

## 10. Get alerted on possible routing instabilities, router configuration errors or routing policy violations

Many network outages caused by routing instabilities, configuration errors or broken policy are accompanied by a high rate of network events. Consider:

- A BGP neighbor AS withdraws the full Internet routes when its border router goes down.
- A BGP peer coming back up similarly floods the full Internet routes
- A route oscillation occurs when route reflectors repeatedly announce the same route with different MEDs. Being internal to the AS, no flap dampening occurs.
- BGP routes are mistakenly flooded into the IGP

Event churn caused by these incidents may not be noticed if high performance core routers are involved. But in most cases there is a route, prefix, customer or user that is experiencing an outage of service.

Based on a learned baseline of stable routes in the network, Route Explorer can watch for and alert on high churn events in BGP or IGP:

- BGP Prefix Flood alert – sent when the number of routes increases by a configured percentage from baseline.
- BGP Prefix Drought alert – sent when the number of routes is reduced by a configured percentage from baseline.
- IGP Excess Churn alert – sent when the rate of IGP events exceeds a configured maximum.

Figure 20 illustrates the alert configurations.

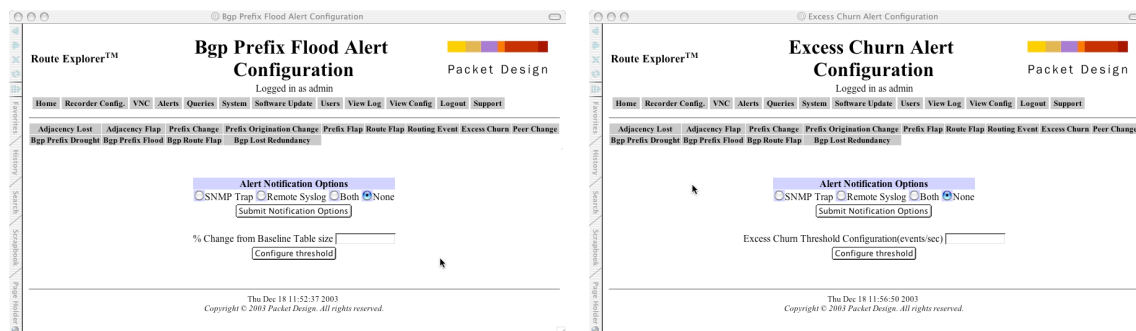


Figure 20

### HOW TO:

1. To enable the BGP Route Flood or Drought alert, select appropriate link in the Alerts page of the Route Explorer Admin page
  - a. Select the alert notification options (SNMP and/or Syslog)
  - b. Enter the percent drop in the number of BGP routes from baseline (drought) or increase from baseline (flood) to trigger the alert, and click “Configure Threshold”

- c. To see the alert from Route Explorer, you must also enable it in your SNMP manager, or view it on your Syslog server
2. To enable the IGP Excess Churn alert, select it in the Alerts page of the Route Explorer Admin page
  - a. Select the alert notification options (SNMP and/or Syslog)
  - b. Enter the event rate to trigger the alert and click “Configure Threshold”
  - c. To see the alert from Route Explorer, you must also enable it in your SNMP manager, or view it on your Syslog server