**Prefix mis-origination**

Multiple events. For example:

"Starting at 18:26 UTC (April 2, 2014) AS4761 began to originate 417,038 new prefixes normally announced by other Autonomous Systems. The 'mis-origination' event by Indosat lasted ... until approximately 21:15 UTC."

http://www.bgpmon.net/hijack-event-today-by-indosat/

**Route origin validation**

Caches regularly travels the RPKI infrastructure or request latest info from another cache.

Routers check the validity of an origin AS based on the locally stored ROAs.

**Deployment of BGP route origin validation**


Use OpenFlow counters to count the amount of traffic per flow.
Counters can be used to predict the amount of traffic that will be dropped due to origin invalidity.

18.81 GB of traffic from REANNZ
20.18 GB from the WIX

A single entry is used to forward most of the traffic.
89.31% of the traffic for the switch facing REANNZ
83.22% for the switch facing WIX

Very little traffic is dropped.
959 bytes at REANNZ’ facing switch
42.60 KB at WIX facing switch

Normalized cumulative distribution of the traffic

From March 17, 2014 to March 24, 2014
Out of 566 routes from the 2 WIX sessions
23 have a valid origin
19 have invalid route origin
The rest has no ROA associated

Most invalid routes are due to the advertised prefix length not matching the ROA
One prefix advertised by an an AS not matching the ROA