

GMSS

Network Performance Management

Nowadays, no matter modern enterprise or personal is in need of the Internet especially the application part including Internet phone, video, and so on. Those applications have successfully reduced the cost and eliminated the restriction of the space and time. People can contact with their families and friends by the Internet phone with a very cheap rate; for enterprise users, they can communicate with the head office or branches by videophone or videoconference. Comparing with the traditional communication, those Internet applications are not only cheap but also efficient for communicating.

However, the Internet applications still have some disadvantages such as delay-sensitive voice 、 bandwidth intensive video, and the poor network performance will affect user's experience on the usage of network application. Therefore, how to provide a stable and fast network transmission service is very important for ISP.

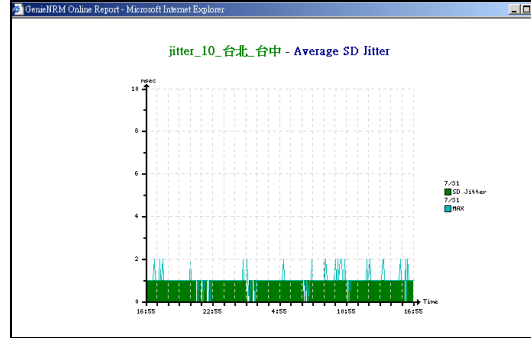
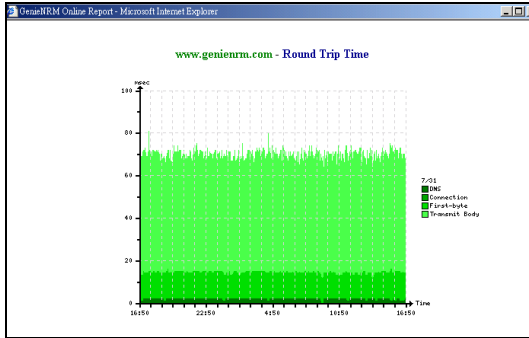
GMSS provides many performance indexes of network measurement; meanwhile, it also provides a performance console said RTR Console. RTR Console allows you to monitor the status of the network path between any network nodes. With RTR Console, you can monitor whole network status in a glance in real time. Once you found any problems between two network nodes, you can use Online Report to review the performance information between the nodes in a specified time period you prefer.

Major Features

1. Network Performance Measurement

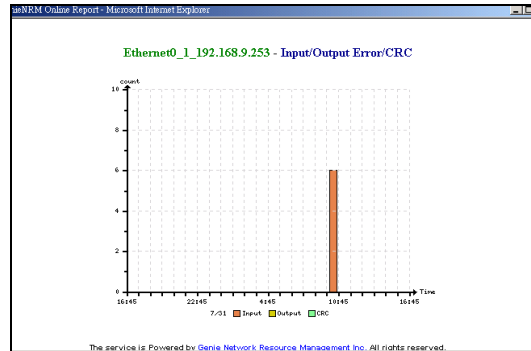
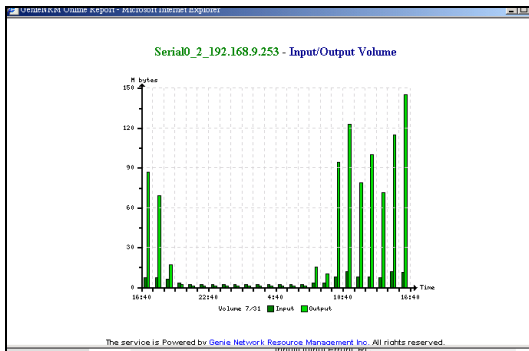
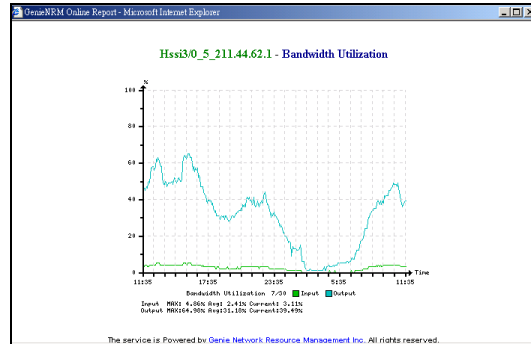
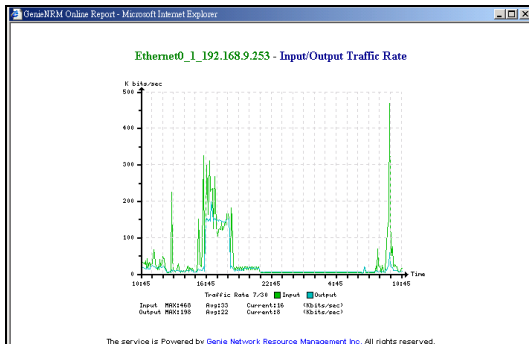
1) measurement between network nodes—main indexes as below :

- * RTT [Round Trip Time]
- * Packet Loss Rate
- * Jitter
- * Single Direction Delay



2) measurement of device's interface—main indexes as below :

- * Availability
- * Input/Output Packet Drop
- * Input/Output Packet Error
- * Input/Output Packet Rate
- * Input/Output Traffic Rate
- * Input/Output Volume
- * Bandwidth Utilization



2.RTR Console :

As a performance console, RTR console can provide real-time monitoring of entire network. There are two kinds of displays.

1) RTR Map

RTR Map displays real-time network performance in topology map so that you can view the entire network very clearly, Through RTR Map, you can get not only a concept for the distribution of the network resource but also the network performance information in the same display.

Logged in: Supervisor [20000002] Logout

Admin MyReport Fault Health Online Report Trap Export Topology **RTR Console** Contract Mgmt Help

RTR Map | RTR Matrix | RTR Node

RTR Console - View Back

Name of RTR-Console	Description	Date Time
TEST	TOPOLOGY MAP	2003-07-28 09:34:56

Time Period: Real Time

Report Name: TEST
 Report Period: Real Time
 Modify Time: 2003-08-19 11:40:20

Resource Name	Type	Latency	Packet Lost	SD, US
jitter_40_Taipei_FenLian	RTR Jitter	25.40ms	0.00%, 0.00%	
jitter_40_Taipei_XinZhu	RTR Jitter	10.70ms	0.00%, 0.00%	
jitter_30_Taipei_Taiwan	RTR Jitter	12.90ms	0.00%, 0.00%	
jitter_20_Taipei_KaoShiang	RTR Jitter	5.50ms	0.00%, 0.00%	
jitter_10_Taipei_TaiChang	RTR Jitter	11.60ms	0.00%, 0.00%	

Indication

Resource Type	Color of Name
SWMP-Fing	Blue
RTR-Echo	Blown
RTR-Jitter	Purple

Alarm Type Color of Line

Red Alarm	Red
Orange Alarm	Orange
Yellow Alarm	Yellow
Status OK	Green

There are four Time Periods :
Real Time ·
Daily ·
Weekly ·
Monthly

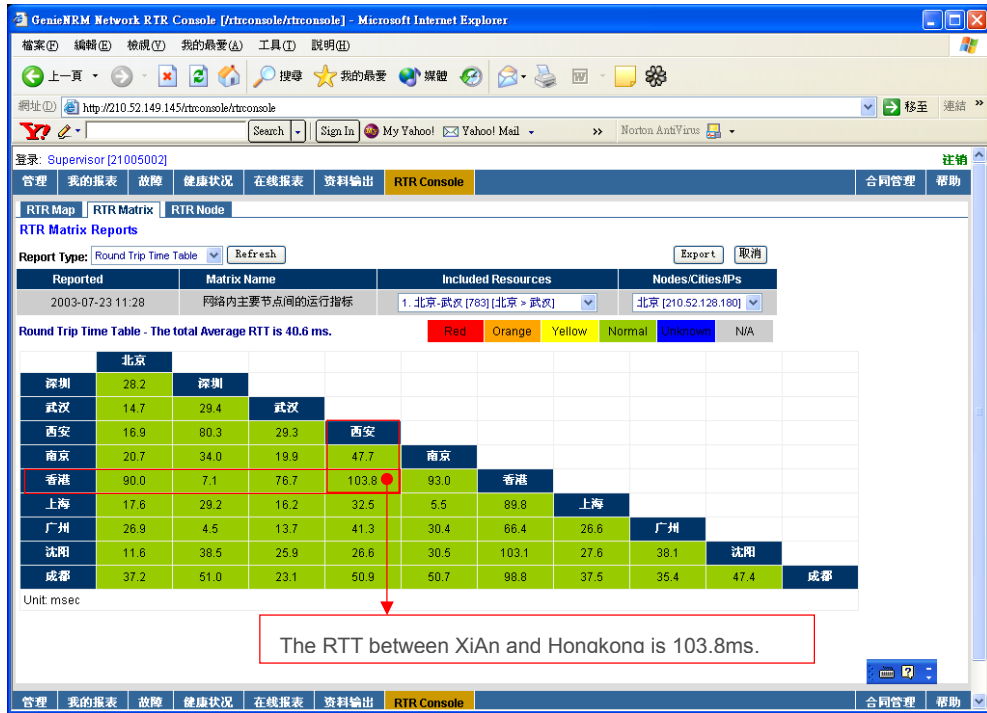
You can see every resource's name, type, latency and packet lost in this Tabular form.

The latency from Taipei to XinZhu is 10.7ms and has no packet loss.

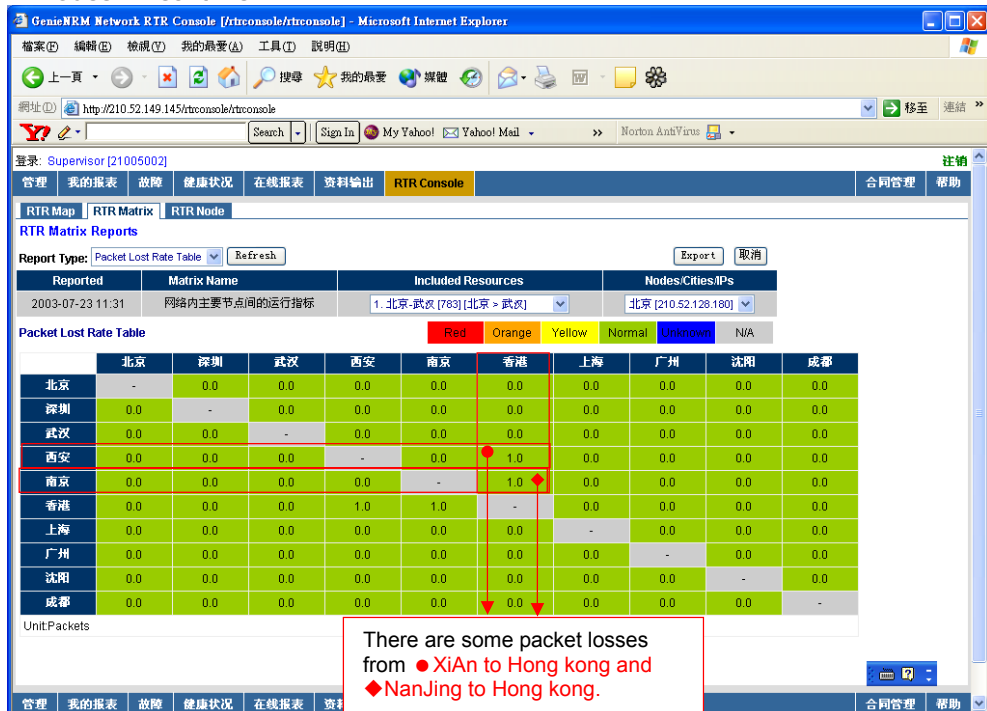
2)RTR Matrix :

RTR Matrix provides whole network performance display in a glance. When you have lots of network nodes, it is convenient to use RTR Matrix to monitor node-to-node performance of your network. GMSS RTR Matrix includes three tables : **Round Trip Time Table** 、 **Packet Loss Rate Table** 、 and **Jitter Table**, you can monitor the RTT, packet loss rate and jitter between the network nodes in each matrix display

A) **Round Trip Time Table** It displays the RTTs between nodes in real time.

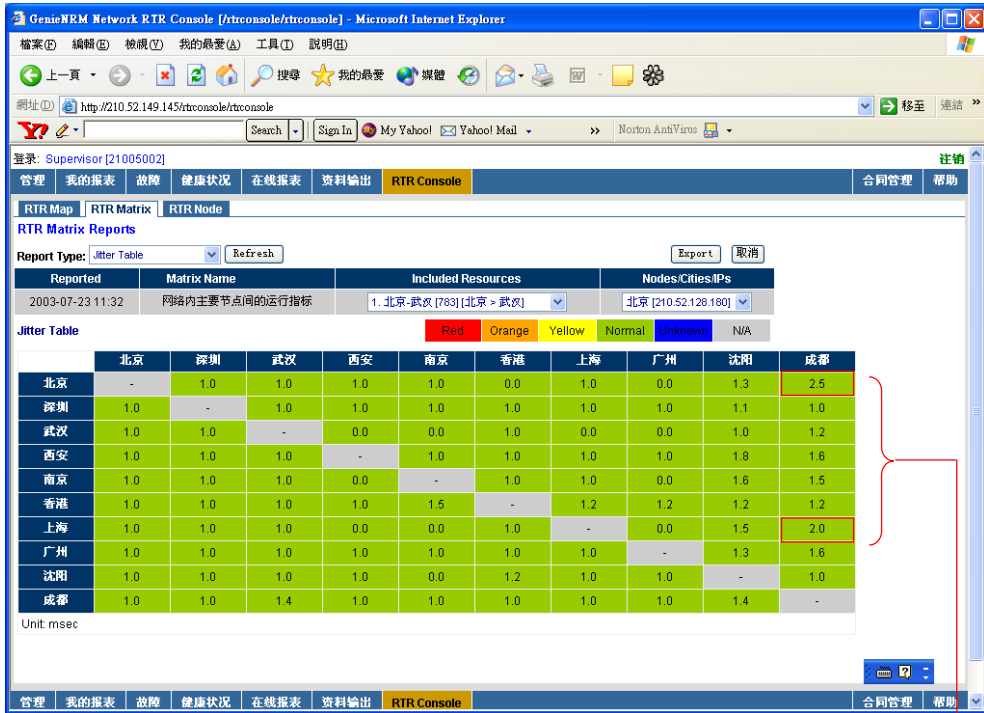


B) **Packet Loss Rate Table** It displays the packet loss rates between network nodes in real time.



C) Jitter Table

It displays the jitters between nodes in real time.



The Jitter values of both "Beijing to Chengdu" and "Shanghai to Chengdu" are above 2ms; the others are below 2ms. It means the line performance between the nodes is worse than the others.