In order to improve the management of the QoS of a MPLS network, it was designed a software tool to manage divided in levels applied in the management plane of the network. This one will be able to contribute to do a major stability before the events that could modify the communication inside this net. Locating the project as part of a more complex one for the development of this net, the area of this work shows the design realized for the NEM (Network Element Monitor).

This new element contributes to the net in managing an interface in its independent work from the device of routing to configure and monitoring, allowing the introduction of different equipments with different methods of access to the net of proposed management.

Besides it, it will be necessary that the NEM will work like server for the requests of work on the devices of routing assigned, turning the NEM into a remote unit by means of web services.

With these requirements, The design of an application NEM for routers Cisco was done, with an internal modular structure divided in processes, and with some available interfaces of communication for NEMs’ development for different routers (Linux, Juniper®, etc).