content
3. Distributing AKAMAI cache content is done ONLY through RINEX
4. ISP #0 shall only advertise to AKAMAI the LOCAL (to RINEX) ASN/Prefixes

RESULTS

- ISP #1: $80/Mbps
- ISP #2: $19/Mbps
- ISP #3 [BSC]: $12/Mbps: Content to be distributed under a paid peering model
- RINEX Value/Traffic has increased
- RINEX keeps its operating model (*Switching*)
- End-user experience has improved
- Savings: ISPs are sharing the cost of "importing" content (less cash outflows)

OTHER EXPERIENCE: UG-GGC

- Two GGC instances in the country;
- At the beginning, GGC cache distributed *freely* through UIXP;
- As consumption & Operators increased, Transit link increased at the *hosting* operator (i.e. Cost)
- Hosting operator incurred high costs, eventually stopped the service: The model proved to be unsustainable

THANK YOU

QUESTIONS?