



PacketLogic™ Carrier-Grade NAT

High-performance, scalable
carrier-grade Network Address Translation

KEY SYSTEM BENEFITS

- Combine deployment of CGNAT functionality with additional features
- Intelligent policy enforcement supports service plans, charging, and other subscriber specific functions
- Supports policy-based NAT offload for high bandwidth traffic like streaming video
- NATSync enables simplified deployment for asymmetric processing without requiring load balancers
- Carrier-class availability and scalability

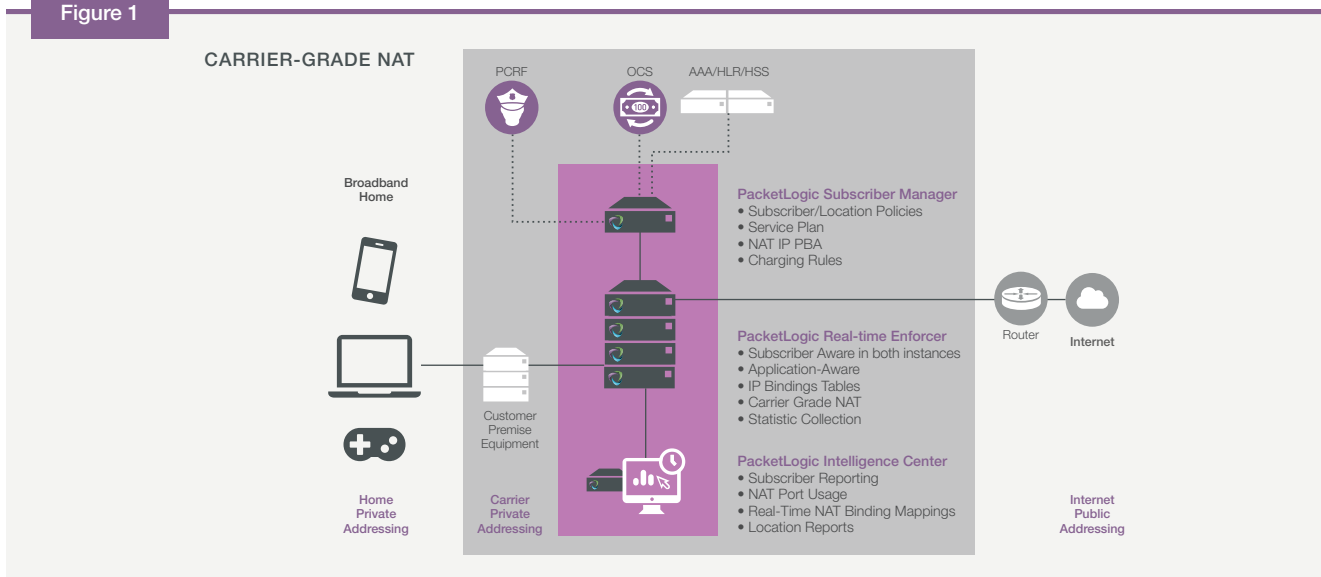
Network operators are finding it increasingly difficult to manage subscriber growth with the rapidly diminishing IPv4 address space. While operators are attempting to launch IPv6 services to ease IPv4 address depletion, this rollout has been hindered by a variety of engineering and product-related challenges. As a result, operators are deploying Carrier-Grade NAT as part of their IPv6 migration strategy. The challenge with current CGN products is that they lack subscriber and service plan awareness, and most are not designed to scale with transparent, stateful processing of application traffic in asymmetric deployments. These solutions also impair the ability to collect network and subscriber analytics, in the network as the sharing of IP addresses complicates troubleshooting and Big Data analysis of subscriber and service plan trends.

PACKETLOGIC CGNAT SOLUTION OVERVIEW

The PacketLogic platform is already application-aware and stateful, so the NAT process simply adds an additional rewrite IP address action on top of its existing stateful processing to meet carrier-class performance and scale requirements. The solution manages IP address pools and port block assignments for both small and large scale installations, including unique support for asymmetric deployments with NATSync, a technique to synchronize session state between multiple systems processing NAT traffic.

PacketLogic enhances standard NAT implementations by adding support for subscriber awareness, including subscriber data enrichment to enable valuable analytics, sophisticated traffic management, and intelligent charging and policy enforcement.

Figure 1



PACKETLOGIC™ CARRIER-GRADE NAT SOFTWARE

NETWORK DEPLOYMENT

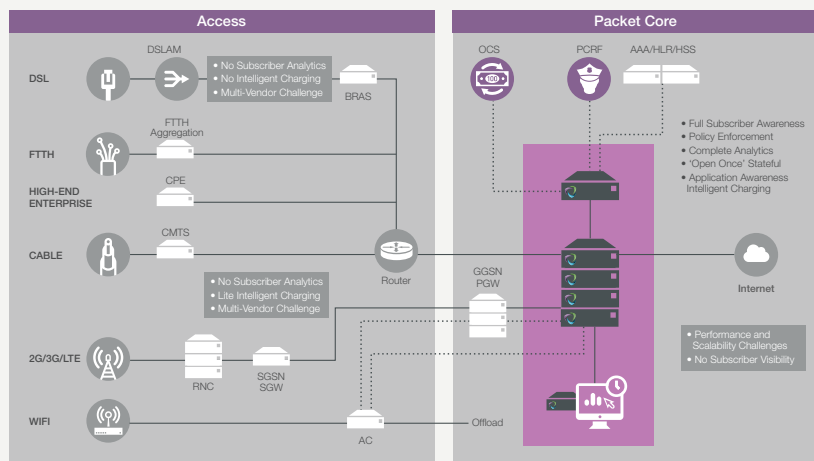
Many operators are struggling with where to place CGNAT in their networks. Since most CGNAT products do not support asymmetric traffic handling, many operators are forced to place the CGNAT systems very close to the customer. In this location, however, subscriber visibility and the ability to deliver detailed subscriber analytics and charging are lost to other systems further along the chain. If these systems are deployed closer to the customer than the CGNAT function, all subscriber identification capability is maintained, but some operators prefer to have centralized deployments for these systems. Deployments using core routers suffer severe performance and scalability concerns and cannot handle asymmetry in the network. Sandvine's CGNAT solution delivers the ideal combination of carrier-scale performance, deployment flexibility, and simplified address management. PacketLogic is also access agnostic, so it can be applied to fixed, mobile, WiFi, and satellite deployments.

EASY CONFIGURATION

PacketLogic CGNAT can be easily configured through the PacketLogic Client. This point-and-click approach to policy creation allows operators to quickly create, test and deploy services in a matter of minutes. PacketLogic CGNAT can be configured for all traffic to be passed through or to offload high bandwidth applications like streaming video to reduce the load on existing CGNAT systems.

Figure 2

TYPICAL PACKETLOGIC DEPLOYMENT



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ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit sandvine.com or follow Sandvine on Twitter at [@Sandvine](https://twitter.com/Sandvine).



USA
47448 Fremont Blvd,
Fremont,
CA 94538,
USA
T. +1 510.230.2777

EUROPE
Birger Svenssons Väg
28D
432 40 Varberg,
Sweden
T. +46 (0)340.48 38 00

CANADA
408 Albert Street,
Waterloo,
Ontario N2L 3V3,
Canada
T. +1 (0)519.880.2600

ASIA
Ardash Palm Retreat,
Bellandur, Bangalore,
Karnataka 560103,
India
T. +91 80677.43333