

Mack Dirks
Seattle-ops-301d8

AWS Site-to-Site VPN Solution

The AWS platform provides the flexibility to create multiple accounts and organizations. To replicate the network setup for Globex and its recently acquired company, GreenGenius, we began by setting up two AWS accounts.

To manage user access and permissions, we utilized the AWS Identity and Access Management (IAM) system. As an administrator, I was granted full access privileges to configure the cloud network and establish a secure Site-to-Site VPN connection.

To enable GreenGenius to utilize the private network, we deployed an OpenSwan instance, an open-source implementation of the IPSec protocol suite (the underlying technology for AWS VPN). OpenSwan proved to be an excellent solution for branch offices, newly acquired subsidiaries, and remote workers. It facilitated the creation of a secure IPSec tunnel, ensuring the confidentiality and integrity of network traffic and data transmission. In our setup, the OpenSwan instance acted as a Customer Gateway.

Additionally, on the Globex side, we configured a Virtual Private Gateway.

By successfully configuring these components—Globex's Virtual Private Gateway and GreenGenius's OpenSwan—we established an encrypted VPN connection between the two entities.

Subsequently, we proceeded to configure the Route Tables. On the Globex side, we enabled propagation for the Virtual Gateway. On the GreenGenius side, we defined the IP CIDR (Classless Inter-Domain Routing) of the AWS VPC (located on the Globex side) and set the Target ID to be our OpenSwan Customer Gateway.

To ensure proper communication within the network, we simulated internal servers on both sides by launching additional AWS EC2 instances. These instances allowed us to verify connectivity by utilizing the ping command.

Once the Site-to-Site VPN connection was fully configured, we initiated a ping request from the GreenGenius Internal Server. The request was directed to GreenGenius's Route Table entry, which in turn routed the data to the OpenSwan Customer Gateway. The OpenSwan instance then securely forwarded the connection, encrypting the data, to the Globex server using its private IP address.