See more.
Do More.

Intelligent Policy Enforcement Solutions for Mobile Service Providers

To do more with your wireless network you need to *see more.*

Imagine being able to view network activity down to the granular level, in real time. If you could see which device and application an individual subscriber is using, and where they're using it, your whole perspective changes. And so does your business.

Procera gives you that view. Our PacketLogic® Intelligent Policy Enforcement (IPE) solutions give you the awareness and insight—from the granular to the global— to deliver highly personalized services and achieve new levels of network control and efficiency.

Behind our IPE platform is an equally innovative vision of the possibilities for mobile network services. Procera isn't just formulating a unique view of tomorrow's opportunities—we're creating them, starting with the solutions you see here.

Start seeing and doing more, with Procera.

Used by leading mobile service providers around the world, PacketLogic® Intelligent Policy Enforcement (IPE) solutions provide:

▶ **Awareness** of individual subscribers and their service plan, network usage, mobile devices, location, application types, and more

▶ **Control** of bandwidth and traffic with real-time policy enforcement to optimize utilization and Quality of Service (QoS)

▶ **Analysis** of network activity, in real time and historically, to dramatically improve your understanding of trends for enhanced business planning

▶ **Monetization** by enabling innovative, personalized mobile services and data plans

One flexible platform.

A multitude of visionary solutions.

Powered by industry-leading Deep Packet Inspection (DPI) technology, our flexible PacketLogic® IPE systems provide the network Awareness, Analysis and Control to enable powerful, new network management capabilities and differentiated services.

Procera offers proven solutions for the following:

See more...

ON ONE SUNDAY DURING THE 2012 OLYMPICS, **STREAMING BANDWITH** PEAKED

34%

OF **TOTAL** TRAFFIC

BBC iPlayer

FRIDAY
18%

SATURDAY
7%

TRAFFIC ON A MAJOR UK MOBILE NETWORK

OTT (over-the-top) Video

Tap the revenue potential of OTT video usage without breaking the mobile network. Our IPE solution enables operators to identify OTT video usage and monetize this activity with flexible pricing models, including zero-rated plans. Policy-based traffic management optimizes the streaming video experience for paying subscribers.

Intelligent Service Charging

Transition from usage-based service pricing to value-based pricing plans. Our IPE solution enforces charging plans for individual subscribers—including tiered plans and zero-rating—in real time, enabling personalized plans based on application categories, individual applications, or even specific content or websites.

Tethering Detection

Detect and block unauthorized device tethering in the mobile network, while monetizing and managing authorized tethering. Our IPE solution enforces tethering detection policies, redirecting subscribers to a portal to purchase a tethering plan, or blocking if the user continues to violate the Terms of Service.

VoIP

Our IPE solution enables mobile operators to detect and monetize "over the top" (OTT) VoIP traffic. Our fine-grain subscriber, application and service plan awareness allows service providers to distinguish unauthorized VoIP activity, while ensuring authorized VoIP traffic receives the QoS required for high latency.

### Tiered Data Service Plans

Deliver a higher level of service to power users, while ensuring cost-effective service for lower bandwidth users. Our IPE solution applies user-aware policies to allocate bandwidth intelligently, enabling service providers to offer plans to meet personalized uses—from a premium "streaming media" plan to a low-cost "email only" plan.

Revenue Assurance

Analyze data flow accurately and quickly to identify and minimize revenue "leakage." Our IPE solution tracks network usage in granular detail to identify over-billed, under-billed, non-billed, and unauthorized activity. Real-time and historical analytics provide the insight needed to quickly resolve issues and spot critical trends.
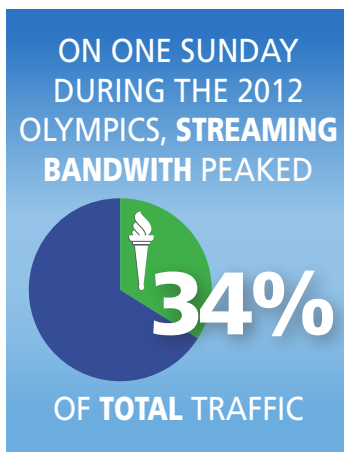
Multi-Device Service Plans

Deliver multi-device or "family" service plans that aggregate bandwidth quotas across multiple devices and/or users. Our IPE solution provides awareness of all mobile subscribers, their network usage and the devices they're using. When multiple devices or users are active simultaneously, it enforces a volume limit that is the sum of the individual data plans—notifying subscribers when they reach data quota limits.

Business Model and Network Analytics

Achieve granular insight into mobile network usage for better business planning. Our IPE solution enables operators to view and analyze network activity down to application, device, location, and subscriber level. It provides a real-time snapshot of network traffic and consumption, and historical analytics to drive development of new, differentiated services and plans.

Subscriber Portals

Avoid "monthly bill shock" when subscribers reach their data limit and provide a convenient way for them to "top up" or upgrade their data plan. Our IPE solution monitors usage and notifies subscribers when they reach their limit, sending them to a captive portal to upgrade their data plan—enhancing subscriber satisfaction while generating incremental revenue.

Network Usage Management

Manage network usage more effectively to maintain QoS under varying traffic loads. Our IPE solution tracks usage patterns in detail, identifying subscribers, devices, locations, and times associated with high bandwidth consumption. Then it applies volume-based shaping to manage traffic peaks and optimize bandwidth availability for subscribers.

Threat Management

Detect and mitigate network threats quickly, before they impact QoS. Our IPE solution monitors network traffic in a granular way to pinpoint potential malware, viruses and other threats. It alerts threat mitigation systems proactively and blocks suspect traffic, quarantining devices or subscribers exhibiting prohibited behavior.

Advanced Traffic Steering

Redirect service-related traffic in a selective, intelligent way to better manage bandwidth and application performance. Our IPE solution provides subscriber- and application-aware traffic steering, diverting traffic to the appropriate service appliance. Service chains can support multiple services, supporting sophisticated services that require multiple traffic steering decisions.

Data Plan Usage Management

Control bandwidth usage, while providing "maxed out" or roaming subscribers with some basic level of service. Our IPE solution tracks individual subscriber usage against their data plan, managing bandwidth in real time. This enables operators to deliver innovative service plans offering subscribers greater flexibility in managing their own usage.

Network Congestion Management

Effectively manage mobile network congestion at peak times and locations by prioritizing network traffic based on volume and QoS for each cell site. Our IPE solution provides intelligent traffic management with policy-based enforcement of traffic rules for each traffic type, in accordance with QoS and service plan levels for each subscriber class.

See more...

VIDEO STREAMING

WAS **MOST POPULAR APPLICATION** ON CONGESTED CELL SITES

iPHONE 4 USERS
CONSUMED

3X

THE **BANDWITH** OF **ANDROID USERS**

PacketLogic®

Intelligent Policy Enforcement (IPE) System

Designed for flexible deployment, PacketLogic systems fit seamlessly into existing 3GPP policy, billing and charging ecosystems when interacting with policy management systems (PCRF) and charging systems (OCS/OFCS).

The solution comprises three PacketLogic platforms that, when configured together and interacting with CDMA, 3G UMTS, and 4G LTE mobile network elements, operate as an Intelligent Policy Enforcement (IPE) system:

- ■ **PacketLogic Real-Time Enforcer (PRE)**
- ■ **PacketLogic Intelligence Center (PIC)**
- ■ **PacketLogic Subscriber Manager (PSM)**
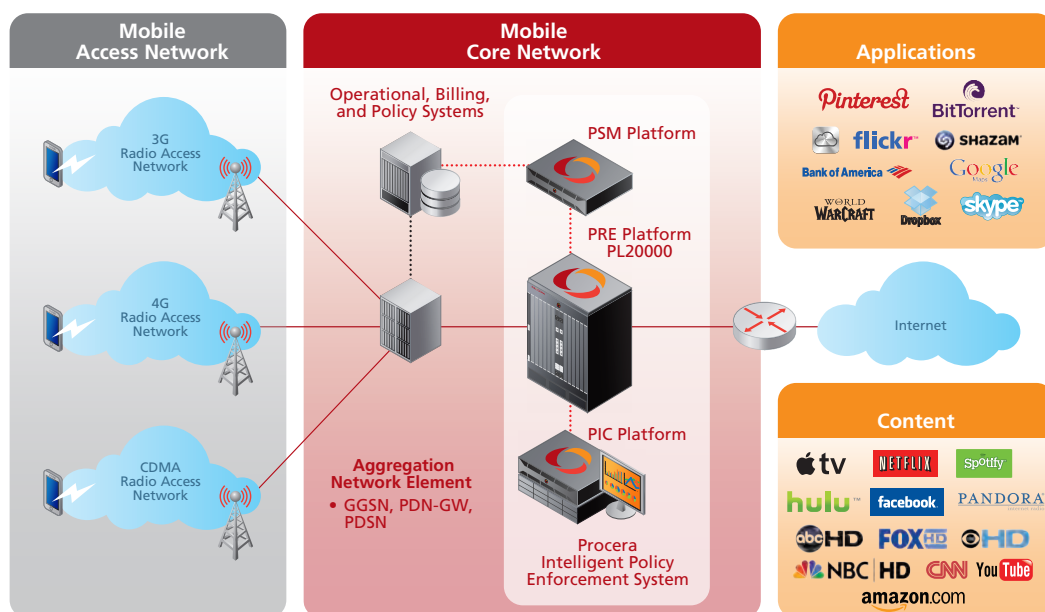
Mobile Network Solutions

Revenue Generating Subscriber Solutions	**Cost Saving Network Solutions**
✓ Data Plan Usage Management	✓ Business Model and Network Analytics
✓ Intelligent Service Charging	✓ Carrier-grade NAT (CGN)
✓ Multi-Device Service Plans	✓ Network Congestion Management
✓ OTT Video	✓ Network Usage Management
✓ Subscriber Portals	✓ Peering Management
✓ Tethering Detection	✓ Revenue Assurance
✓ Tiered Data Service Plans	✓ Subscriber/Application Aware Traffic Steering (ADN)
✓ VoIP	✓ Threat Management

PRE
PacketLogic™
Real-Time Enforcement

PSM
PacketLogic™
Subscriber Manager

PIC
PacketLogic™
Intelligence Center

To learn more about our PacketLogic® Intelligent Policy Enforcement (IPE) solutions, contact Procera today.

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About Procera

Procera Networks delivers Intelligent Policy Enforcement (IPE) solutions for network operators that leverage industry-leading Deep Packet Inspection (DPI) technology. Our PacketLogic® solutions, deployed by more than 700 customers worldwide, enable mobile service providers, broadband carriers, cloud service providers, and higher education institutions to improve the quality and efficiency of their networks, better monetize their infrastructure investments, control security hazards, and create attractive services for their users by making qualified business decisions based on granular user and traffic intelligence.

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