



Inspired Innovation

## TRT 模拟 RIP 路由器



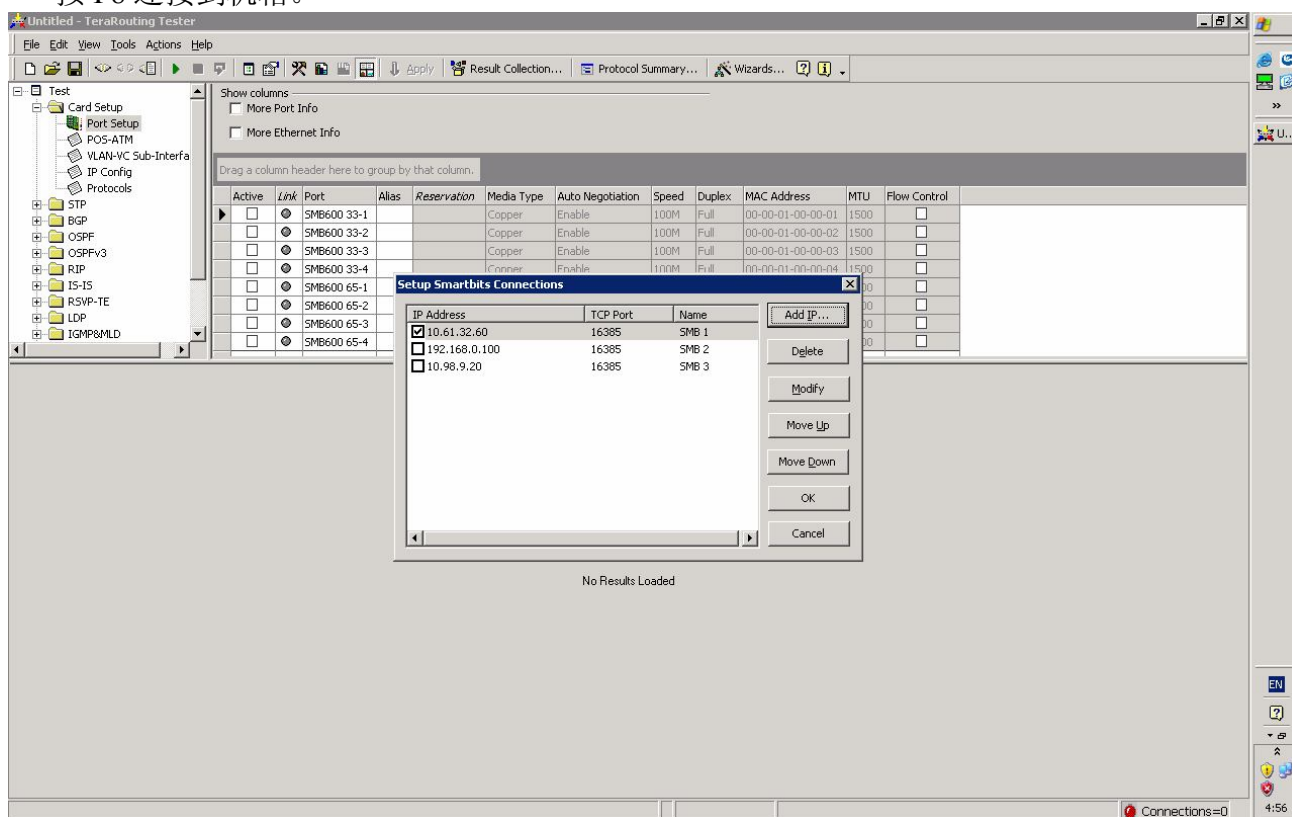
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测试拓扑：

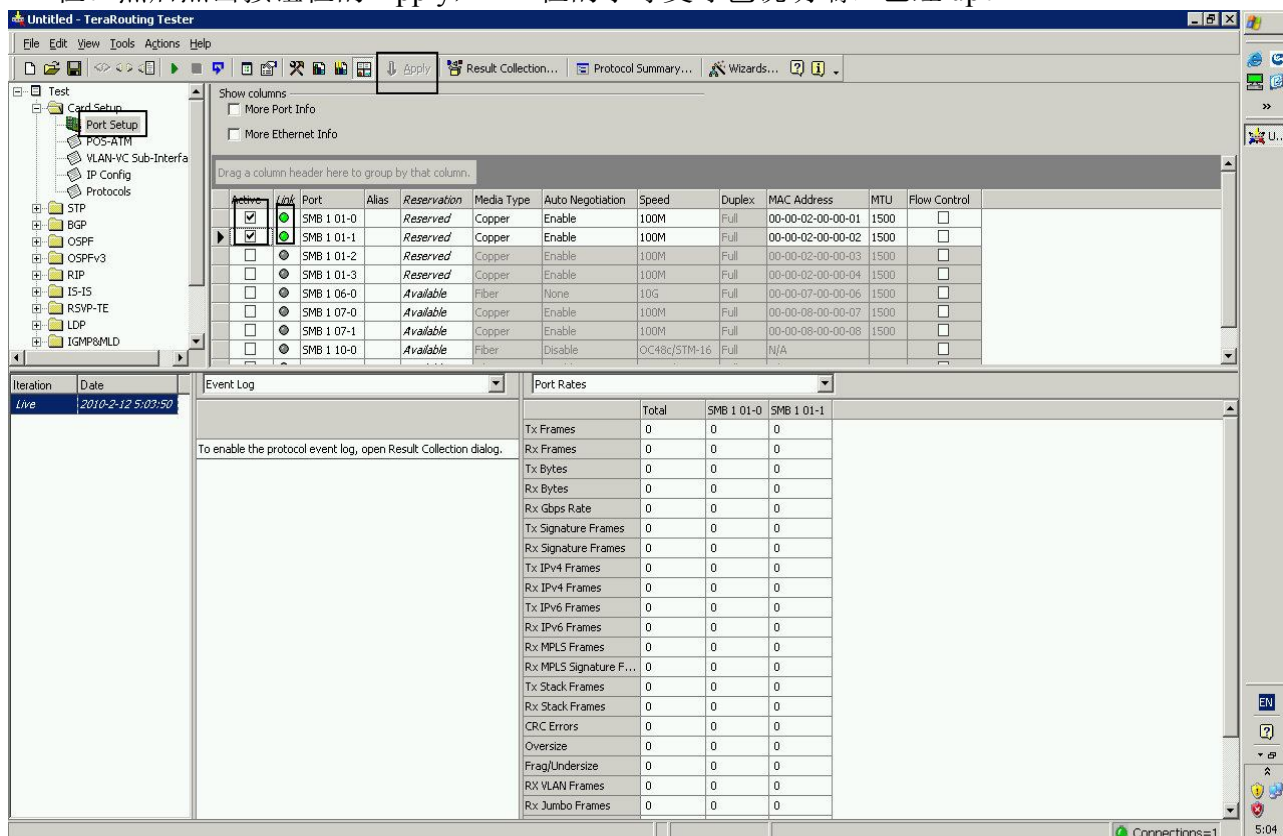


# 1. 连接 SmartBits 机箱并占用测试端口

- 1) 点击 Tools→Setup Chassis Connections, 在弹出窗口中添加机箱 IP 地址, 点击 OK 退出后按 F8 连接到机箱。



- 2) 在左边窗口中点击 Test→Card Setup→Port Setup, 在右边窗口中勾上要使用端口的 Active 栏。然后点击按钮栏的 Apply, link 栏的小球变绿色说明端口已经 up。



## 2. 设置测试端口属性

1) 在下图方框勾出的栏中可以用下拉列表来设置端口物理层属性。

The screenshot shows the 'Port Setup' window in TeraRouting Tester. The 'Show columns' section has 'More Port Info' checked. The main table lists ports from SMB 1 01-0 to SMB 1 10-0. The 'Media Type' column is highlighted, and a dropdown menu is open, showing options: Copper, Fiber, None, 100M, 1000M, 10G, and OC48c/STM-16. The 'Speed' column also has a dropdown menu open, showing options: 100M, 1000M, 10G, and OC48c/STM-16. The 'Duplex' column has a dropdown menu open, showing options: Full and Half. The 'MTU' column has a dropdown menu open, showing options: 1500 and 9000. The 'Flow Control' column has a dropdown menu open, showing options: On and Off.

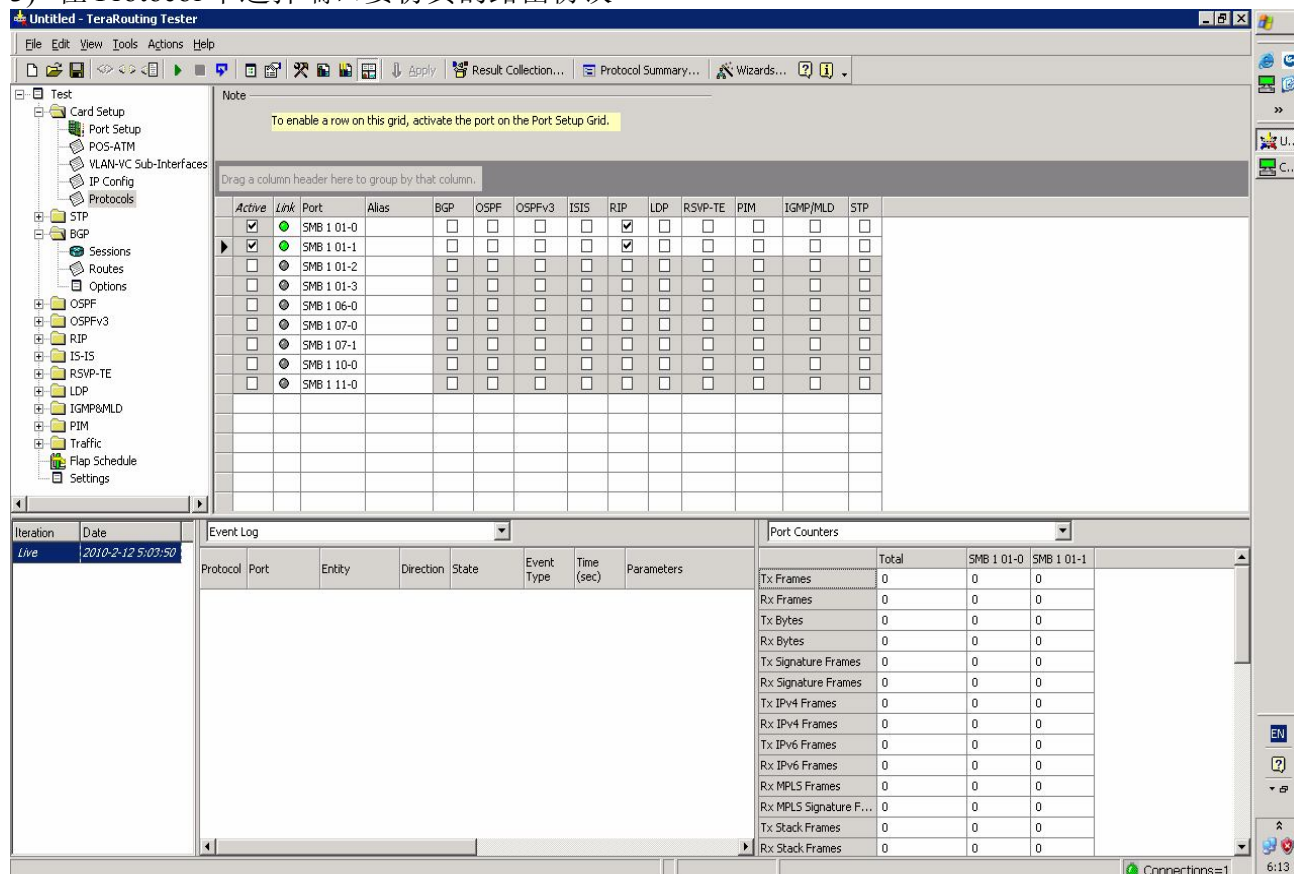
Active	Link	Port	Alias	Reservation	Media Type	Auto Negotiation	Speed	Duplex	MAC Address	MTU	Flow Control
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SMB 1 01-0		Reserved	Copper	Enable	100M	Full	00-00-02-00-00-01	1500	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SMB 1 01-1		Reserved	Copper	Enable	1000M	Full	00-00-02-00-00-02	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 01-2		Reserved	Copper	Enable	100M	Full	00-00-02-00-00-03	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 01-3		Reserved	Copper	Enable	100M	Full	00-00-02-00-00-04	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 06-0		Available	Fiber	None	10G	Full	00-00-07-00-00-05	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 07-0		Available	Copper	Enable	100M	Full	00-00-08-00-00-06	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 07-1		Available	Copper	Enable	100M	Full	00-00-08-00-00-07	1500	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 10-0		Available	Fiber	Disable	OC48c/STM-16	Full	N/A	1500	<input type="checkbox"/>

2) 在 IP Config 中设置端口 IP 相关属性

The screenshot shows the 'IP Config' window in TeraRouting Tester. The 'Show columns' section has 'IPv4' checked. The main table lists ports from SMB 1 01-0 to SMB 1 10-0. The 'IPv4' column is highlighted, and a dropdown menu is open, showing options: IPv4, IPv6, and VPN ID. The 'IPv4 Address' column has a dropdown menu open, showing options: 192.86.0.2, 192.86.1.2, 192.86.2.2, 192.86.3.2, 192.86.1.2, 192.87.1.2, 192.87.2.2, and 192.88.1.2. The 'IPv4 Gateway' column has a dropdown menu open, showing options: 192.86.0.1, 192.86.1.1, 192.86.2.1, 192.86.3.1, 192.86.1.1, 192.87.1.1, 192.87.2.1, and 192.88.1.1. The 'IPv4 Prefix Length' column has a dropdown menu open, showing options: 24, 25, 26, 27, 28, 29, 30, 31, and 32.

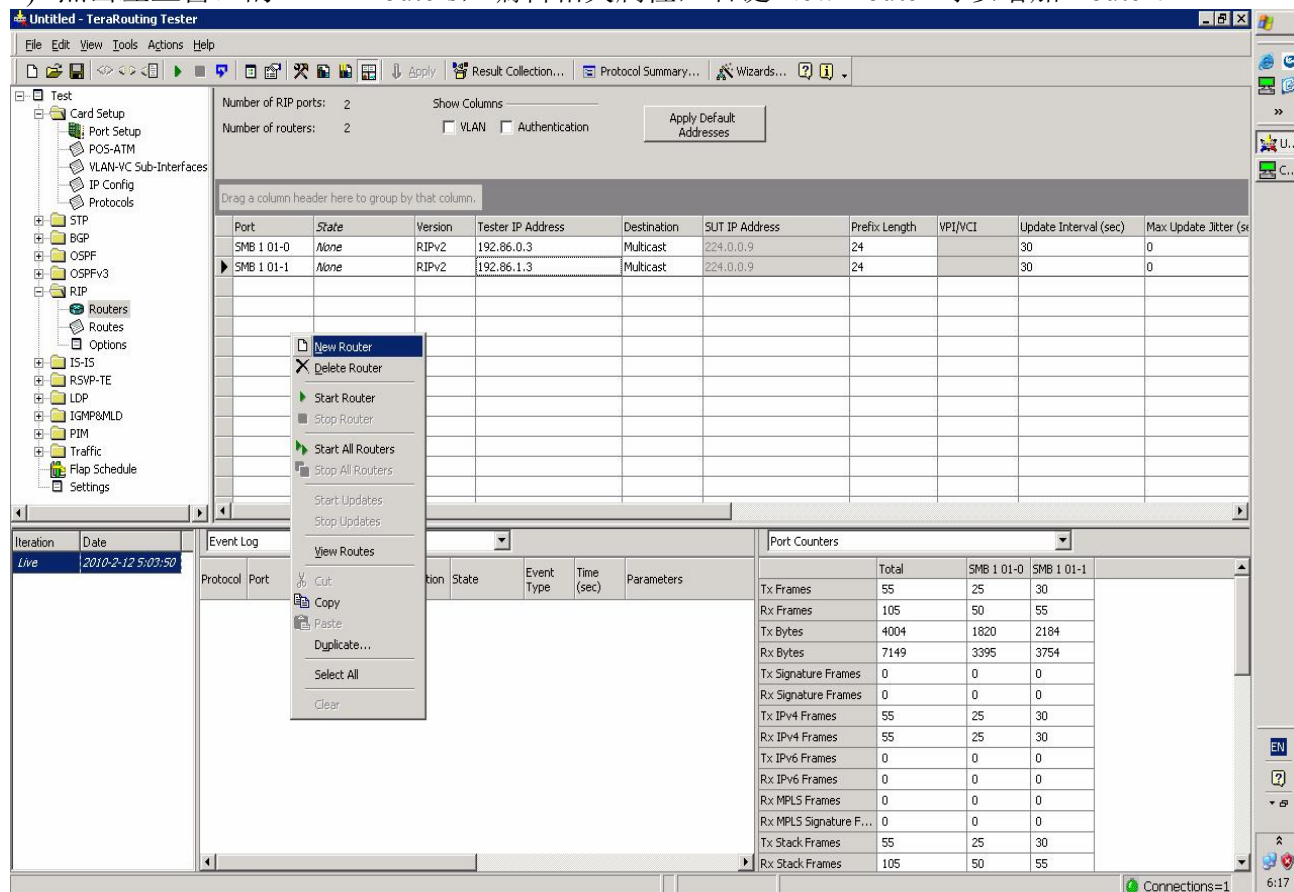
Active	Link	Port	Alias	IPv	IPv4 Address	IPv4 Gateway	IPv4 Prefix Length
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SMB 1 01-0		IPv4	192.86.0.2	192.86.0.1	24
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SMB 1 01-1		IPv4	192.86.1.2	192.86.1.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 01-2		IPv4	192.86.2.2	192.86.2.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 01-3		IPv4	192.86.3.2	192.86.3.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 06-0		IPv4	192.86.1.2	192.86.1.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 07-0		IPv4	192.87.1.2	192.87.1.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 07-1		IPv4	192.87.2.2	192.87.2.1	24
<input type="checkbox"/>	<input type="checkbox"/>	SMB 1 10-0		IPv4	192.88.1.2	192.88.1.1	24

### 3) 在 Protocol 中选择端口要仿真的路由协议



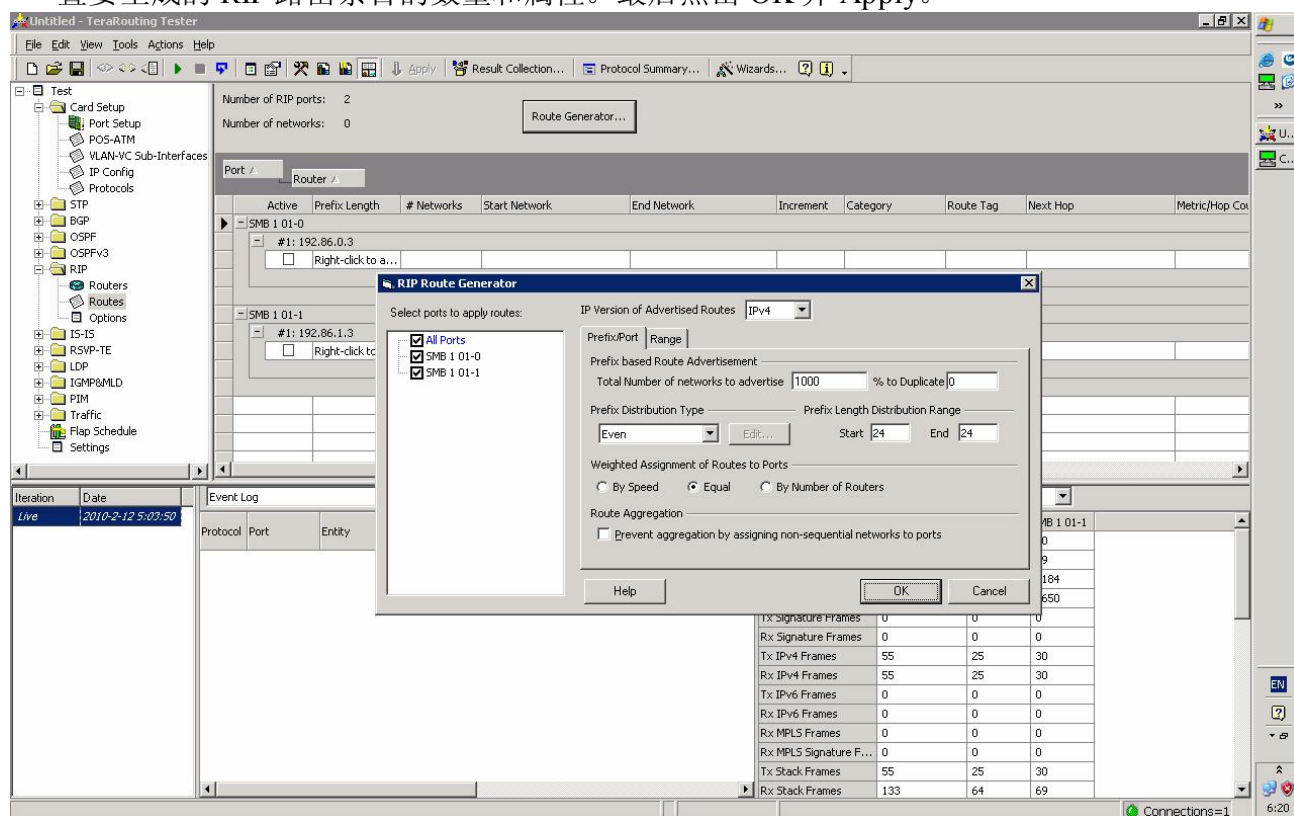
## 3. 创建 RIP 路由器

1) 点击左上窗口的 RIP→Routers，编辑相关属性，右键 New Router 可以增加 Router。



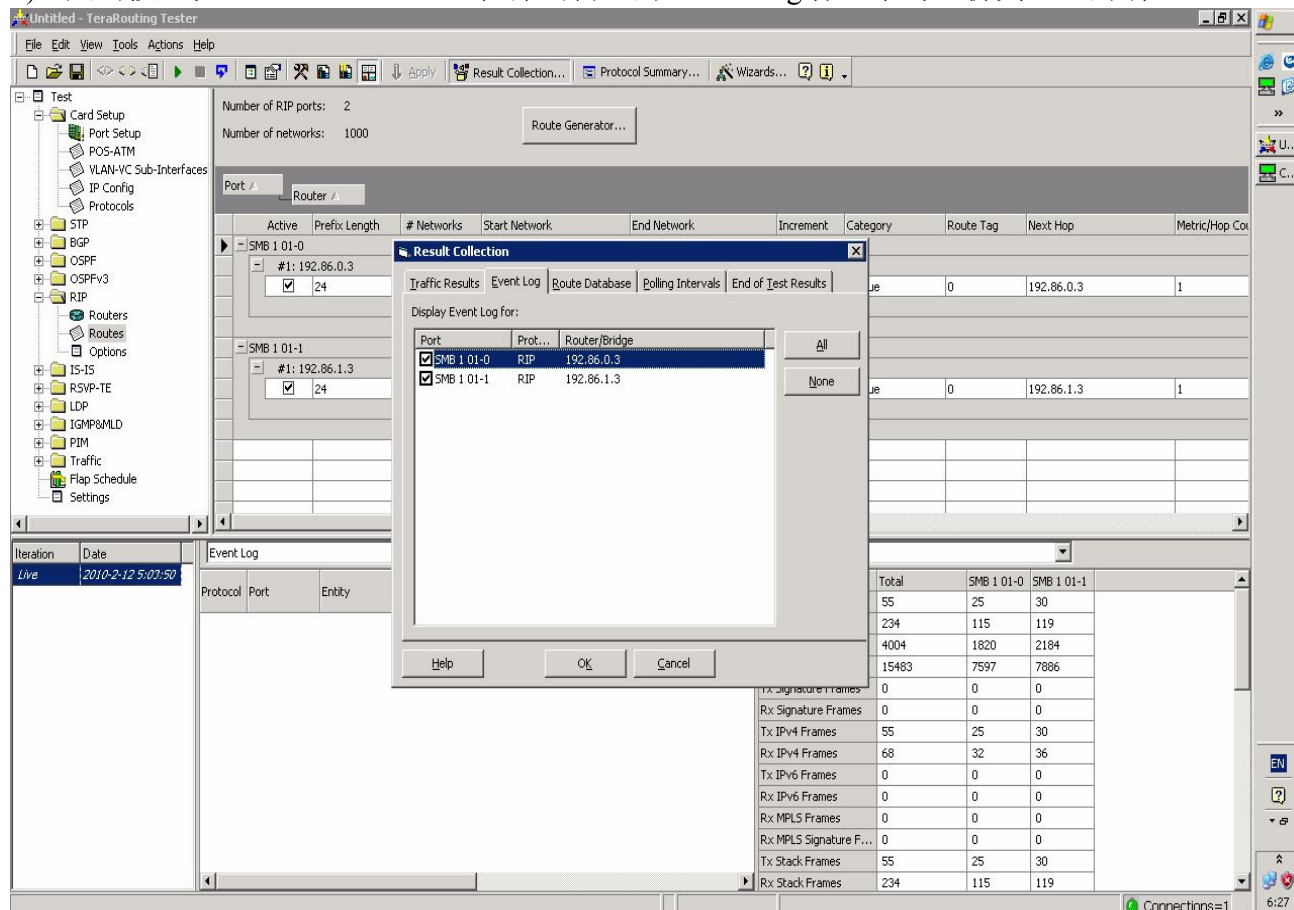


- 2) 点击左上窗口中的 Routes，然后点击右上窗口中的 Route Generator 按钮，在弹出窗口中设置要生成的 RIP 路由条目的数量和属性。最后点击 OK 并 Apply。



#### 4. 运行测试，查看和分析测试结果

- 1) 点击按钮栏 Result Collection，在弹出窗口的 Event Log 标签中勾上仿真 RIP 的端口。



## 2) 在结果窗口的下拉列表中选择 Protocol State Summary

The screenshot shows the TeraRouting Tester interface. On the left, the 'Test' tree is expanded to 'RIP'. The main window displays the 'Protocol State Summary' configuration for RIP. It shows two routers, SMB 1 01-0 and SMB 1 01-1, each with a prefix length of 24 and a network range of 192.86.0.0 to 192.86.0.255. The 'Event Log' at the bottom shows the 'RIP' protocol state summary.

Protocol	Port	Entity	Direction	State	Event Type	Time (sec)	Parameters
RIP	SMB 1 01-0	192.86.0.3		Closed	Update	5140.47	Reach = 25, Unreach = 0
RIP	SMB 1 01-1	192.86.1.3		Closed	Update	5140.47	Reach = 25, Unreach = 0

## 3) 点击 Routers，在右边窗口中点击右键然后点击 Start Router 启动仿真路由器。

The screenshot shows the TeraRouting Tester interface with the 'Routers' configuration window. A context menu is open over the 'Routers' list, showing options like 'New Router', 'Delete Router', 'Start Router', 'Stop Router', 'Start All Routers', 'Stop All Routers', 'Start Updates', 'Stop Updates', 'View Routes', 'Cut Routers', 'Copy Routers', 'Paste', 'Duplicate...', 'Select All', and 'Clear'. The 'Start Router' option is highlighted. The 'Event Log' at the bottom shows the 'RIP' protocol state summary.

Protocol	Port	Entity	Direction	State	Event Type	Time (sec)	Parameters
RIP	SMB 1 01-0	192.86.0.3		Closed	Update	5140.47	Reach = 25, Unreach = 0
RIP	SMB 1 01-1	192.86.1.3		Closed	Update	5140.47	Reach = 25, Unreach = 0

4) 在下方的结果窗口中可以看到 RIP 相关 log 和仿真路由器的状态。

[illegible]