

Cisco network testbed portflap exploratory data analysis report

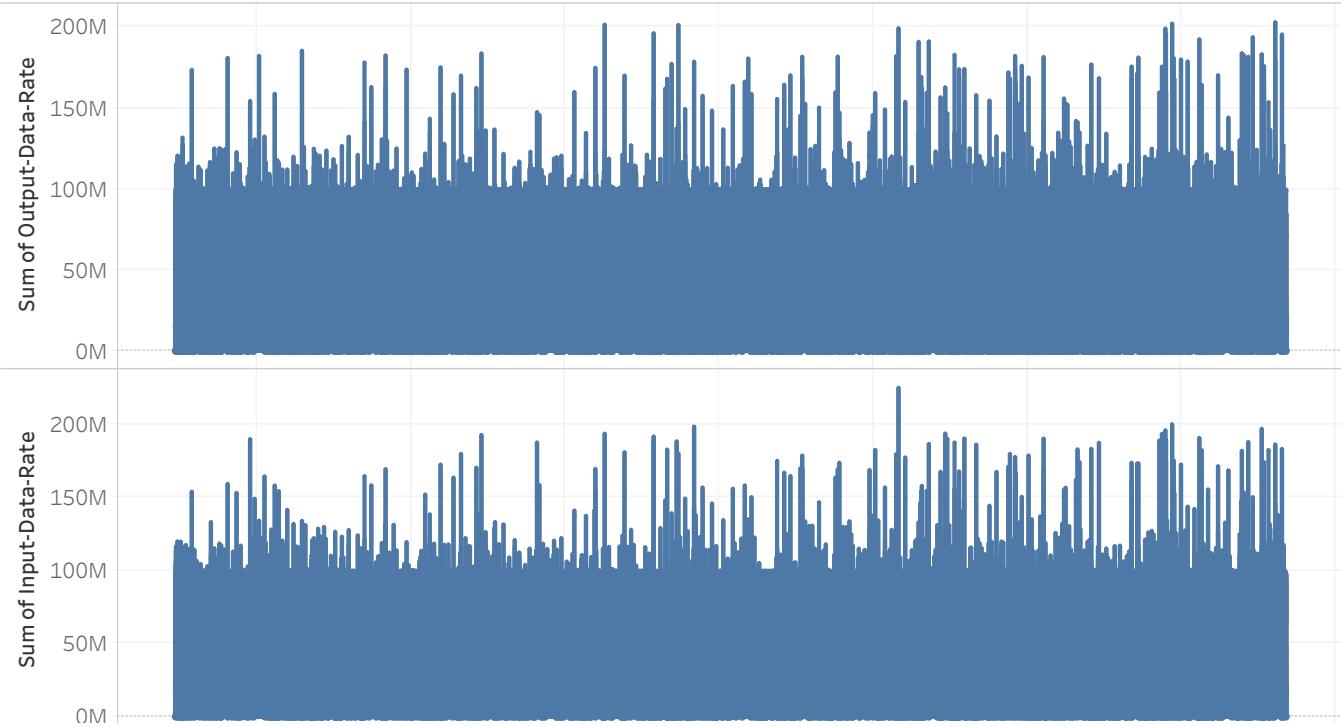
Initial thought process	Filtering data based on producer to establish a pattern for understanding portflap failure	Delving deeper to understand the interface in the machine where port flap fails	Studying one type of port flap failure to analyze the time required for netowkr stabilization	Distinguishing between diff e..
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Team Number: 3

To apply the takeaways from the model built for the telemetry data, we plotted input and output parameters to understand the nature of portflap data

INPUT AND OUTPUT DATA PLOTS

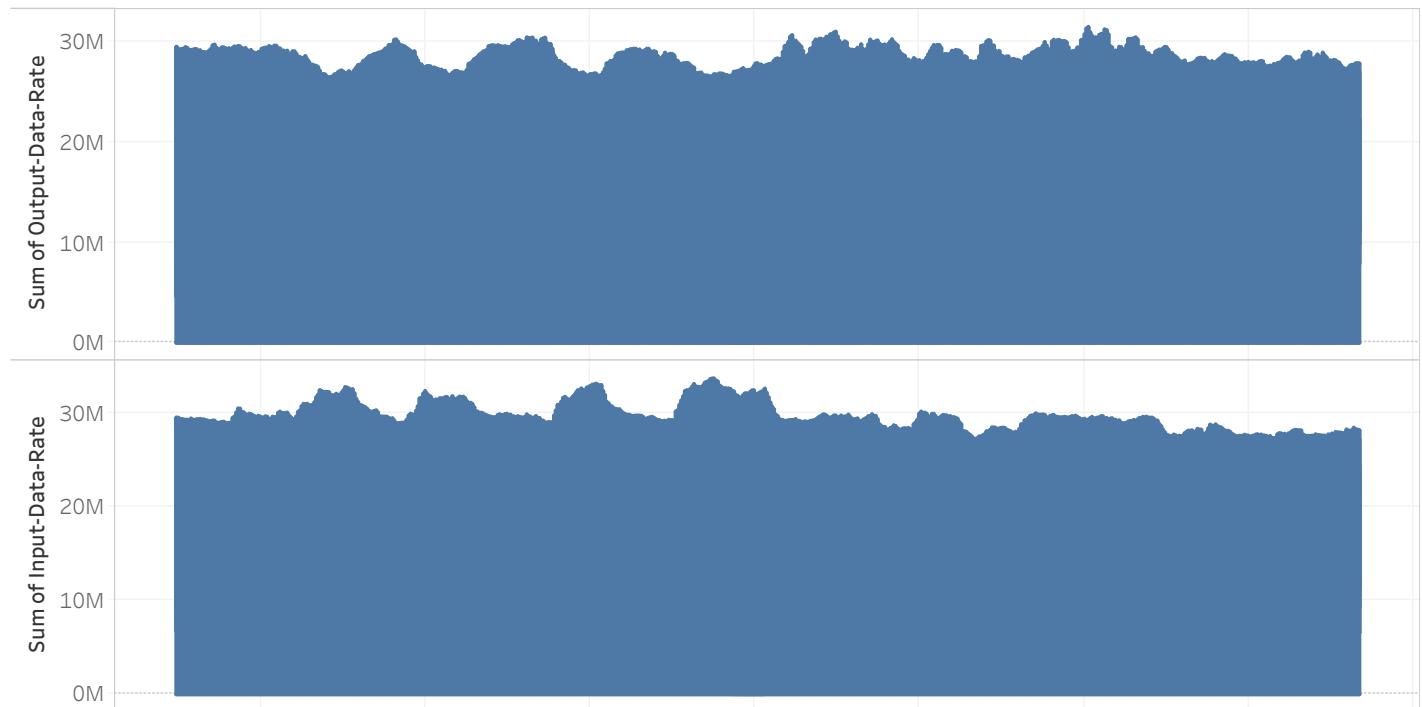


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Moving ahead, we analyzed the data set by filtering each producer to establish a pattern for machine failure. Thus, continuous fluctuations in telemetry data for spine 2 provided grounds for further investigation.

Spine 2 plot

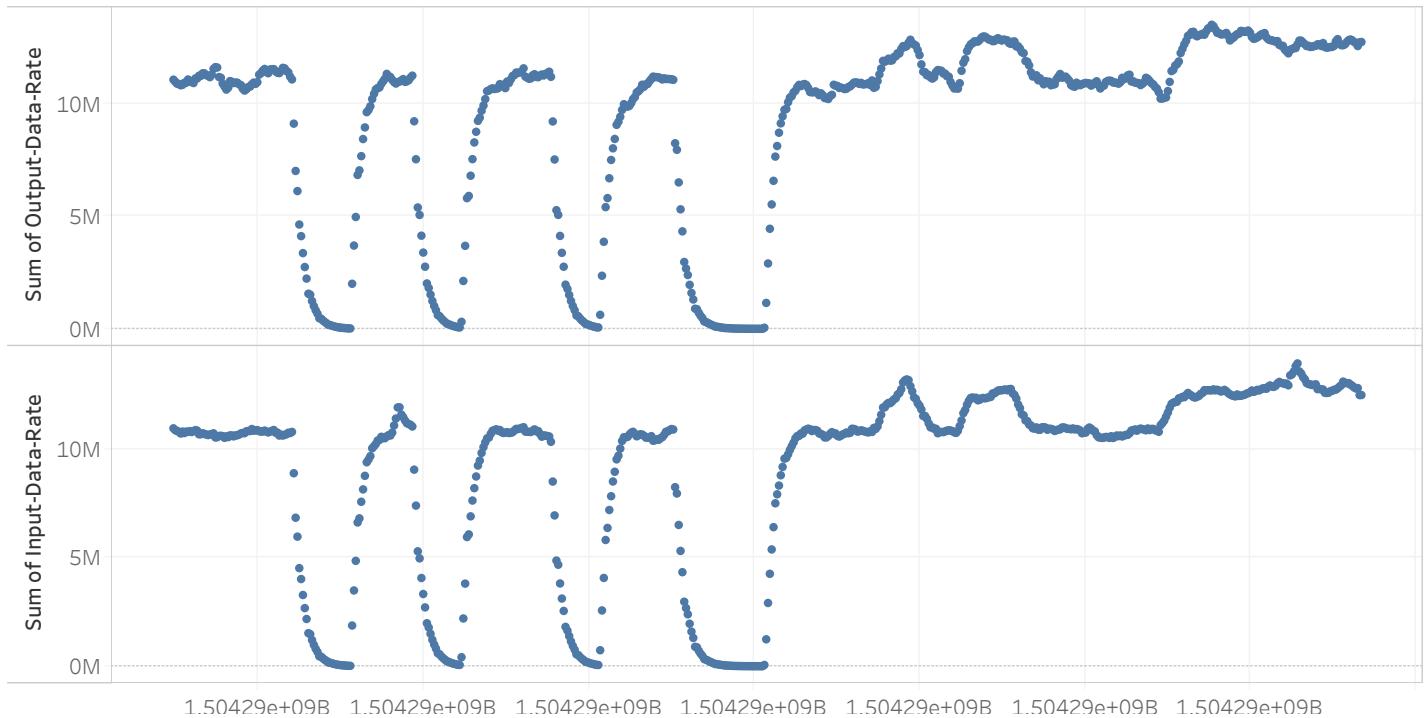


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To analyze the interface which contributed to network failure, we referred the log file and read me file which has the exact information of when the interface was shut down and for how long. By analyzing and interpreting data from case data file, this we found that interface/port 8 had all the three failures of which one was at both ends- local and remote as mentioned in the read me file.

Input data rate and output data rate for port 8

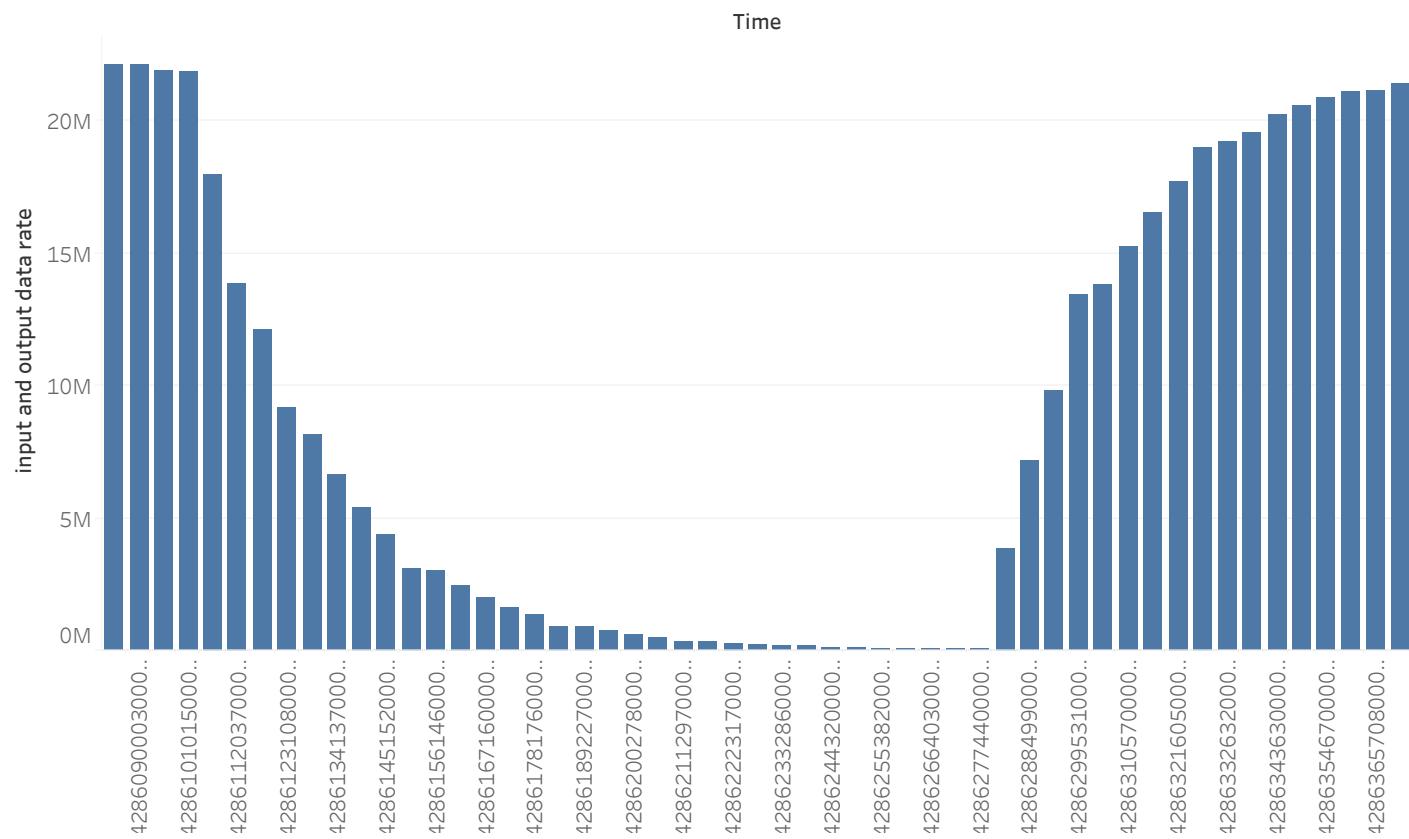


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Filtering data based on producer to establish a pattern for under..	Delving deeper to understand the interface in the machine where port flap fails	Studying one type of port flap failure to analyze the time required for netowkr stabilization	Distinguishing between different types of port flap failures	Understanding type three failure
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To calculate the time interval for the interface to stabilize we plot a curve for one type of failure for interface 8

Plot for one particular interface failure

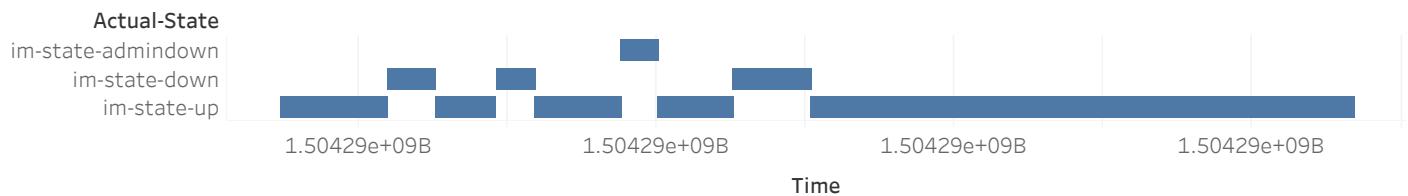


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After understanding the different types of failure from the read me file, we plotted the actual state of the interface inorder to understand the differences between the different types of port flap failures. There is a clear distinction visible between the optical transceiver pulled and admin state change.

Actual state plot



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Filtering data based on producer..

Delving deeper to understand the interface in the machine where port flap fails

Studying one type of port flap failure to analyze the time required for network stabilization

Distinguishing between different types of port flap failures

Understanding type three failure

In order to understand the nature of type 3 failures, we plotted for different producers and filtered interfaces to understand the failure caused by loss of light to transceiver

Plot for leaf 3 interface 30

