IPv4 Conservation and IPv6 Transition Solutions

It's coming, and it's coming fast. Service providers are starting to feel the pinch on their IPv4 address space. You need a strategy for how to deal with the shortage of IPv4 addresses, and how you will migrate to IPv6 while still supporting IPv4 customers and content.

ZCorum offers A10 Networks® Thunder® CGN product line of Carrier Grade Networking gateways. The A10 provides high-performance, highly transparent address and protocol translation that allows service providers to extend their IPv4 network, while simultaneously making the transition to IPv6.

Extend IPv4 connectivity

Service providers have to meet the demand for new Internet connected devices and service area expansion, but an immediate transition to IPv6 is not a realistic option. Carrier Grade NAT (CGN/CGNAT) enables you to preserve your existing IPv4 address allocation and your investment in IPv4-based infrastructure, saving cost and gaining time to plan your IPv6 transition strategy. The Thunder CGN product line provides advanced CGNAT functions to easily mitigate IPv4 address exhaustion and extend the life of an IPv4 network infrastructure.

Broad transition options

The Thunder CGN product line provides a wide choice of technologies that enable a smooth transition to IPv6 networks and devices as they are deployed, ensuring that applications and users can connect to the entire Internet, regardless of what IP version is used. Supported transition technologies include Dual-Stack Lite (DS-Lite), Light Weight 4 over 6 (LW4o6) and IPv6 Rapid Deployment (6rd). Plus, IPv6 client access to IPv4 content is ensured through NAT64/DNS64, allowing IPv6-only devices to access IPv4-only content.

Application reliability

The Thunder CGN product line provides the highest connection reliability by using application layer gateways (ALGs) to ensure that applications remain addressable and operate transparently through address translation. No need to worry about VoIP, Skype, Gaming and other applications not working for your subscribers.
Features and Benefits

- High ratio of private to public IP addresses reclaims a significant amount of IPv4 addresses
- Support for Dual-Stack Lite (DS-Lite), Light Weight 4 over 6 (LW4o6), IPv6 Rapid Deployment (6rd) and NAT64/DNS64 provides multiple transition options.
- Advanced logging features reduce logging infrastructure requirements and make it easier to get details of user connections
- Endpoint Independent Mapping (EIM) and hairpinning ensure predictable NAT behavior and a transparent end user experience
- Application Layer Gateways (ALGs) ensure connectivity for all application services and users, including FTP, TFTP, RTSP, PPTP, SIP, ICMP, H.323 and DNS
- Carrier-grade hardware with Hot swap Redundant Power Supplies (AC and DC), Smart Fans (hot swap), Solid-state drive (SSD) and Compact Flash increases reliability
- Scales up to 256 million concurrent sessions in a single RU form factor to save space and costs.

Networking Features

- Integrated Layer 2/Layer 3
- Transparent Mode/Gateway Mode
- Routing – Static Routes, IS-IS (v4/v6), RIPv2/ng, OSPF v2/v3, BGP4+
- VLAN
- Trunking
- Access Control Lists (ACLs)
- Basic Stateful Firewall
- Traditional IPv4 NAT/NAPT
- IPv6 NAPT

Management

- Dedicated Management Interface (Console, SSH, Telnet, HTTPS)
- Web-based Graphical User Interface (GUI) with Language Localization
- Industry-standard Command Line Interface (CLI)
- SNMP, Syslog, Alerting
- Port mirroring
- REST-style XML API (aXAPI)
- RADIUS attributes in logs
- Policy from RADIUS

Carrier-grade Hardware

- Advanced hardware architecture
- Lights Out Management (LOM/IPMI)
- Hot swap Redundant Power Supplies (AC and DC)
- Smart Fans (hot swap)
- Solid-state drive (SSD) and Compact Flash
- Error Correcting Code (ECC) memory
- 10 GE and 40 GE ports