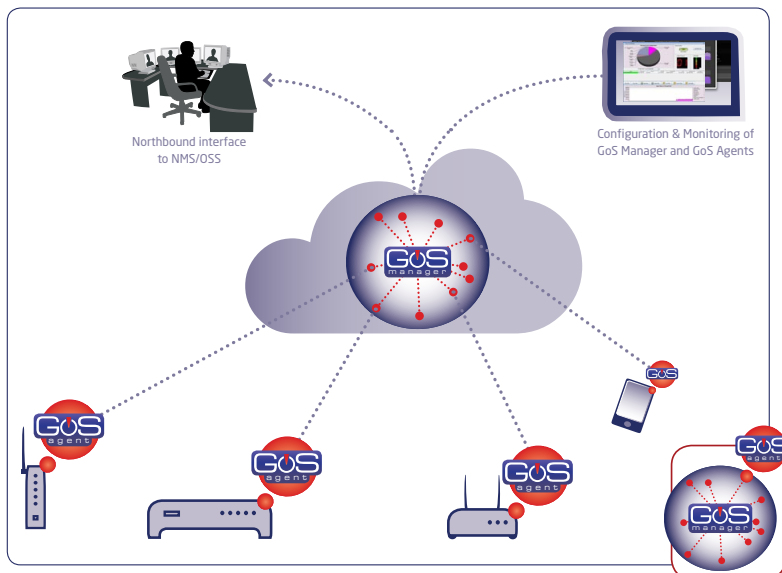


## GoS Monitoring and Assurance

Delivering QoS across an entire network for all customers and applications represents a considerable challenge for service providers. With unprecedented growth in bandwidth demand, this is an increasing problem. The solution is comprehensive monitoring and enforcement of QoS / QoE across a complete network, right up to the boundary of the consumer / enterprise and the service provider domains.

### Make Policies Profitable

QoS differentiation is an asset for service providers that will grow in value. To capitalise on this, efficient mechanisms are needed to allow network optimisation and differentiated classes of service. GoS enables monitoring and enforcement of policies, supporting multiple classes of service and efficient bandwidth utilisation across an entire network.



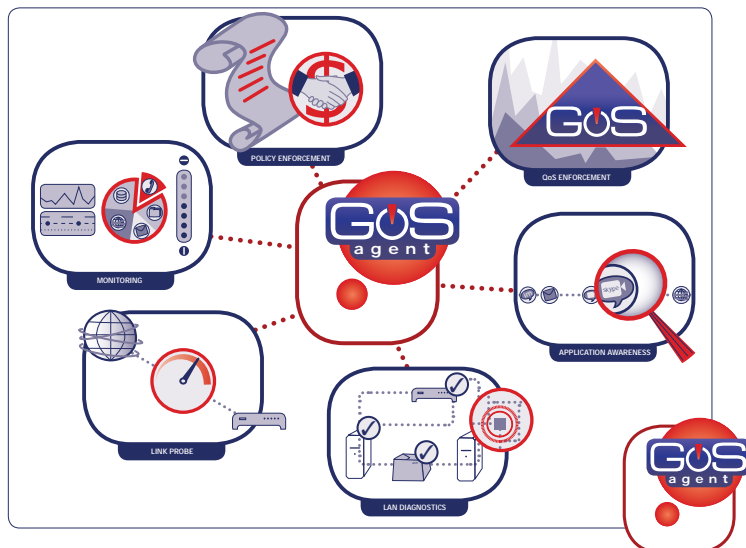
## GoS Delivers Unparalleled QoS for Multiple Real-time Applications

GoS offers a complete architecture and system for managing and providing QoS, both end-to-end and across CPE to network links. The GoS solution consists of two key components: **GoS Agent** and the **GoS Manager**. The combination of GoS Agents and GoS Manager provides real-time assessment of link performance

and traffic types passing across available links. It allows optimal configuration of QoS to maximise link bandwidth utilisation and application performance / QoE. Uniquely, GoS provides full distributed application awareness, allowing discovery of the applications and traffic running on to the network.

### GoS Agent

GoS Agent is embeddable software deployed in any CPE or residential access gateway.



- Routers
- Firewalls
- DSL Gateways
- VoIP Appliances
- DSLAMs
- Connected Services Gateways
- Multi Service Access Gateways
- NodeBs
- eNodeBs
- 3G / HSPx Dongles

The GoS Agent is needed in any situation where a device can't forward packets as fast as it receives and/or generates them. A specific example would be a customer premise WAN access device that has to deliver streams of VoIP packets mixed with data packets, and potentially other packets such as video, on the WAN uplink.

## GoS Manager

The GoS Manager is responsible for the QoS / QoE performance of the GoS agents deployed in the network. It enables:

- Measuring
- Monitoring
- Configuration
- Reporting



Acting as a centralised service level manager, it is deployed on standard, COTS platforms and can scale to support hundreds of thousands of GoS Agent devices. A comprehensive OSS / BSS interface is provided for integration with network management infrastructure. Detailed statistical reporting is enabled and the GoS Manager can enable instant reconfiguration of GoS agents based on current link and application utilisation.

## Optimise Network Performance to Generate Maximum ROI

GoS has been deployed by major vendors and service providers. GoS is patent protected and has been independently verified. It is based on unique technology founded on partnerships with academia and researchers at CERN.

## Key Benefits

- Simple reconfiguration as new services are added
- Launch differentiated services backed by reliable QoS / QoE
- Enforce policies across an entire network
- Provide clear QoS demarcation point
- Assure and protect revenue generating services
- Confidently upsell measurable SLAs
- Reduce churn rates through consistent quality
- Consistent low latency for VoIP and gaming applications
- OPEX savings through simplified provisioning and reduced support costs
- Reduce over-provisioning, save CAPEX

## Key Features

- Alarm reporting
- Simple reconfiguration of end points
- Centralised remote management
- LAN diagnostics
- Granular measurement of QoS at the network boundary
- Layer 7 application identification
- Link performance measurement
- Scalable to entire network user base
- SLA monitoring and enforcement
- Trend analysis

## Technical Specifications

### Bandwidth control

- Guaranteed bandwidth
- Enforced bandwidth limits
- Reuse of unclaimed bandwidth
- Automatic and on-demand measurement of up/dpwn link rate

### Quality classes

- Nine quality classes for prioritized real-time traffic
- One Best Effort class
- Up to 128 bandwidth partitions per class

### Utilization

- Fills link to 100%; 90% of link bandwidth available for priority traffic

### Loss/delay control

- Independent control of loss and delay priority
- Predictable loss and delay behaviour under saturation

### Interoperability

- Interoperable with common network technologies such as routing, firewall, VPN, compression, etc.
- Compatible with network standards, such as DiffServ (RFCs 2474, 2475, 2596, 3246)

### Monitoring

- Flexible end-point grouping and selection
- Clear charting of QoS parameters
- Bandwidth per application

## GoS Networks Limited

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