



Adjacency Information Base Stats and Threshold Frequency

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About Adjacency Information Base Stats and Threshold Frequency

The 3.2(5) release introduced the adjacency information base stats and threshold frequency feature. Nodes in the network are said to be adjacent if they can reach each other with a single hop across a link layer. The adjacency table, which is a protocol-independent adjacency information base (AIB), is populated as adjacencies are discovered. Each time an adjacency entry is created (such as through ARP), a link-layer header for that adjacent node is precomputed and stored in the adjacency table. After a route is determined, the route points to a next hop and corresponding adjacency entry.

This feature introduces an adjacency counter, which changes only if there is any update, add, or delete to the adjacency. This essentially keeps track of the number of times an adjacency has been modified (added, deleted, or updated).

You can use this feature to check if there is any unexpected churn in the adjacencies. For example, a churn could happen due to an endpoint flapping continuously or if there is a MAC address move. You can detect the churn by looking at the faults that are generated for different threshold values. The following faults are set when the counter value crosses a threshold value depending on the rate of change on a per second granularity:

- Warning: This fault is generated when the rate of change increases above 50.
- Minor: This fault is generated when the rate of change increases above 100.
- Major: This fault is generated when the rate of change increases above 150.
- Critical: This fault is generated when the rate of change increases above 200.

Subsequently, these faults are removed when the rate of change falls below the appropriate threshold value:

- Warning: This fault is removed when the rate of change decreases below 45.
- Minor: This fault is removed when the rate of change decreases below 90.
- Major: This fault is removed when the rate of change decreases below 135.

- Critical: This fault is removed when the rate of change decreases below 180.

Prerequisites for Adjacency Information Base Stats and Threshold Frequency

To use the adjacency information base (AIB) stats and threshold frequency feature, you must have an L3Out configured to connect to an external network. If you have an L3Out configured, then this feature is enabled by default; you do not need to do anything to enable or configure the feature.