

# Solutions for Service Providers

Traffic Management Enhancement (TME)  
Solution

A Policy and Charging Control (PCC) Use Case



## Cisco and Italtel Solution Portfolio Value Proposition

The Cisco and Italtel solution portfolio addresses the challenges facing Service Providers, including:

- Controlling operating costs and capital investments in traditional technology, and solving the obsolescence problems that affect both the transit and the access level of the PSTN
- Seeking new and high-margin revenue streams while reducing customer turnover and attracting new customers
- Enriching the broadband connectivity offering with new services that create new values, attract customers, and increase revenues

## Traffic Management Enhancement (TME) Solution: a Policy and Charging Control (PCC) Use Case

The dramatic rise of Mobile Broadband traffic caused a strong decoupling of traffic from revenue in the data world, with revenues lagging behind traffic growth, thus creating a profitability issue for service providers.

This is due to the concurrency of the following ingredients:

- Introduction of HSPA in the networks
- New handsets such iPhone, and HSPA USB dongles
- Applications from the web 2.0 community – e.g. Google, Flickr, YouTube, Facebook
- Flat rate, all-you-can-eat billing plans

Service Providers need to reconsider how to manage network traffic and move away from flat rate to tiered services.

The Traffic Management Enhancement (TME) solution – based on Policy and Charging Control (PCC) Architecture – allows for a rich Policy and Charging differentiation, thus allowing the Service Provider to improve the quality of experience of their subscribers and get more revenues out of their Mobile Packet Network.

TME is an end-to-end solution, defined by ITALTEL, along with the partner companies CISCO SYSTEMS and CAMIANT, and in close cooperation with a Tier 1 Mobile Service Provider.

TME removes limitations of Mobile Packet Core flow-based-charging solution, offloads GGSN from Service-Aware Policy and Charging, and enables the Mobile Packet Core Network to provide the following services:

- Intelligent Charging – flexible tiered services; e.g. personalized service packages based on usage patterns; lower/zero rates for on-net web sites/applications vs. off-net web/sites/applications
- Quota Management – based on PCRF/SPR for Flatrate subscribers, and on PCRF/SPR + OCS for Prepaid subscribers – e.g. upon monthly time/volume quota expiry, block usage or throttle down the allowed bandwidth level until top-up occurs
- Heavy User Management – e.g. to provide a fair usage policy for all users, by preventing that a small number of heavy user consume most of the network resources
- Law Enforcement – e.g. User Activity Tracking, URL Blacklisting



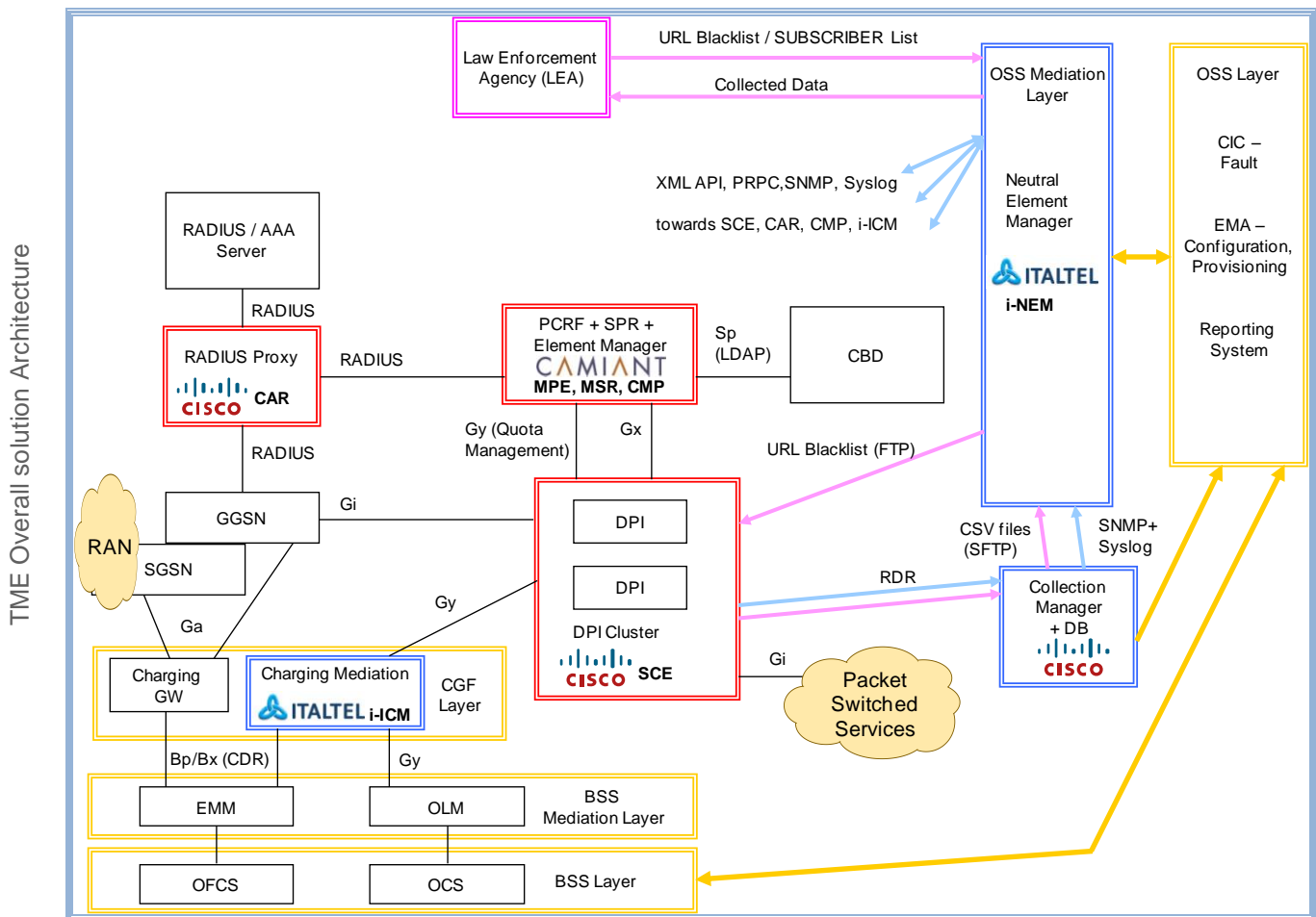
TME provides minimal impacts on existing OSS/BSS:

- Same as per today: e.g. parameters used for rating, Service-Aware CDRs, Prepaid/ Postpaid/ Flatrate charging methods, fallback procedures to allow for billing reconciliation when needed
- System integration with existing OSS/BSS: e.g. new Network Elements to manage, Quota Management integration with existing BSS

The TME solution introduces the following components in the Mobile Packet Core Network:

- Cisco Systems standalone DPI – the Service Control Engine, SCE8000
- Cisco Systems RADIUS-Proxy – the Cisco Access Register, CAR
- CAMIANT PCRF – the Multimedia Policy Engine, MPE
- CAMIANT SPR – the Multimedia Subscriber Repository, MSR
- ITALTEL Integrated Charging Mediation, i-ICM – a Charging Gateway allowing for a smooth integration with the existing BSS and BSS Mediation layers
- ITALTEL Neutral Element Manager, i-NEM – a FCAPS system allowing for a smooth integration with the existing OSS layer

The figure below shows the TME Overall Solution Architecture.



TME Overall solution Architecture





## Italtel and Cisco Strategic Alliance

Together, Cisco and Italtel deliver jointly developed IP NGN solutions and services that help Service Providers expand their service portfolios, increase revenues, and enhance competitiveness, while transforming the end user communications experience. With experience providing joint offerings in Italy and throughout Europe, Cisco and Italtel have achieved significant results for Service Providers who are staking their long-term future on IP technology. Cisco and Italtel offer proven, flexible solutions that leverage competencies and share risk with a joint go-to-market solution.

Cisco and Italtel Alliance means:

- Experience - first in the market to offer carrier-grade technology and end-to-end managed services solutions
- Reliability - largest VoIP carrier network in Europe and Emerging markets
- Capability - internal system integration capabilities, direct control over product features, and end-to-end solutions that meet unique service provider business needs

### Contacts

For more information on how Italtel and Cisco can help you achieve success, contact

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### About Italtel Group

Italtel designs, develops, implements solutions for Next-Generation Networks and Services, based on the Internet Protocol (IP), which are the most innovative worldwide. Italtel counts among its customers more than 40 of the world's top TLC Operators and Service Providers. In Italy Italtel is also reference partner of Enterprises and Public Sector for the deployment of IP Next-Generation Networks and for the development of multimedia convergent services for their customers. Italtel has around 2,200 employees and is present in 25 countries including France, UK, Spain, Germany, Belgium, Russia, Poland, Argentina, Brazil, United Arab Emirates, Saudi Arabia. Italtel's headquarters are in Milan (Italy).

Website: [www.italtel.com](http://www.italtel.com)

### About Cisco

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Today, networks are an essential part of business, education, government and home communications, and Cisco Internet Protocol-based (IP) networking solutions are the foundation of these networks.

Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction and strengthen competitive advantage. The Cisco name has become synonymous with the Internet, as well as with the productivity improvements that Internet business solutions provide. At Cisco, our vision is to change the way people work, live, play and learn.

Website: [www.cisco.com](http://www.cisco.com)

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