The Hillstone CloudEdge Virtual Firewall for AWS VPC

Overview

When integrated with the Amazon Web Services (AWS) cloud service, the Hillstone CloudEdge virtual firewall is deployed as a Virtual Private Cloud (VPC) gateway to provide comprehensive security protection to an enterprise customer using AWS. Companies deploying business on AWS, and creating a VPC service, can choose the Hillstone CloudEdge from the AWS portal. The virtual firewall component of the Hillstone CloudEdge offers enhanced access control, Virtual Private Network (VPN), attack protection, and server load balancing for an enterprise's business services. The CloudEdge is deployed dynamically to meet AWS elastic requirements, enables security-on-demand services for your organization, and helps improve utilization of your security investment.

Key Security Features of the Hillstone CloudEdge

The Hillstone CloudEdge – based on NGFW technology, and using the same StoneOS software – is integrated with VPC network to rapidly build a flexible security service to protect AWS business transactions. The solution provides enterprises with enhanced security ability for their VPC networks, including:

1. Isolation of VM instances to ensure that all traffic flowing across your VPC is inspected, and unauthorized access attempts are prevented based on user and application identification and control.

2. Reliable VPC service maintained through the integration of a snapshot back up of the virtual firewall, enabling rapid restoration of virtual firewall service, with the most current configuration, in the unlikely event of an appliance failure or system crash.

3. IPSec VPN/SCVPN security tunnel technology that guarantees safe and secure access to cloud services from untrusted locations to all users, anytime, anywhere.

4. Service continuity guaranteed by providing security protection against known and unknown threats or DDoS attacks, as well as various other Internet threats.

5. Server load balancing to help establish a service cluster, where user traffic can be assigned equally to each VM using a choice of multiple load balancing algorithms.

AWS

AWS offers a broad set of global compute, storage, networking, and deployment services to help build an organizations' cloud infrastructure with lower costs, more rapid deployment, and elastic scalability. AWS authorizes user access to your virtual servers through VPC. When you plan to launch a business using AWS, professional security protection must be utilized to ensure secure access to all your business data and virtual applications.

Customer Value

While AWS VPC provides a basic network isolation service, it continues to face more complex threats from the Internet, such that your Elastic Cloud Compute (EC2) instances and VPC also have to guard against these known and unknown attacks, as well as protect against hacking behavior. Also, your virtual services need additional security features such as granular identification, QoS, VPN, access control, and server load balancing to guarantee business continuity and improve your customers' experience. The Hillstone CloudEdge can be deployed in an EC2 instance, offering sophisticated firewall features to address challenges with cloud business migration and to protect your EC2 instances.

Integrated with AWS service, the Hillstone CloudEdge enables north-south traffic inspection to provide the VPC network with dedicated security isolation via policy control, as well as to protect against unauthorized access and other potential threats to your virtual service.

Integrated with the EBS snapshot, Hillstone CloudEdge can be restored rapidly from a backup image with the most current configuration, in the unlikely event of an appliance failure or system crash. You can deploy and manage the Hillstone CloudEdge quickly and conveniently from the AWS console, choosing suitable CloudEdge settings based on actual traffic usage. Using elastic deployment and dynamic extensions, the Hillstone solution scales to provide AWS security-on-demand services, and helps your organization achieve the lowest cost for network security.

AWS Use Cases

VPC Gateway

A VPC provides network virtualization similar to a traditional physical network in topology and function. The Hillstone CloudEdge is deployed at the service entrance as the VPC gateway to protect your EC2 instances by inspecting all traffic to identify users, applications, content, and to set granular access control policy, block known and unknown threats, as well as to guard against abnormal behavior. In a dynamic AWS deployment solution – when EC2 instances are added or changed to accommodate workload – the CloudEdge is rapidly and automatically updated with new security policies and IP addresses.

Corporate VPN

VPN capability is a common requirement in the traditional enterprise network. When enterprise business migrates to AWS, users access cloud data and manage EC2 instances through an encrypted VPN tunnel. The CloudEdge offers multiple VPN modes, such as IPSec VPN and SCVPN, to satisfy different requirements. In the hybrid-cloud mode, standards-based site-to-site VPN connections are established between the corporate local network, branches and your AWS virtual service – the CloudEdge applies access control based on application, user, and content to guarantee valid and continuous access to users on remote links.

Server Load Balancing

The Hillstone CloudEdge provides DNAT-based server load balancing (SLB), helping enterprises establish an EC2 cluster on AWS – traffic can be assigned equally to different EC2 instances, all providing the same service. When an EC2 instance reaches its workload threshold, the CloudEdge forwards the connection request to another instance to avoid discarding the request. Multiple SLB algorithms are supported, including weighted hashing, weighted least-connection and weighted round-robin. The advantage of integrating SLB with the firewall is that the firewall can inspect and analyze all inbound traffic. In the VPC, this means that the CloudEdge can block attack threats hidden in traffic to protect all of your EC2 instances.
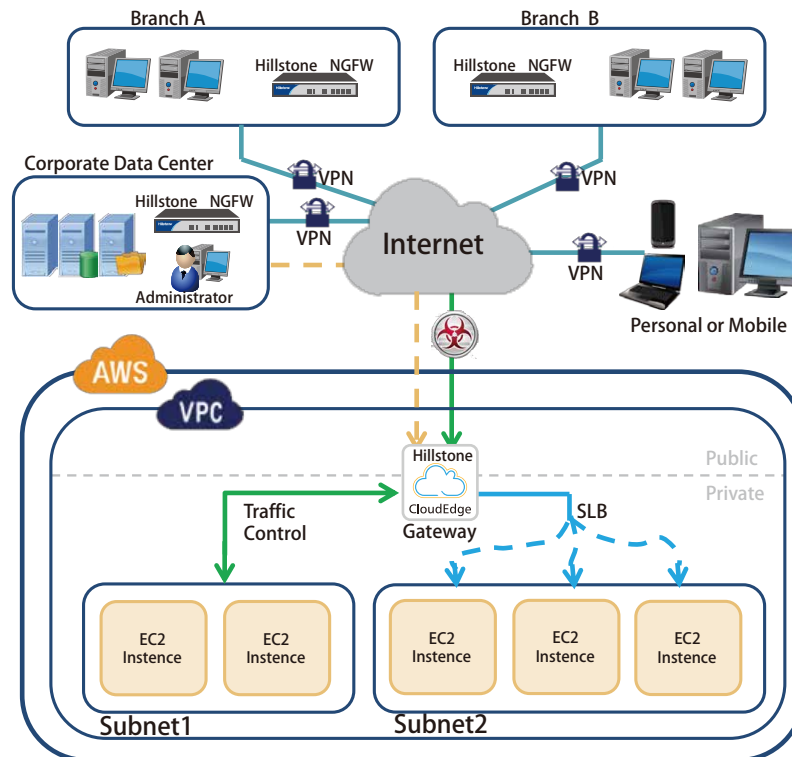
Summary

As cloud technology matures, enterprises and SMBs increasingly migrate their business to cloud platforms. To complement the advantages of compute, storage and application virtualization, Hillstone offers the CloudEdge virtual firewall to provide secure networking to the cloud platform. Integrated with the AWS service, the Hillstone solution provides isolation and protection for the VPC network, as well as offering to cloud customers additional benefits such as rapid service deployment, enhanced competitiveness, lower initial investment, and lower cost service maintenance.