

	Past	Present	Future
Link Speed	1G	1G	1G, 10G
Redundancy	STP	Cross Switch LAG	ECMP w/IGP
Per Cluster BW	100M/STP	1G/STP	2-20G/ECMP
Per Node BW	4Gbps	6Gbps	6Gbps - 20Gbps
Usable BW	50% - Slow Failover	100% - Fast Failover - Poor Maintainability	100% - Reasonable Failover - High Maintainability
Core Network	No	No	Yes
Security	None - Bridged	Some - Proxy ARP	More - Filtering

EY Networking - Past

- STP used for redundancy.
- 50% of inter-node bandwidth always blocked.
- Minimal use of vlans.
- No real security.
- Cluster v1, so this was “okay”.
- No “core network”.

EY Networking - Present

- Cross switch LAGs used for redundancy.
- Switch maintenance is a problem.
- Requires stacked switches.
- Allows 100% use of bandwidth.
- Fast failover.
- Traditional use of vlans. i.e. switch segmentation.
- Proxy ARP isolates customers and prevents MAC stealing.
- Core network coming online.

EY Networking -

Future

- ECMP for redundancy with IGP for dynamic route calculation.
- Allows for flexible upgrades to the infrastructure.
- 100% of bandwidth available.
- Core network w/more traditional TOR or EOR solutions.
- Investigating trade-offs between layer 2 and layer 3.
- Layer 3 filtering provides more robust security.