



PacketLogic PL5600

Product Overview

PL5600 is Procera Network's entry-level member of the PacketLogic™ product family. Enjoy all the functionality and the features of the upscale PL76xx and PL10000 platforms, packaged in an intuitive license model that is available in five bandwidth configurations – up to 4, 10, 24, 45 and 100 Mbps. This makes PL5600 the preferred choice for broadband edge and access deployments, e.g. wireless backhaul connections, as well as the enterprise's WAN connection. The license is upgraded using a software key. No hardware upgrade is required.

The PL5600 comes pre-packaged with all PacketLogic modules – LiveView, Filtering, Traffic Shaping, Statistics and WebStatistics. The 1RU 19" hardware comes with one channel, i.e. two interfaces. The interfaces are gigabit Ethernet (GE) RJ-45 copper interfaces with hardware bypass functionality. The Layer 2 design of the PL5600 makes it easy to install. The VLAN support (802.1q) enables multiple physical networks to be aggregated through one PL5600.

PacketLogic is a Layer 2 Ethernet repeater. This transparent design gives minimum network impact, low latency, easy deployment and increased capacity. High-availability is achieved through any kind of Layer 2 fail-over technology, like Rapid Spanning Tree (RSTP). This offers the options of straight through or full functional redundancy.

The key to high availability is however Procera Networks' dedication and commitment to delivering carrier-grade DPI solutions – something the entry-level PL5600 enjoys as well. The performance commitment applies across the board from capacity, to functionality, to performance – not only the performance of the products but of the whole organization. This is crucial as DPI solutions today get deployed in-line and are critical to modern networks.

The unparalleled real-time traffic view – from overview down to a specific connection – gives an instant picture that guides to the right decisions on how to limit, prioritize, block and track applications and users. The Traffic Shaping functionality in PacketLogic relies solely on non-disruptive queue management that adjusts the packet-rate when approaching the defined threshold. This is a smooth approach to shaping which minimizes the number of dropped packets and thereby the amount of overhead traffic generated through retransmits.

Most important to making the right decision is to have access to and rely on accurate intelligence. This is where PacketLogic stands out from the competition. DRDL™ stands for Datastream Recognition Definition Language and is the state-of-the-art traffic identification and classification engine in PacketLogic. With more than 1100 signatures (Jan-09) that facilitate a broad range of criteria, header

Key Features

- **1 RU rack-mounted appliance** for deployment at broadband edge/access or WAN connection
- **Low entry-level license** – 4 Mbps – with all the PacketLogic functionality
- **Software upgrade** to higher bandwidth – 10, 24, 45 and 100 Mbps
- **Outstanding traffic identification** and classification accuracy in DRDL™
- **Instant information** in real-time traffic view
- **Preferred choice** for in-line Deep Packet Inspection (DPI) deployment thanks to transparent design and reliable performance
- **Integrates elegantly** with the network and other PacketLogic family members (PL7600/PL7620 and PL10000)
- **Extended network protection** capabilities

information, actual payload, bi-directional traffic information and the characteristics of a handshake, DRDL delivers previously unseen accuracy and an unchallenged low false-positive rate – even as applications get encrypted. Besides application identification, DRDL also gives PacketLogic the unique capability of characterizing a flow as streaming, random-looking, interactive, etc., and to aggregate detailed properties like filename, SIP caller ID, chat channel and mime-type.

This data and the management capabilities are accessible through the graphical PacketLogic administration client software that is available for Windows, Linux and Mac. The Admin client establishes an encrypted connection to the out-of-band Admin interface on the PL5600. All features can also be automated using the Python API. Remote interfaces to PL5600 also include SNMP, Syslog and a CLI for system configuration. Both the GUI and the Python API enable centralized management of multiple PacketLogic systems.

The Python API makes it possible to integrate with existing authentication solutions to activate per-user awareness in PacketLogic. This enables per-user policies to package services, follow up on user behavior in Statistics, and give instant and accurate customer support. The multi-tier NetObject structure, with dynamic creation of objects and assignment of IP addresses, enables group conditions and aggregation of user information per individual subscribers as well as for a subscriber group (geographic, demographics, service tier etc.). The combination of the most accurate application and per-user awareness provides all the necessary means for business intelligence, network traffic control, network protection and innovative service creation.

PacketLogic is purpose-built for DPI. We believe that intelligent decisions require accurate intelligence. We have always broken boundaries thanks to our lack of legacy, and we will not accept good enough

to be good. That is why we constantly over-deliver on expectations. Find out for yourself. Procera Networks – Accuracy and Control, Redefined.

PL5600 Hardware Platform

PL5600 is an integrated one (1) rack unit (RU) 19" rack-mounted appliance with AC power supply. As a transparent Layer 2 device, PacketLogic uses the concept of channels. Two interfaces are bonded as a channel with an Internal and an External interface. The interfaces have hardware bypass in case of failure. The Layer 2 design assigns no IP addresses to the packet-forwarding (Internal/External) interfaces, which substantially increases security by disabling attacks.

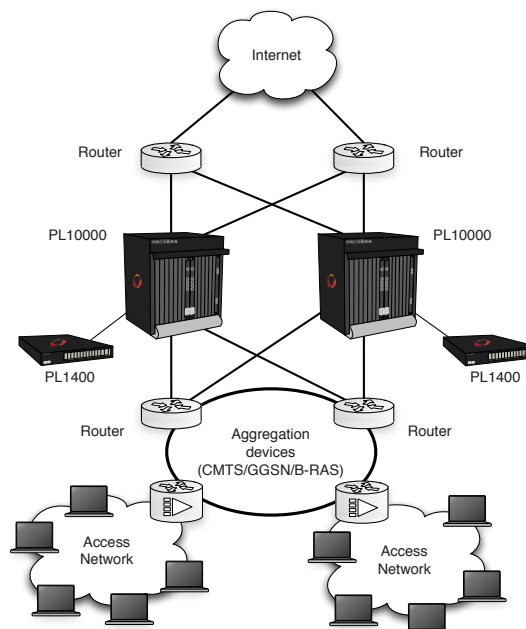
The appliance comes with three (3) systems management interfaces – Admin, AUX and Console. Admin and AUX are RJ-45 BASE-10/100/1000 interfaces. The bandwidth of the system is defined by the license. See specifications below for recommended maximum number of concurrent users, flows and new connections per second (CPS).

Deployment

The PL5600 is suitable for access or edge deployments in small broadband networks, e.g. a metro network, a network segment or a wireless backhaul. The licensing model also makes it suitable for WAN traffic optimization and network protection in enterprises, public administrations and schools. Multiple physical networks can be aggregated and managed by one PL5600 thanks to the support of VLANs (802.1q).

PL5600 is deployed in-line to shape and filter traffic. PacketLogic relies on queuing for bandwidth management and will never introduce any packets in the traffic stream. The use of a home brew Random Early Detection (RED) algorithm called BROWN, assures smooth adoption of traffic as it approaches a defined threshold. PacketLogic typically relies on the network for resilience, i.e. PacketLogic is deployed as a transparent device in a redundant location. Any kind of Layer 2 or Layer 3 redundancy or load-sharing can be combined with PacketLogic. A stand-alone heartbeat fail-to-wire appliance that provides bypass outside PL5600 can also be facilitated.

Typical PacketLogic Deployment



Specifications

Hardware	
Hardware	1 rack unit (RU), 19" rack-mounted
Physical Dimensions (not including handles and cable holders)	1.75" (h) x 17" (w) x 17" (d) / 4.45cm (h) x 43.2 cm (w) x 43.2 cm (d)
Power	100-240 VAC, 4.5 Amp. 50/60 Hz
Weight	17 lbs/7.71 kg
Channels	Three (3), i.e. three channels with Internal and External interfaces
Interfaces	RJ-45 BASE-10/100/1000 copper with bypass (fail to wire)

Capacity and Performance (under beneficial conditions)

	4 Mbps	10 Mbps	24 Mbps	45 Mbps	100 Mbps
Bandwidth*	4 Mbps	10 Mbps	24 Mbps	45 Mbps	100 Mbps
Max Concurrent Users †	250	500	1,000	1,500	2,000
Concurrent Flows †	80,000	80,000	80,000	80,000	80,000
New Connections per Second (CPS) †	5,000	5,000	5,000	5,000	5,000

* bandwidth limit is forces

† recommended upper limits supported by Procera Networks

Integration & Management

Interfaces	<ul style="list-style-type: none"> Graphical User Interface (GUI) administration client for Windows, Linux and MacOSX Python Application Programming Interface (API) for Windows, Linux and Solaris SNMPv2 Syslog Command Line Interface (CLI)
Physical Interfaces	<ul style="list-style-type: none"> RJ-45 BASE-10/100/1000 Admin interface RJ-45 BASE-10/100/1000 AUX interface Console interface All systems management interfaces are front-mounted

Miscellaneous

Modules	<ul style="list-style-type: none"> LiveView – real-time traffic view Statistics – traffic analyzing Filtering – Layer 7 filtering and network protection Traffic Shaping – bandwidth management WebStatistics – web interface connecting into Statistics (above)
DRDL Signatures	<ul style="list-style-type: none"> ~1100 signatures (Jan-09)
Subscriber Authentication	Dynamic creation of per user NetObjects and assignment of current IP address through: <ul style="list-style-type: none"> DHCP Snooping Radius Snooping Python API integration (w/ DHCP, AAA, LDAP, AD etc.)