



## State-wide Internet Link Monitoring for Galileo India: A Case Study

InterGlobe (Galileo India) is the Indian distributor of Galileo International—a global travel and technology distribution company providing GDS access to over 500 airlines. InterGlobe, Kerala, as part of its nation-wide operations, is providing service to major travel agents across Kerala through cable and leased lines.

They were on the look out for a solution to monitor their clients' links. The need was to monitor the status of the link, bandwidth consumption and quality. In addition to that InterGlobe system administrators need to be alerted through SMS or Email if a link goes down or showing undesirable behavior. InterGlobe also wanted to generate record of the link status and archive them. They approached Linuxense to build a solution for this.

Most of their clients were connected through a state-wide Hybrid Fiber-coaxial (HFC) Network with DOCSIS cable modems at the client-end. HFC Network runs on its own IP Network over which the bandwidth is being delivered. Cable modems in the HFC Network are given with an IP address from the HFC Network with which cable modems can be accessed to query for various status information.

Most of the cable modems have built-in SNMP agent that can be queried to get various status information. Linuxense used this approach to implement the system using its Nagios-based Meerkat service.

Meerkat needs to have access to the HFC Network to access the SNMP agent running inside the cable modem. There were two possible approaches to solve this issue: either to use a cable modem attached to the same HFC Network or to create a special routing to the HFC Network with the help of the ISP. We decided to take the former route as we found it much easier.

It took only less than 5 days to set up the service for InterGlobe for a fully operational state-wide link monitoring system that alerts their administrators if anything goes wrong. This provides information on the quality of service they get from the ISP and real-time bandwidth usage of each client. This also enables them to act pro-actively if a link shows signs of bad health. "The option to see the flapping links makes our team to prepare for a down time management" says Alex T. Jacob, Manager Sales & Services.

Success of this Meerkat-based monitoring system inspired them to think about bringing in other states as well under this monitoring system.

### **About Meerkat Service**

Meerkat is a Nagios-based resource monitoring service from Linuxense (see: <http://meerkat.linuxense.com/>). It can monitor servers, services, Network links and devices for its uptime, availability and performance on a 24x7 basis. Meerkat offers Email alerts and out-of-band-alerts like SMS and paging.