



vBNG Virtual Broadband Network Gateway

Cloud-based disaggregated network architectures promise accelerated service deployments, increased revenue, and cost cuts, but pose new challenges on network management, monitoring and performance sustainability.

BISDN's **vBNG** solution offers state-of-the-art services for authenticating and authorizing customer sessions at the operator edge. Its self-managing capabilities lower deployment complexity and adapt to varying states of load and utilization based on its inherent scalability features.

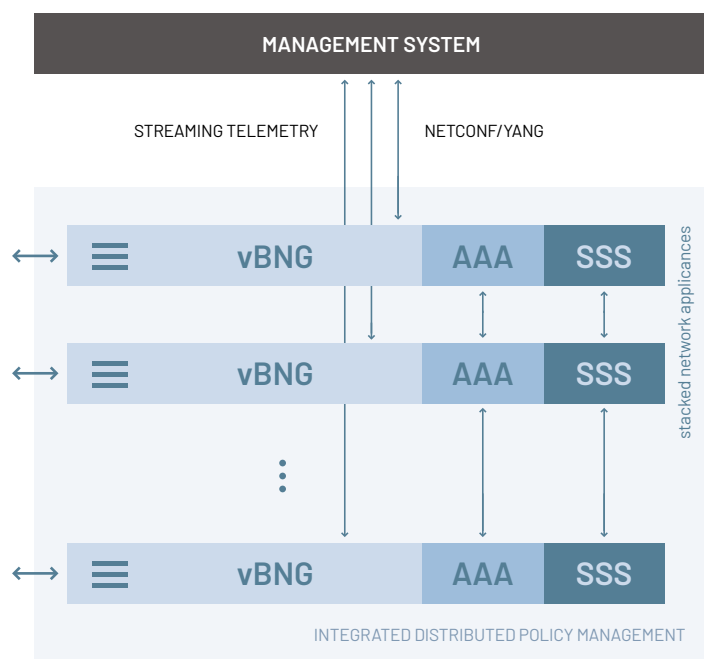
Leverage benefits of cloud-native networking while shielding your employees from cloud complexity. Conduct software updates at **runtime** with no service interruption!

Make use of x86 or ARM based **COTS** hardware for packet forwarding, header manipulation and hierarchical QoS. Select from a range of preconfigured systems based on x86 CPUs (e.g., Intel® Xeon-D Icelake) with enhanced support and software updates.

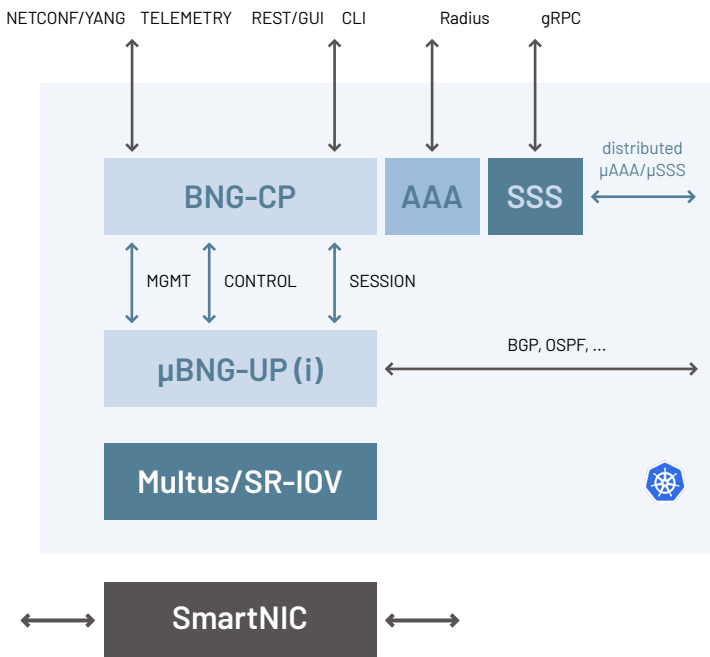
Benefit from flexible deployment options: BISDN's vBNG is available as **network appliance** hiding cloud complexity from an operator's day-to-day operation or integrate with your existing k8s infrastructure. We offer customized solutions for various **vendor flavors** of k8s.

Contact us for high performance variants offering more demanding QoS schemes with an increased number of layers or traffic classes utilizing hardware acceleration boards available from various hardware vendors!

Cloud-native networking made easy!



- Integrated distributed policy management framework for AAA and SSS services
- Support for BBF WT-474 Subscriber Session Steering (SSS) (*under development*)
- Support for Radius (AAA) acting as integrated server or proxy towards external infrastructure
- BISDN vBNG is a true **cloud-native** virtual network function (VNF) solution running on Kubernetes
- Available as simple-to-run **stackable** network appliance or for deployment on existing k8s infrastructure
- Utilizes latest development from k8snetworkplumbing group including **SR-IOV** operator for multus CNI
- **Micro user plane instances** for dynamic or manual adaptation to changing load conditions
- Software based 3-layer hierarchical QoS for triple play services
- IGMP/multicast support
- Access Control Lists (ACL)
- Routing support based on opensource project Free Range Routing (FRR)
- **NETCONF/YANG** based management interface
- Streaming telemetry



SIMPLE TO SCALE AND USE

- Start with a single network appliance instantaneously and integrate into your existing network infrastructure
- Transform into a stack of multiple vBNG instances and increase overall **capacity** and add **redundancy**
- Simple zero touch provisioning for stack management

CUSTOMIZATION AND OPEN SOURCE

- Utilize your hardware efficiently using our improved hardware acceleration for open-source components
- In need for a specific feature not yet available or seeking for even higher performance numbers?
- **Contact us** for our feature roadmap or get information about our highly optimized systems aiming towards highest performance and energy efficiency.

ABOUT US

BISDN was founded in 2012 in Berlin, Germany, and set out to develop the software needed in the rapidly changing world of software defined networking. Based on long-standing experience in the area of telecommunication as well as data center networking, BISDN focusses on high-performance whitebox switching and open network software solutions.

HIGH-PERFORMANCE CONNECTIVITY

Supports both IPoE and PPPoE, ensuring versatile and high-speed internet access for both IPv4 and IPv6.

ADVANCED VLAN AND QOS CAPABILITIES

Offers QinQ, VLANs, and a broad set of AVPs and VSAs for sophisticated service differentiation and quality of service.

COMPREHENSIVE DHCP SERVICES

Includes DHCP server, DHCP relay, and extensive DHCP option support for dynamic IPv4/v6 address allocation.

ENHANCED NETWORK MANAGEMENT

Features static IP, DNS, RADIUS, and configurable MTU size, along with Jumbo frames support for optimized traffic handling.

ROBUST SECURITY AND ROUTING

Provides user and session security, static routing, ECMP, and IPv4/v6 fragmentation and reassembly for secure and efficient data transmission.

INNOVATIVE SUBSCRIBER MANAGEMENT

Equipped with Virtual Routing and Forwarding (VRF), Subscriber Liveness detection (PPPoE only), and access loop identification for precise subscriber management.

EFFICIENT ADMINISTRATION AND MONITORING

Includes CLI, web-based GUI, multiple alarm handling, logging, Syslog, and NTP for streamlined network administration and monitoring.

FUTURE-PROOF NETWORK OPERATIONS

Supports all management features via IPv4 and IPv6, deployment and orchestration of services via Kubernetes, and PFCP for CUPS for advanced network operations.

VERSATILE DEPLOYMENT OPTIONS

Ready for deployment on bare-metal servers, VMs, and in containerized environments, ensuring flexibility across different network infrastructures.

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