PACKETLOGIC™ 20000 PLATFORM

PROCERA

600 GBPS subscriber experience intelligence and policy enforcement for broadband networks

Designed for the most demanding network deployments

The PacketLogic 20000 is a 100GE-based system that enables network operators to gain insight into how their networks are performing and take action to improve the subscriber experience, with support for up 600 Gbps of throughput in a single system and multi-system performance scaling up to 10 Tbps.

Designed for the most demanding network deployments, the PL20000 platform offers the performance and capacity to handle up to 10 million subscribers delivering Subscriber Experience Intelligence and many different personalized services in a policy enforcement configuration. This enables massive network growth without sacrificing service creation flexibility—removing limitations for subscriber provisioning, policy interactions, policy enforcement, charging, application identification, analytics, and congestion management that have constrained network services and profitability.

The PL20000 platform can be configured to support various analytics and policy enforcement capabilities functioning as a PacketLogic Real-time Enforcer. It is ideally suited for the largest fixed, Cable MSO, and Mobile service provider network deployments supporting very large subscriber bases. The system supports multiple highavailability options, including internal N+1 redundancy, configuration synchronization, and clustering, for carrierclass availability.

KEY SYSTEM BENEFITS

- ☐ Granular awareness for applications with superior accuracy using DRDL™

- ☐ Unsurpassed real-time visibility with LiveView™

- ☐ Flexible deployment options including support for asymmetric traffic through FlowSync™ and QueueSync™

- ☐ Carrier-class availability

- ☐ Chassis offers ability to add capacity with additional flow processing modules

SUPPORTING HIGH-VALUE USE CASES

Procera's PacketLogic software enables the PL20000 to support a full suite of network intelligence and policy enforcement use cases, including:

- Content-aware services
- Congestion management
- Traffic prioritization
- Application-layer shaping
- Statistics collection

- Volume-based shaping
- Application delivery networking via advanced traffic steering
- HTTP Header Enrichment

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POWERFUL ENFORCEMENT CAPABILITIES

The PL20000 platform is a turnkey hardware solution optimized to support Procera's PacketLogic Real-time Enforcer software , delivering unparalleled Subscriber Experience Intelligence with Policy Enforcement capabilities to enhance the subscriber experience.

- **REAL–TIME DYNAMIC LIVEVIEW QUERY ENGINE AND PACKETLOGIC CLIENT** enables sophisticated real-time forensics to manage Quality of Experience, Network Congestion, and Network Security issues.

- **DRDL™ (DATASTREAM RECOGNITION DEFINITION LANGUAGE) PROCESSING** to identify properties of individual session flows in real time, enabling operators to create and define services on-the-fly.

- **A FULL SUITE OF POLICY ENFORCEMENT CAPABILITIES** including content-aware services, congestion management, application layer shaping and volume-based shaping, mirroring, and captive portals.

- **POLICY–BASED TRAFFIC MANAGEMENT CAPABILITIES**, including asymmetric traffic control, traffic shaping and filtering, traffic flow classification and prioritization, traffic monitoring and packet re-write.

- **ADVANCED PACKET QUEUING**, including parallel queuing to enable more flexible traffic management policies which ensure predictable delay and jitter enabling operators to meet their customers' QoE expectations.

- **STATISTICS GATHERING** for individual flows to enable real-time and historical reporting, including real-time Quality of Experience (QoE) updates.

- **CONTENT INTELLIGENCE** enables network operators, cloud providers, and high-speed enterprises to combine the policy management capabilities of PacketLogic with industry-leading URL content categorization functionality.

- **HTTP HEADER ENRICHMENT** leveraging PacketLogic's stateful awareness and subscriber awareness.

- **ADVANCED TRAFFIC STEERING** that combines PacketLogic capabilities with Application Delivery Networking functionality to provide a single Application Delivery Controller solution with unmatched performance and scalability, enabling service chaining with subscriber, service plan, charging, and Layer 7 awareness.

- **EVENT BASED TRIGGERS** that automatically change policy in response to specified real-time network traffic conditions by dynamically enabling DoS/ DDoS connection limits, traffic shaping or filtering.

- **BGP INTEGRATION** enables Peering and CDN visibility, including QoE metrics Support for Origin-AS and Transit analysis.
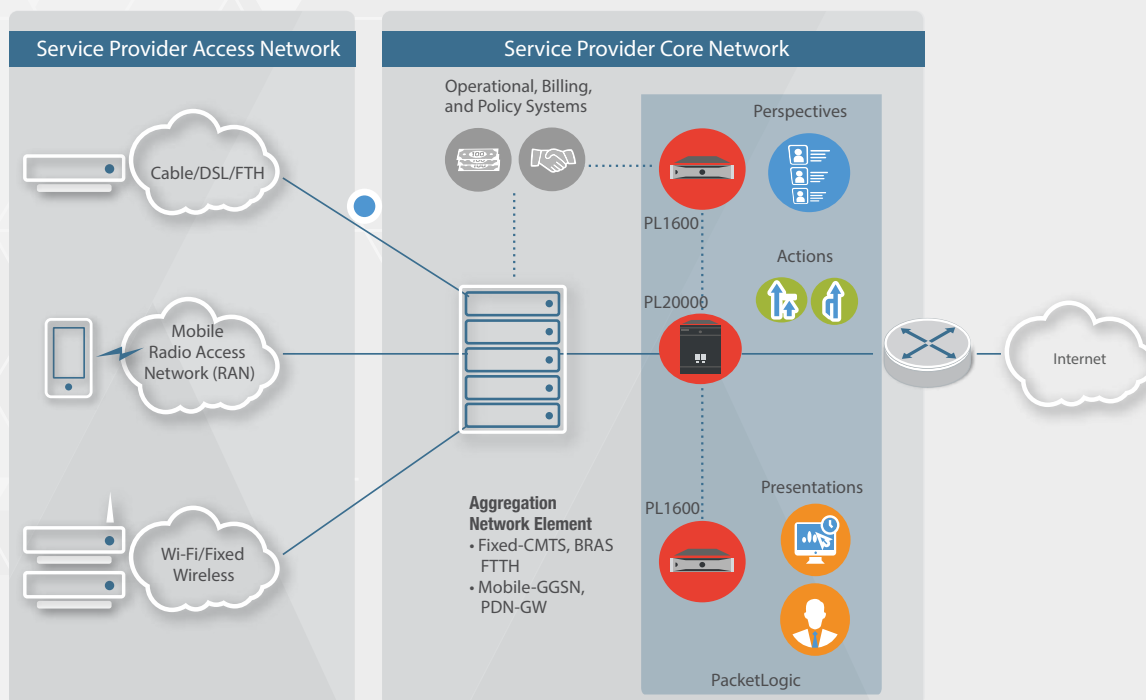
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NETWORK INTEGRATION

The PL20000 tightly integrates with other PacketLogic software within the operator's core network to deliver analytics and enforcement solutions.

- **ACTIONS** are run directly on the PL20000 to perform intelligent policy enforcement. Congestion Management, Filtering, and Traffic Steering. In a mobile policy environment, the PL20000 acts as a 3GPP Policy and Charging Enforcement Function (PCEF)

- **PERSPECTIVES** integration to support powerful intelligent policy enforcement at the different subscriber, RAN, or other Perspective levels. The PL20000 gleans subscriber information during login to dynamically create policies, traffic control, or service packages for each user on the network. Other Perspectives enable fine-grained visibility and control for individual locations, content types, devices, etc.

- **PRESENTATION** to provide rich intelligence and analytics visualization for networks, subscribers, devices, and application performance. The network intelligence gathered by deployed PL20000s enables operators to make informed business decisions on network conditions, congestion management, and innovative new services.

Figure 1

TYPICAL PACKETLOGIC DEPLOYMENT

Service Provider Access Network — Cable/DSL/FTH, Mobile Radio Access Network (RAN), Wi-Fi/Fixed Wireless

Service Provider Core Network — Operational, Billing, and Policy Systems; Perspectives; PL1600; Actions; PL20000; Presentations; PL1600; PacketLogic

Aggregation Network Element
- Fixed-CMTS, BRAS FTTH
- Mobile-GGSN, PDN-GW

Internet

PL20000 SPECIFICATIONS

	PL20000
Connections	240,000,000[1]
Connections per second	4,000,000[1]
Throughput	600 Gbps[1]
Subscribers	10,000,000[1]
Management interfaces	4 x 10GE, 4 x 1000Base-T
Number of channels	Up to 36 x 10GE and 4x40GE or 4 x 100GE and 8 x 10GE
Physical interfaces	1000 Base-T, 1000 Base-SX, 1000 Base-LX 10 Gbase-SR, 10 Gbase-LR, 40 Gbase-SR
Serial console port	RJ-45, mini-USB
Redundancy	Bypass, Internal Modules, FlowSync
Bandwidth licensing	1 Gbps, 10Gbps and 100Gbps increments
Network intelligence	Intelligence Center
Subscriber management	Subscriber Manager
Hardware	14RU Advanced TCA chassis; 19" rack mounted
Components	Systems Management Module (SM); Flow Processing Module (FP); Load Balancer Module (LB); Rear Transition Module (RT); Shelf Management Module
Size	24.25" (h) x 17.637" (w) x 15.18" (d)/61.6cm (h) x 44.8cm (w) x 38.6cm (d)
Weight	220lbs / 99kg
Power	Wattage: 5000W; Voltage: 100-240 VAC or 40-72 VDC; Frequency: 50-60Hz; Current:90A
Environmentals	Operating temperature: 0⁰C to 40⁰C; Storage temperature: -20⁰C to 75⁰C; Operating humidity: 5% to 85% (non- condensing)

[1] Depending on configuration/features used

ABOUT PROCERA NETWORKS

Procera Networks, the global Subscriber Experience company, is revolutionizing the way operators and vendors monitor, manage and monetize their network traffic. Elevate your business value and improve customer experience with Procera's sophisticated intelligence solutions. For more information, visit proceranetworks.com or follow Procera on Twitter at @ProceraNetworks.

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