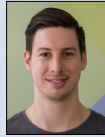




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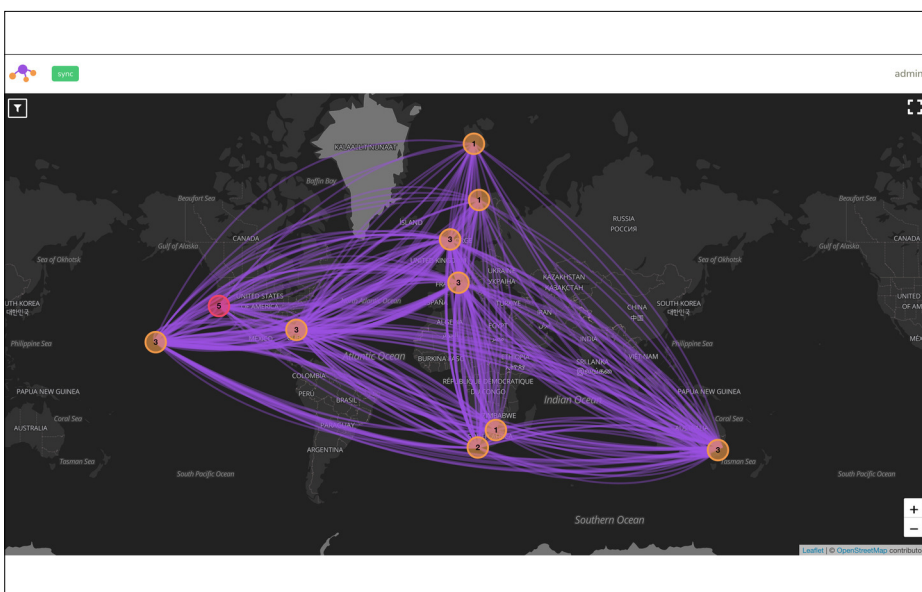
SDWAN Topology Viewer (SDWAN-TV)

Introduction: Software defined WAN (SDWAN) is a trending new technology that is emerging fast. Many of the market leading network equipment providers, like Cisco, have developed their own SD-WAN solution. For IT professionals using SD-WAN solutions in global companies, the complexity of their network quickly becomes overwhelming. As a result, it is even harder to keep track of the network topology.

Problem: Cisco's SD-WAN solution vManage provides a web application that is primarily designed for configuration. It provides a simple graphical overview of the distribution of the individual routers on a world map. Unfortunately, it is not designed for active monitoring of the infrastructure and does not display the IPsec tunnels. With the rise of SD-WAN, its products and non-existent monitoring solutions, the foundation for a solution to this problem has already been laid.

Result: In contrast to Cisco's vManage web application, the SDWAN Topology Viewer (SDWANTV) puts more emphasis on a visual representation of the topology. It not only displays both devices and IPsec tunnels, but also the states of both and the metrics of the IPsec-tunnels. With a filter, the user is able to only display those resources they are interested in. Because of the simple user experience, a network administrator can quickly detect failures and anomalies in the topology in one view.

With an internal topology state representation based of the information gathered over the Cisco's vManage API and stored in a PostgreSQL database, the Django backend offers a REST API for an improved user interface to a state-of-the-art single page application written in React. Depending on the size of the topology, the tool propagates vManage state changes to the frontend in under one minute and therefore can be rated as a live monitoring.



SD-WAN Topology Viewer
Own presentment