Real-World Route Announcement Datasets

We collect 18 real-world route announcement datasets from RouteViews Project [1]. Each dataset contains all route announcements from all RouteViews collectors 12 hours before and after a previously-confirmed routing anomaly. We name each dataset (*e.g., PO_{brazil}*) by the category and the abbreviation of the confirmed routing anomaly related with the dataset. Table 1 shows the details of each dataset.

TABLE 1: **Real-world datasets with previously-confirmed routing anomalies.** *PO*, *SO*, *SP* and *RL* indicate the categories of anomalies, *i.e.,* the prefix origin change, the subprefix origin change, the subprefix path change, and the route leak, respectively. *#Total Ann* denotes the number of announcements in each dataset. *GT Duration*, *#GT Ann*, and *#GT VP* denote the duration of the ground-truth anomaly, the number of anomalous announcements in the ground-truth anomaly, and the number of vantage points observing the ground-truth anomaly, respectively.

Category	Name	Time Span ($\pm 12h$)	#Total Ann	GT Duration	#GT Ann	#GT VP
prefix hijacking (origin change)	PO_{brazil}	2014-09-10 00:30:00	93,942,111	1h28m39s	127	24
	PO_{sprint}	2014-09-09 13:45:00	91,338,780	7s	198	74
subprefix hijacking (origin change)	SO_{iran}	2018-07-30 06:15:00	201,516,610	3h25m42s	587	102
	$SO_{bitcanal\_3}$	2018-06-29 13:00:00	141,856,933	47m34s	672	107
	$SO_{backcon\_3}$	2016-02-21 10:00:00	279,389,745	4s	1,156	100
	$SO_{backcon\_1}$	2015-12-03 22:00:00	186,952,580	16m5s	695	96
	$SO_{bitcanal\_2}$	2015-01-23 12:00:00	60,327,936	5m11s	284	34
	SO_{h3s}	2014-11-14 23:00:00	94,519,947	2s	581	86
	$SO_{pakistan}$	2008-02-24 18:00:00	8,155,604	4h57m6s	156	20
subprefix hijacking (path change)	$SP_{backcon\_5}$	2016-05-20 21:30:00	147,824,105	1h33m47s	296	61
	$SP_{backcon\_4}$	2016-04-16 07:00:00	100,632,725	11m28s	1,032	98
	$SP_{backcon\_2}$	2016-02-20 08:30:00	314,047,522	3m10s	825	73
	$SP_{bitcanal\_1}$	2015-01-07 12:00:00	57,902,559	12m55s	286	38
	$SP_{petersburg}$	2015-01-07 09:00:00	60,016,016	28s	1,000	83
	SP_{defcon}	2008-08-10 19:30:00	5,701,271	26s	72	21
route leak	RL_{jtl}	2021-11-21 06:30:00	3,035,292,256	1h14m47s	2,419	146
	$RL_{stelkom}$	2021-11-17 23:30:00	3,572,332,877	3m18s	1,888	140
	$RL_{itregion}$	2021-11-16 11:30:00	3,409,628,374	31m32s	2,409	144

References

[1] University of Oregon Route Views Project. MRT format RIBs and UPDATEs. Accessed Dec. 10, 2021. [Online]. Available: http://routeviews.org/