High Capacity Switch Routers

TETA 32100 model: 32x100G

TETA 7210 model: 48x10G+6x40G

Convertable to 24x10G by splitter

Usage:

Data Center: ToR, Leaf, Spine
Service Provider: Core, Aggregation, Access
Enterprise: Stackable L2/L3 switch

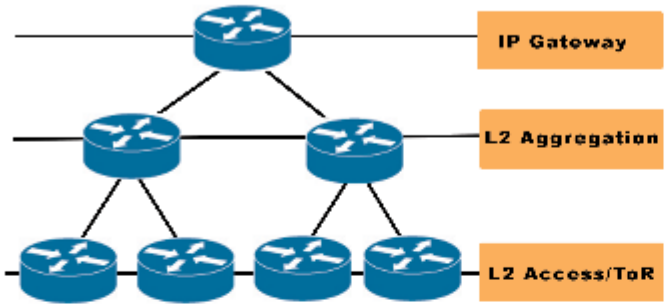
Applications

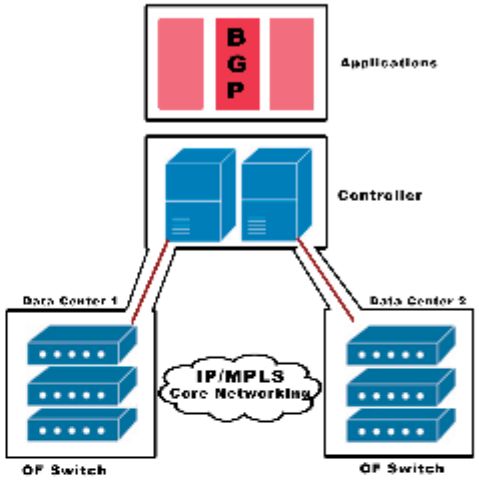
Service provider, enterprise:
Core layer
Distribution layer
Edge layer
Access layer
SDN network

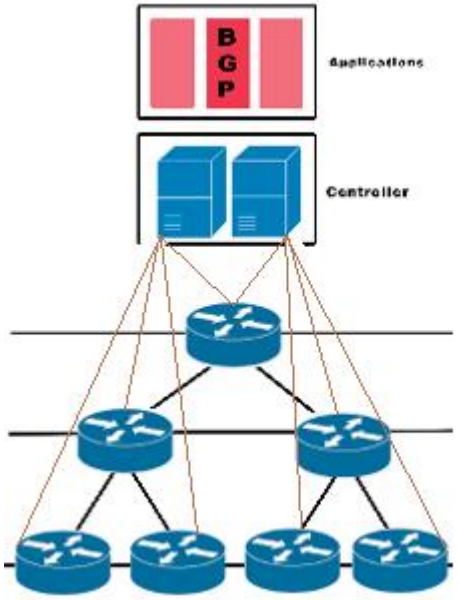
Data centers :
Leaf, Spine, ToR, EoR
SDN, Fabric Network

Specific Use Cases:
Hardware Firewall
Network Policy Control
DIP Packet Inspection
Hardware Load-balancer
Circuit Pusher
Network as a service

Traditional + **SDN** **Next-Generation SDN**







Features:

LLDP
Link Agregation
VLAN
Spanning-tree
Storm Control
IGMP Snooping
Dual-Stack (IPV4/V6)
QOS
Multi-VRF Routing (BGP/OSPF/ISIS)

PIM
Security
Management
VXLAN
NVGRE
Fabric Path
MPLS
OpenFlow 1.3, 1.4
...

General overview

- Full Layer-2, Layer-3 protocol stack support.
- Multiple Architectures & Customized Operating Systems by TETA for specific scenarios.
- High Availability & Resiliency, Performance at Scale.
- Reliability, Manageability, Programmability & Extensibility.
- Modular Software, break monolithic switch software into multiple containerized components that accelerates software evolution.
- Deploy new features without impacting end users, and in-service upgrades with zero downtime.
- Roll out updates securely and reliably across the fleet in hours instead of weeks.
- Fine-grained failure recovery, early detection of failure, fault correlation, and automated recovery mechanisms without human intervention. (Netbouncer and Everflow).
- Hybrid Legacy, SDN based Operating System.
- Support OpenFlow, PCEP, SR, link-state address-family for NG-SDN application.
- Utilize cloud-scale deep telemetry and fully automated failure mitigation.
- OpenStack Neutron ML2 Integration.
- Market-leading SDN controller Integration: OpenDaylight, ONOS, Ryu, …
- RESTful APIs, NETCONF, RESTConf, gNMI, Python for the API.
- Standard SNMP v2,v3, Yang Models.
- CLI, Linux standard shell, DevOps automation tool, Ansible Test Automation.
- Docker based software architecture.
- Fast/Warm/Cold Reboot Support .
- FEC control .
- CORD ready(central office re-architected as a datacenter for telcos and the head-end for operators).
- In Service Software Upgrade.
- Decouples Hardware & Software using SAI.

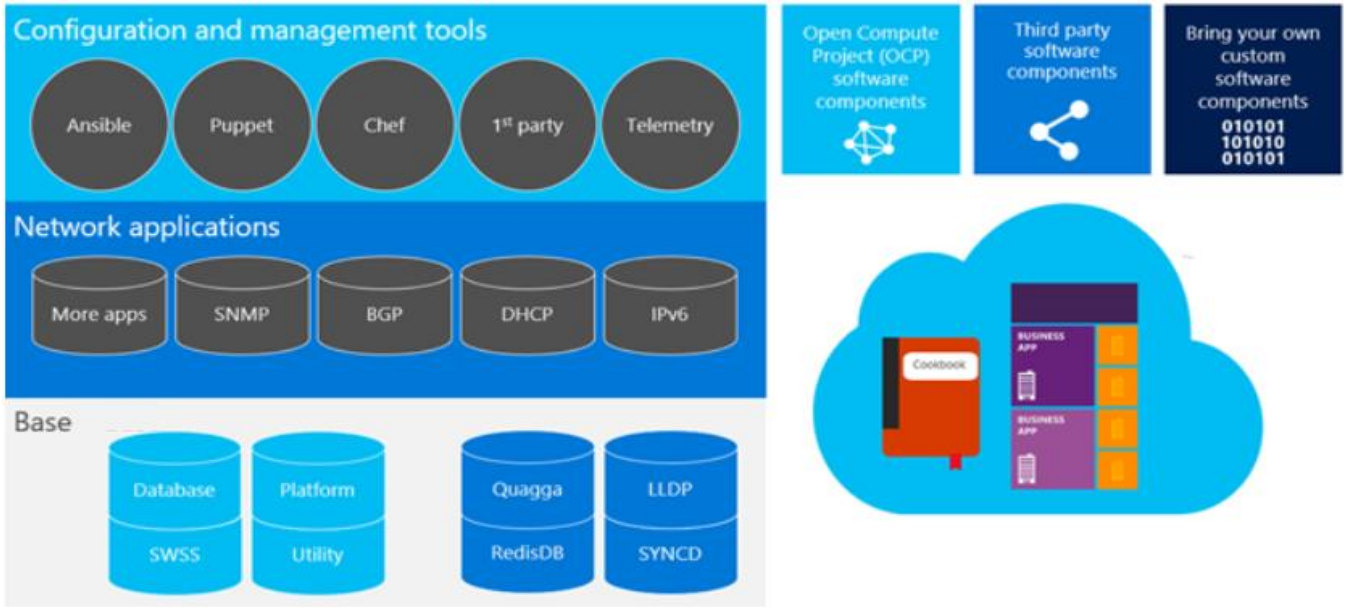
TETA7210 hardware specifications

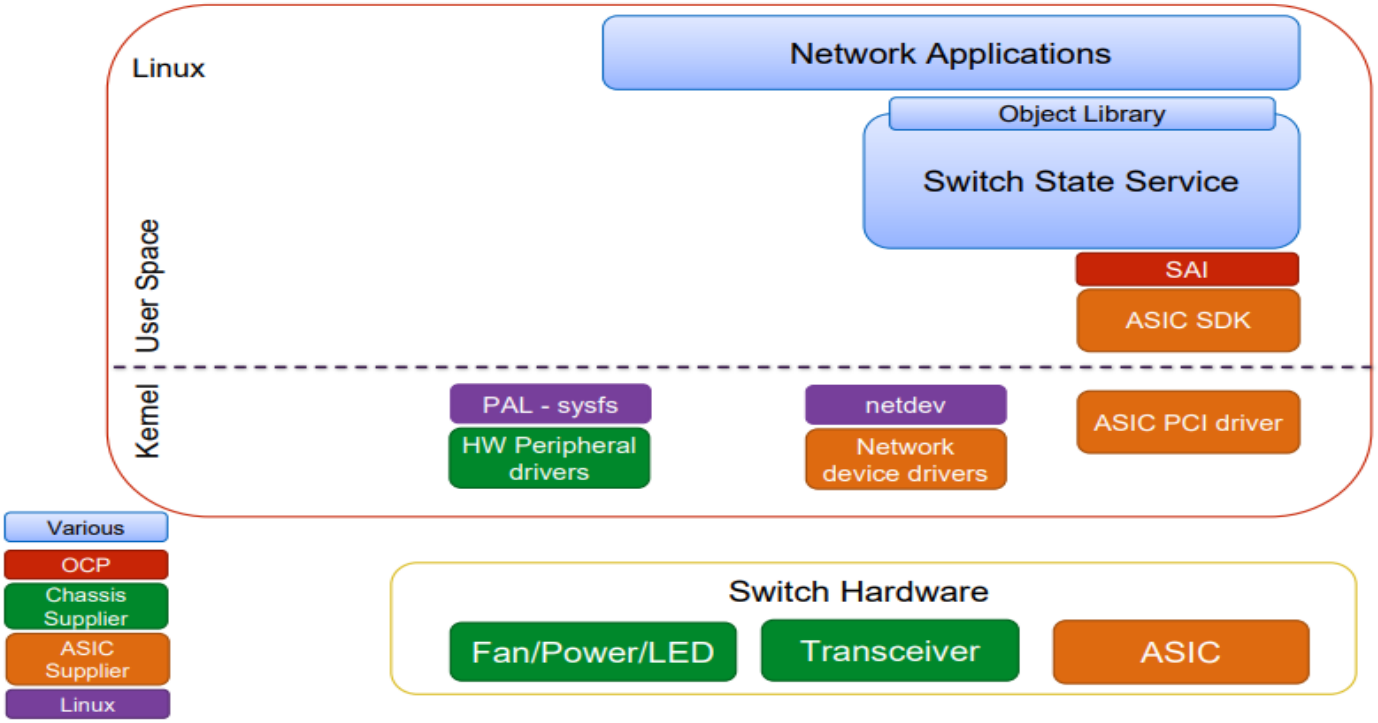
ASIC	720Gbps Broadcom Trident2 BCM56854 switching silicon
Forwarding performance	1071 Mpps: 48x10G + 6x40G
Processor	Intel Atom 2558 (4 core)
RAM	8GB DDR3
HDD	64GB M.2 SATA SSD
Latency	less than 700 ns (PHY-less)
Hardware accelerators	Hardware VXLAN/NVGRE acceleration
DCB features	802.1Qau, 802.1Qaz, 802.1Qbb, DCBX, EVB(802.1Qbg), MLAG, 32-way ECMP
Power supply	Redundant 1+1 power, DC/AC power option available
Cooling	Redundant N+1 cooling
MAC address table size	32768
ARP table size	16384
Route table size	384k

TETA32100 hardware specifications

ASIC	3.2Tbps Broadcom Tomahawk BCM56960 switching silicon
Forwarding performance	4400 Mpps: 32x100G
Processor	Intel Atom 2558 processor (4 core)
RAM	8GB DDR3
HDD	64GB M.2 SATA SSD
Latency	less than 500 ns (PHY-less)
Hardware accelerators	VXLAN/NVGRE/GENEVE acceleration
DCB features	802.1Qau, 802.1Qaz, 802.1Qbb, DCBX, EVB(802.1Qbg), MLAG, 32-way ECMP
Power supply	Redundant 1+1 power, DC/AC power option available
Cooling	Redundant N+1 cooling
MAC address table size	40960
ARP table size	8192
Route table size	128k

Architecture





Ready For SDN

- Support OpenFlow v1.3.4, integrated with OF-DPA v3.0.4.0
- Support OVS 2.5 with extensions to support OF-DPA 3.0 Experimenter protocol definitions
- Support OVSDB for SDN controller management
- Support OVS tool for configuring groups/flows
- Integration with SDN controllers OpenDaylight, ONOS, Ryu …
- Support Hybrid Mode Operations (Both OpenFlow & L2/L3 on the same port)

Layer 2

• L2 MAC address table: 40K • Aging support • Static MAC • Unicast/multicast traffic balance • Broadcast • Unknown multicast • DLF (unknown unicast) • Jumbo Frame • LLDP • SPAN/RSPAN	• FEC • MLAG • LACP • 32-way ECMP • Storm Control • VLAN • MSTP • VRRP • QinQ • Chipset Shell

Layer 3

- BFD
- Graceful restart
- BGP ipv4[labeled] (MPLS)
- BGP ipv6[labeled] (MPLS)
- BGP vpnv4 (MPLS)
- BGP vpnv6 (MPLS)
- BGP LS (SDN)
- BGP flowspec (SDN)
- BGP evpn (SDN)
- Babel
- OpenFabric
- LDP (MPLS)
- EIGRP
- ISISv4
- ISISv6

- NHRP
- OSPFv2
- OSPFv3
- OSPF SR (MPLS)
- PIM-SM
- PIM-SSM
- PBR
- RIP
- RIPng
- SHARP
- Route-map
- Access-list
- Community-list
- DHCP relay, DNS, NTPv4

Security and quality

- Security
  - Ingress/Egress/VTY/control-plane ACL
  - AAA: RADIUS /TACACS+/Local (on CPU)
  - 802.1x
- QoS
  - COS
  - DSCP

- DWRR and Strict scheduling
- WRED-ECN
- Traffic shape
  - ingress policing, egress shaping
- PFC
- CoPP

Management

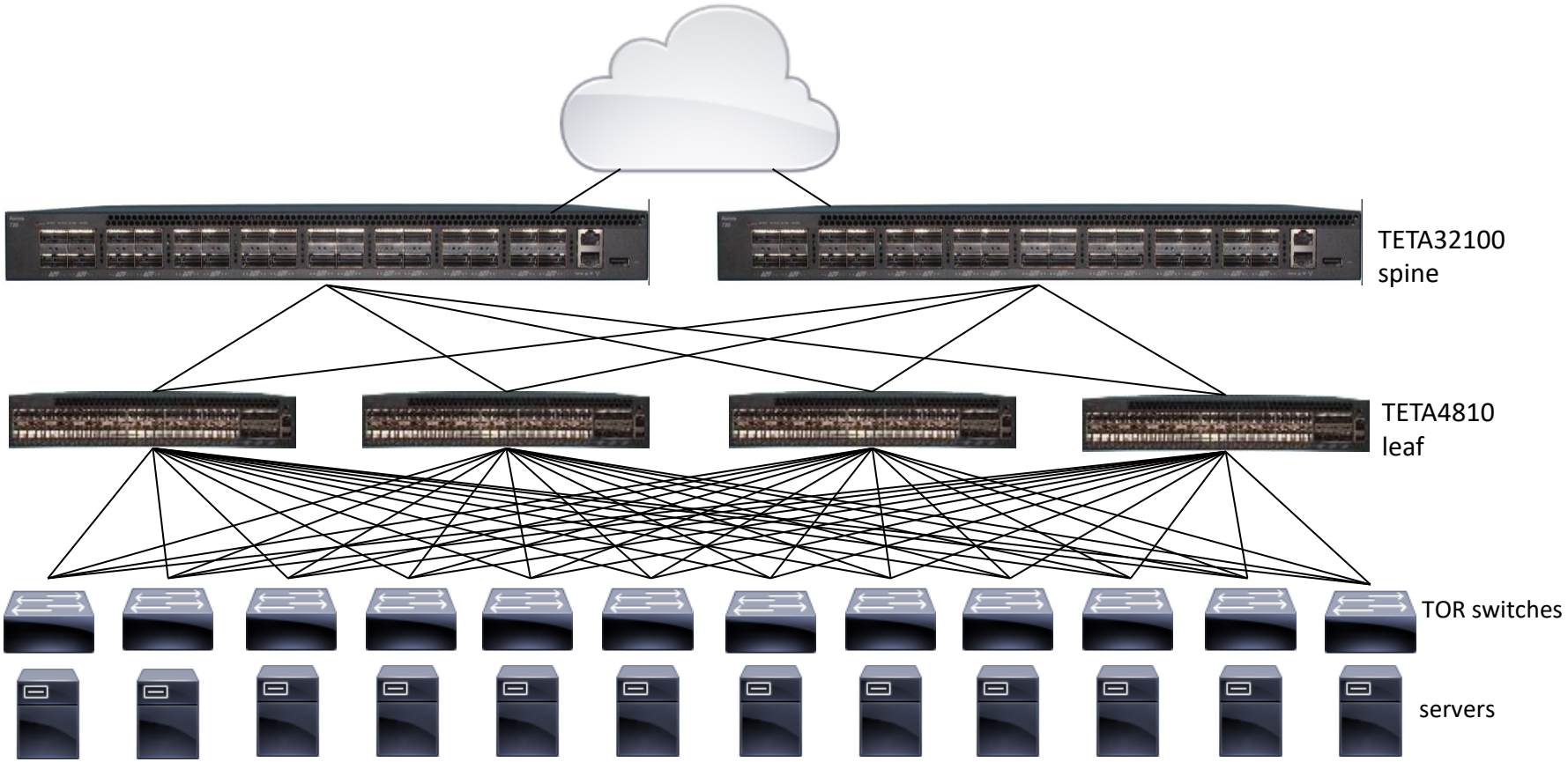
- Industrial standard CLI
- CLI filtering, pagination and interface range
- Text-based configuration
- SSH v2
- SFTP/SCP/TFTP
- Multiple Images
- Incremental software update
- DHCP Client/Server/Relay
- Docker based, Swarm/kubernetes compatible
- Automation tools: Ansible/Chef/Python
- New network applications extensibility
- Distributed processing/Software mobility/ Database clustering
- ASIC pipeline and buffers monitoring, packet tracing.

- Syslog
- Diagnostic dump
- sFlow
- NetFlow/IPFIX
- EverFlow/telemetry
- Chipset pipeline monitoring
- SPAN / ERSPAN
- Fast/Warm/Cold reboot
- ZTP
- Restful API
- gNMi
- NETCONF/RESTCONF/SNMPv2v3

Data Center

- VxLAN/HW-VTEP
- OpenFlow 1.3.4
- CORD ready
- 802.1Qau
- 802.1Qaz
- 802.1Qbb
- DCBX
- EVB(802.1Qbg)
- MLAG
- 802.3x

CLOS Network Architecture



Clustered Architecture