NetEngine 9000 Series Converged Backbone Router

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>>> Product Overview

The NetEngine 9000 (NE9000) series are high-performance, next-generation converged backbone routers that can be deployed on IP/MPLS backbone, DCI, and large-scale enterprise networks. The NE9000 series offers more flexible capacity and more integrated and intelligent functions. These features address the evolving service demands driven by the cloud, mobile and video. They help carriers and enterprises maintain profitable growth in an increasingly competitive and constantly changing market.

The NE9000 series features the industry's first high-speed cable backplane. A capacity of 80 Tbit/s is provided in a single chassis, which can be upgraded to 160Tbit/s in the future. NE9000 routers also feature an innovative green design that reduces power consumption less than 0.4 W/G, half of the industry average. In addition to all of the functions of P and PE nodes, NE9000s also provide complete SDN and virtual system capabilities to simplify network architecture, converge the bearing of multiple services, and enable high reliability and easy O&M.
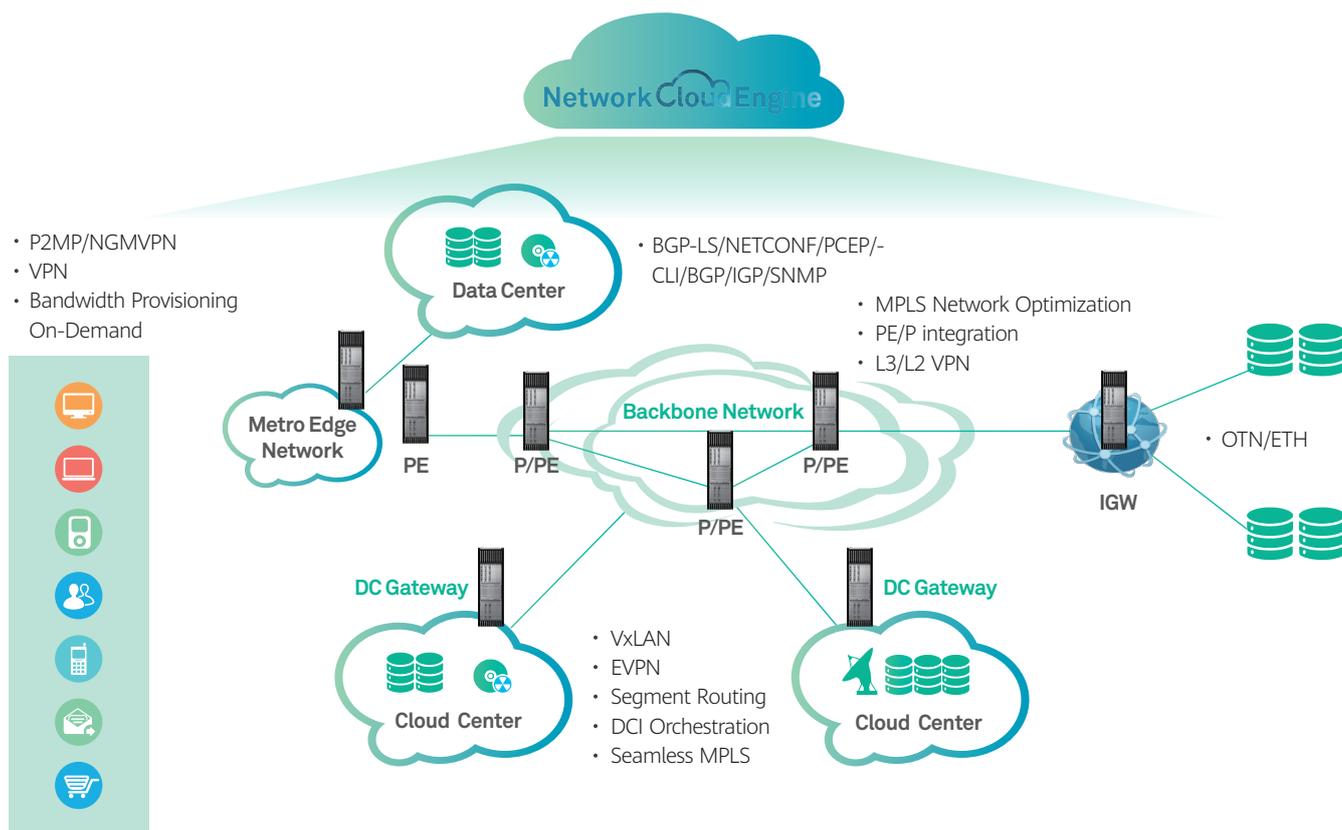
NetEngine 9000 Application Scenarios

The NetEngine 9000 Family

The NetEngine 9000 family now has two members: the NetEngine 9000-20 and NetEngine 9000-8.

NetEngine 9000-20   NetEngine 9000-8

NetEngine 9000 Series Appearance

NetEngine 9000-20 suited for deployment on large-scale backbone networks or DCI networks. The router has 20 slots and a capacity of 160Tbit/s.

NetEngine 9000-8 suited for deployment on small-scale backbone, metro edge, or DCI networks. The router has 8 slots and a capacity of 64Tbit/s.

8*400GE+8*100GE

40*100GE

20*100GE

60*25GE/10GE

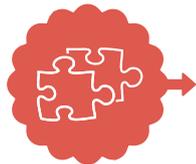60*10GE

Product Characteristics

| Meeting Traffic Requirements in The Next 5 to 10 Years | **Ultra-Broadband** | • 160T/Chassis, the industry's most integrated router
• Smoothly upgrade to support 8T line card
• 400GE , industry's first 400GE port |

| One Network for All Services | **Simplicity** | • One network with multi-domain system (MDS) for all services
• One platform with full features for P&PE
• Omni-scenario SR/EVPN solution, protocol types reduced by 80% |

| Minutes-Level Traffic Optimization, Improving O&M Efficiency | **Intelligence** | • Proactive traffic optimization, Non-congestion network, improve BW utilization
• Proactive O&M, minute-level fault locating and self-healing
• IP+Optical Synergy, shorter TTM, reduced TCO |

| Secure, Reliable, and Green | **High Quality** | • Redundant key components with Intelligent fault detection and recovery
• Variety of reliability-related features, including comprehensive NSx and protection switching
• Green design for <0.4 W/G power consumption, half of the industry average |

	NetEngine 9000-20	NetEnine 9000-8
Main Processor Slots	2	2
Switching Fabric Slots	8	8
Service Slots	20	8
Slot Capacity	4T, scale to 8T	4T, scale to 8T
System Capacity	160Tbps	64Tbps
Forwarding Performance(Mpps)	36,160Mpps	14,464Mpps
Power Consumption	<0.4W/G	<0.4W/G
Physical Dimensions(H x W x D)	2200mm x 600mm x 1000mm	1016mm x 442mm x 945mm
Chassis Weight(empty loaded)	231KG	159KG
Interface Type	400GE, 100GE, 50GE, 40GE, 25GE, 10GE, 1000M	
IPv4	UCMP, ECMP, Fragment, MAC Accounting RIP, OSPF, IS-IS, BGPv4, Segment Routing	
IPv6	IPv4/IPv6 dual stack, IPv6(ND), Path MTU, IPv6 DNS IPv6 over IPv4 Tunnel, 6PE&6vPE RIPng, OSPFv3, IS-ISv6, BGP4+, SRv6 BE, SRv6 Policy	
Multicast	IGMP, MLD, IGMP/MLD Snooping, PIM-DM, PIM-SM PIM-SSM, MSDP, MBGP, PIMv6-DM, PIMv6-SM, PIMv6-SSM NG-MVPN, BIER, BIERv6	
VPN	IPv4/IPv6 dual stack MPLS L3VPN, MPLS/BGP L3VPN LSP tunnels, GRE tunnels, IPv6 GRE tunnels, TE tunnels PWE3/VLL, VPLS, EVPN	
Clock Synchronization	G.8275.1, G.8275.2, G.8265.1, G.8264, G.8273.2 1588v2, 1588v2 ACR, NTPv4	
Reliability	GR, NSR, BFD, IP FRR, VPN FRR, Mutlicast FRR, MPLS TE FRR/Hot Standby	
Security	IPv4/IPv6 Protocol encryption and authentication, URPF, GTSM, ARP Attack Defense, BMP, BGP Flowspec, BGP ROA Verification, MACSec	
QoS	Routing Policy, QPPB, Differ-Serv, HQoS, Ethernet QoS	

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