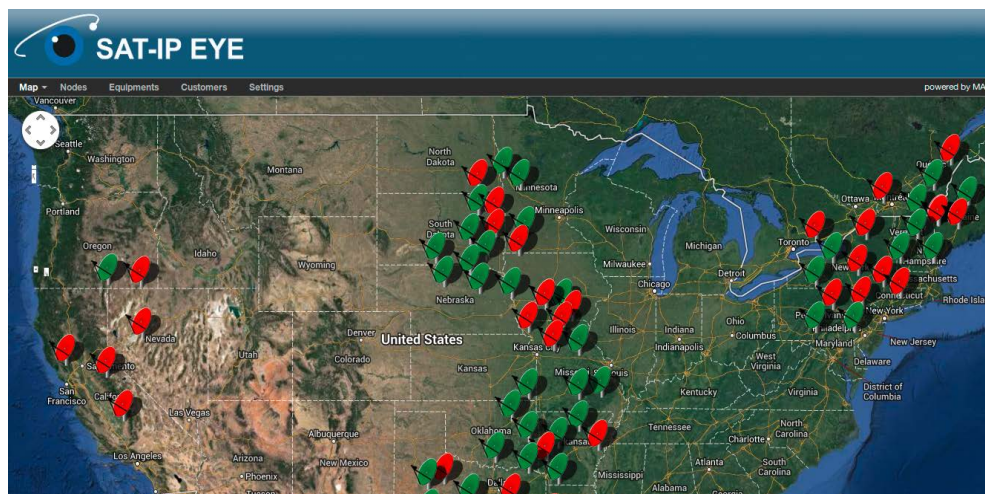
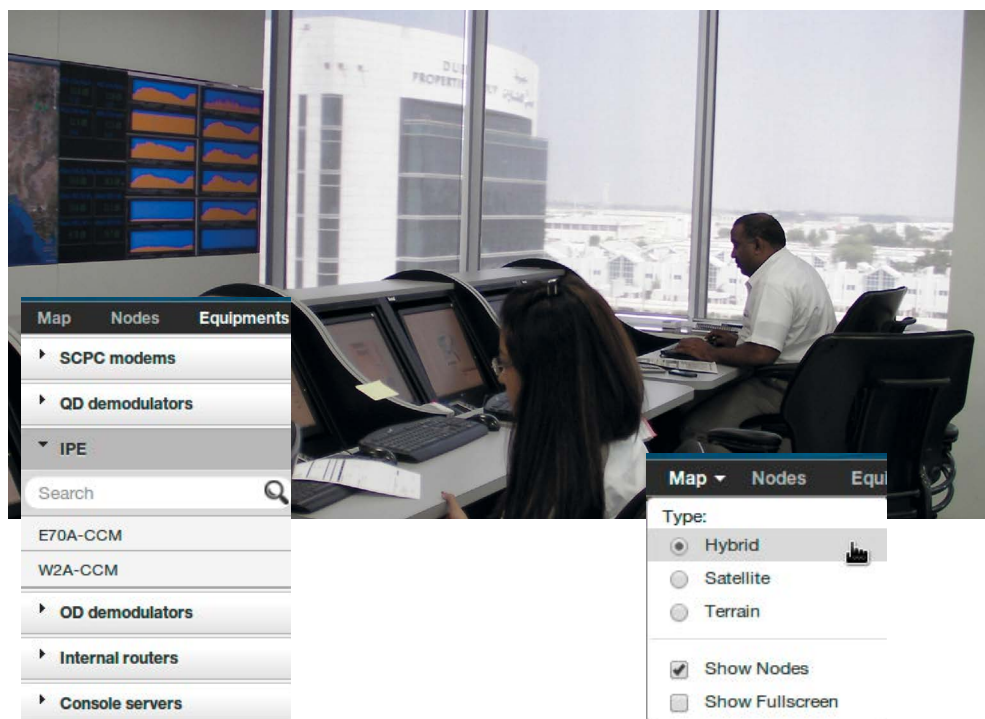


MONITORING THE HEALTH OF YOUR SATELLITE INTERNET LINKS



Live monitoring of dozens or hundreds of satellite links is growing challenge for satellite internet providers, but also an opportunity to provide a differentiated service.

Without a monitoring tool it is difficult to sustain a good quality of service and provide proactive maintenance.



SAT-IP EYE combines the view of different satellite networks like iDirect, Comtech SCPC links, DVB Tx (IPE) links and others into an intuitive monitoring system by positioning terminals from multiple networks on a single map using the GPS location. **SAT-IP EYE** combines different protocols and interfaces like SNMP, IP and serial ports to interface with different head-end and end-user equipments.

SAT-IP EYE provides an intuitive interface, where each circuit has a real-time indication of link status via color coded satellite icons.

With a simple mouse click a selected satellite icon provides additional information such as monitoring, statistics & properties.

The screenshot shows the 'Monitoring' tab in the SAT-IP EYE interface. It displays two columns for 'Tx' and 'Rx' data. Both show a Name of 'IDirect NMS', Type of 'IDIRECTNMS', and Bandwidth of '0.25 / 0.51 Mbps' for Tx and '0.06 / 0.51 Mbps' for Rx. The Eb/No is 14 for both. Below this is a table with three columns: Packet loss, RTT, and Down time, with rows for 1 hour, 1 day, 1 week, 1 month, and 1 year.

	Packet loss	RTT	Down time
1 hour	14 %	649 ms	7m 40s
1 day	56 %	342 ms	13h 23m 55s
1 week	60 %	317 ms	4d 4h 38m 3s
1 month	55 %	350 ms	16d 15h 25m 43s
1 year	56 %	353 ms	38d 22h 20m 32s

Monitoring

live data

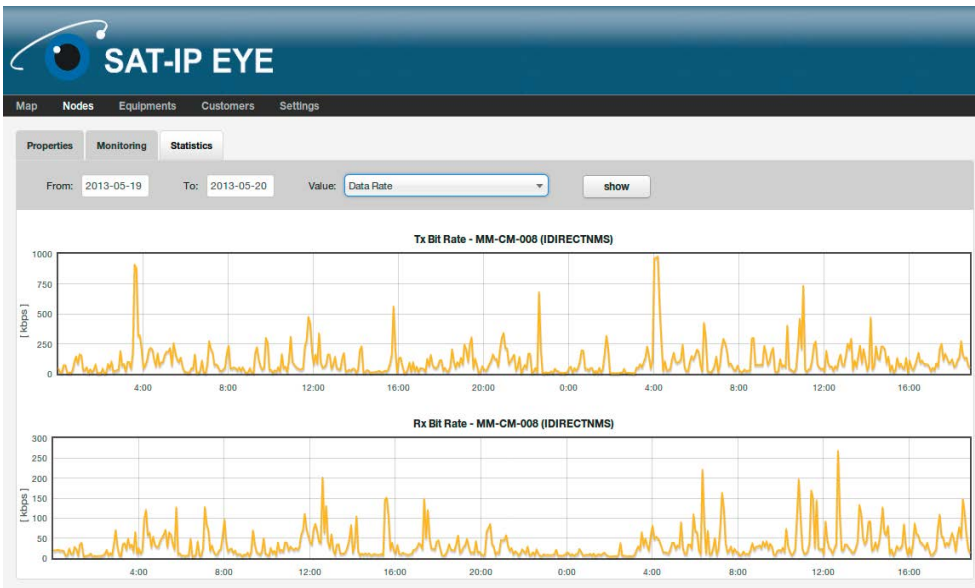
- Tx & Rx Bandwidth (current/max)
- Eb/No
- IP packets loss, RTT
- Down time for last hour, day, week, month and year

The screenshot shows the 'Properties' tab in the SAT-IP EYE interface. It is divided into 'Node' and 'Tx/Rx' sections. The 'Node' section has fields for Name (AZT-7195), Customer (Al Riyadh Internet Networking), Node IP (82.205.253.41), Latitude (27), and Longitude (45). The 'Tx' and 'Rx' sections have dropdown menus for Type (IDirect), Name (IDirect NMS), and Modem (AZT-7195). There are 'Save' and 'Cancel' buttons at the bottom.

Properties

settings

- Circuit ID
- Equipments forming a link
- Tx link
- Rx link



Statistics

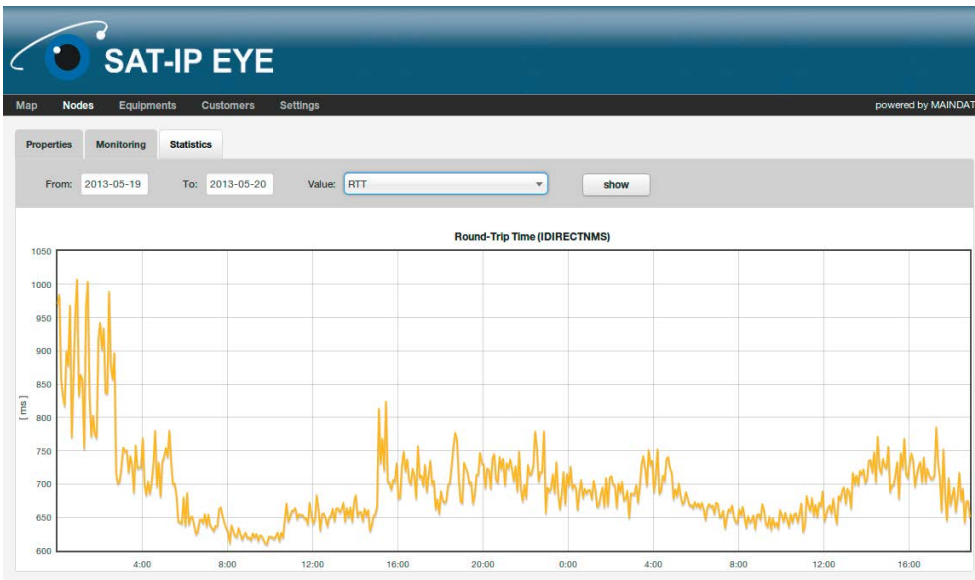
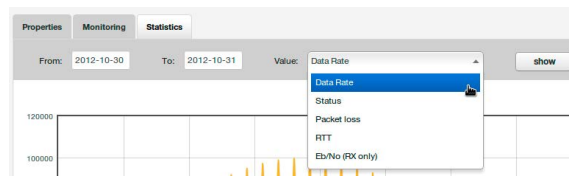
historical data

In a case of a customer claim, details of the historical data about the performance of the link can be evaluated easily.

SAT-IP EYE provides historical data for:

- Data rate
- Status
- Packet loss
- RTT
- Eb/No

Tx, Rx bitrates records



RTT values records

WARNING MESSAGES

It is possible to setup threshold levels, which when crossed generates warning messages. These messages are automatically distributed to NOC by mail.

Threshold	
Ping packet loss:	<input type="text" value="50"/>
Max. RTT [ms]:	<input type="text" value="500"/>
Min. EbNo [dB]:	<input type="text" value="10"/>
SNR:	<input type="text"/>

Future Feature Enhancements

Direct login for resellers enables users to watch a specific subset of satellite links for their specific purpose.

Setting thresholds levels individually according to individual SLA agreements.

SMS gateway send warning messages not only via mail but also SMS.

Ticketing system to record, handle and track customer claims.



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