Hillstone Networks, Inc.

CloudEdge Deployment Guide

Version 5.5R3P1

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About this Guide:

This guide gives you comprehensive installation instructions of Hillstone Networks, Inc.CloudEdge .

For more information, refer to the documentation site: http://www.hillstonenet.com/resources/.

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TWNO: TW-DPL-VFW-EN-5.5R3P1-EN-V4.0-2016/11/2

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Overview

The virtualization product of Hillstone Networks, Inc. is CloudEdge virtual firewall (vFW). vFW is a software product, a StoneOS system running on a virtual machine.

About This Guide

This guide introduces how to install CloudEdge on Azure virtualization platform. This document does not cover how to con-figure StoneOS itself. For information of how to set up StoneOS, please refer to documents of StoneOS (click here).

Targeted Readers

This guide is intended for administrators who want to deploy CloudEdge of Hillstone Networks, Inc.. Before deploying vFW on Azure, the administrator should be familiar with the knowledge of Azure. This document is written with readers in mind that have already known basic virtualization knowledge, and it will only introduce operations of how to install vFW.

vFW Models

vFW is available in two models: SG-6000-VM01 and SG-6000-VM02. All models can be deployed on Azure with formally pur-chased license ("Licensing CloudEdge" on Page 3). The required configuration of virtual machine is as listed below:

Configuration	SG6000-VM01	SG6000-VM02
Minimum	1CPU / 1GB memory	2CPU / 2GB memory
Recommended	1CPU / 8GB memory	2CPU / 8GB memory

Supported Features

vFW supports the following features:

- Firewall (policy, zone, NAT, etc)

- Application Identification

- Attack Defense (AD)

- Intrusion Prevention System (IPS)

- IPSec VPN

- SSL VPN

- User Management

- Access Control

- High Availability (HA)

- Link Load Balance (LLB)

- Logging

- Statistics Set

- QoS

Licensing CloudEdge

CloudEdge SG6000-VM provides license controlled capacities. Only after installing formal license can the CloudEdge reach the listed capacity. To purchase a license, please contact sales people (click here).

Licenses

CloudEdge licenses are categorized to platform licenses, sub licenses and function licenses. A platform license is the base to install all other types of licenses.

Platform Licenses

- **Platform Trial License**

  After the installation of Platform Trial License, you will get the same features as system with Platform Base License. But the duration will be shorter. When platform trial license expires, the system will not be allowed to configure if it is not restarted; if it is restarted, the system will restore to the status which the it only has a default license.

- **Platform Base License**

  When a CloudEdge is officially purchased, you can buy a Platform Base License. Platform Base License provides fundamental firewall features.

  When it expires, CloudEdge will use Default License. The system can be normally functioning, but cannot upgraded to higher version.

- **Default License**

  CloudEdge has a built-in free default license. The default license is eternally valid.

  CloudEdge using the default license provides the same features as Platform Base License, but capacities are restricted.

Sub Licenses

Sub licenses control whether corresponding functions are enabled or not and the time limit as well.

- **IPSec VPN Sub License**

  IPSec VPN sub License enables IPSec VPN function and authorizes the maximum number of IPSec VPN accesses. After installing multiple IPSec VPN licenses, you can increment the maximum number of IPSec VPN accesses. When the license expires, the IPSec VPN connection will be disconnected. IPSec VPN function will not be allowed to configure. Until the device is restarted, all the configurations of IPSec VPN will not be lost.

- **SSL VPN Sub License**

  SSL VPN Sub License enables SSL VPN function and authorizes the maximum number of SSL VPN accesses. After installing multiple SSL VPN licenses, you can increment the maximum number of SSL VPN accesses. When the license

expires, the SSL VPN connection will be disconnected. SSL VPN function will not be allowed to configure. Until the device is restarted, all the configurations of SSL VPN will not be lost.

- **iQoS Sub License**

  iQoS sub license enables iQoS function. When the iQoS sub license expires, all the configurations of iQoS will not be lost until the device is restarted.

Function Licenses

Some functions are only enabled when that corresponding license is installed. The function service includes:

- **Intrusion Prevention System (IPS) License**

  IPS License provides IPS function and its signature database upgrade. IPS License has its own validity. When it expires, the IPS function works normally, but IPS signature database cannot be upgraded.

- **APP DB License**

  APP DB License allows APP database to upgrade. APP DB license is issued with platform license. There is no need to apply for it. The validity of APP DB License also follows platform license. When the platform license expires, APP signature database cannot be upgraded.

> **Note:** URL DB function and Perimeter Traffic Filtering (PTF) function can be seen in StoneOS, but they are not available for the moment. Future versions will support the two functions.

> **Note:** Besides the licenses listed above, a hardware platform from Hillstone Networks, Inc. can install other types of licenses, e.g. StoneShield, but currently, CloudEdge does not support licenses other than those listed here.

Generating Application Code

To install a license, log in the StoneOS and generate application code. After receiving the application code, the vender or salesperson will send you license information. Before logging in your CloudEdge, you need to refer to the installation instructions to set up your CloudEdge firewall first.

To generate application code in WebUI:

1. Log in the StoneOS system.

2. Select **System > License** to enter the license page.

3. Fill in the required fields under the **License Request** section.

4. Click **Generate**, and a series of code appears.

5. Copy and send the code to salesperson or vendor. They will return the license to you soon.

Installing License

After receiving license, you need to upload the license to make it take effect.

To install a license:

1. Select **System > License** to enter the license page.

2. Under **License Request**, choose one of the following two methods:

    - **Upload License File**: select this radio button and click **Browse**, select the license plain text file (.txt) to upload it to the system.

    - **Manual Input**: Select this radio button, and copy and paste license code into the text box.

3. Click **OK** to save the license.

4. Go to **System > Device Management**, and click the **Option** tab.

5. Click **Reboot**, and select **Yes** in the prompt.

6. The system will reboot. When it starts again, installed license(s) will take effect.

Deploying CloudEdge on Azure

Typical Scenarios

This guide describes how to deploy CloudEdge virtual firewall (vFW) on Azure as Internet gateway. In this example, CloudEdge is deployed as a router of Azure Vnet(10.0.0.0/8) which contains a subnet(10.0.0.0/24) , and it controls the out-bound and inbound traffic of the subnet. The following is the network topology:
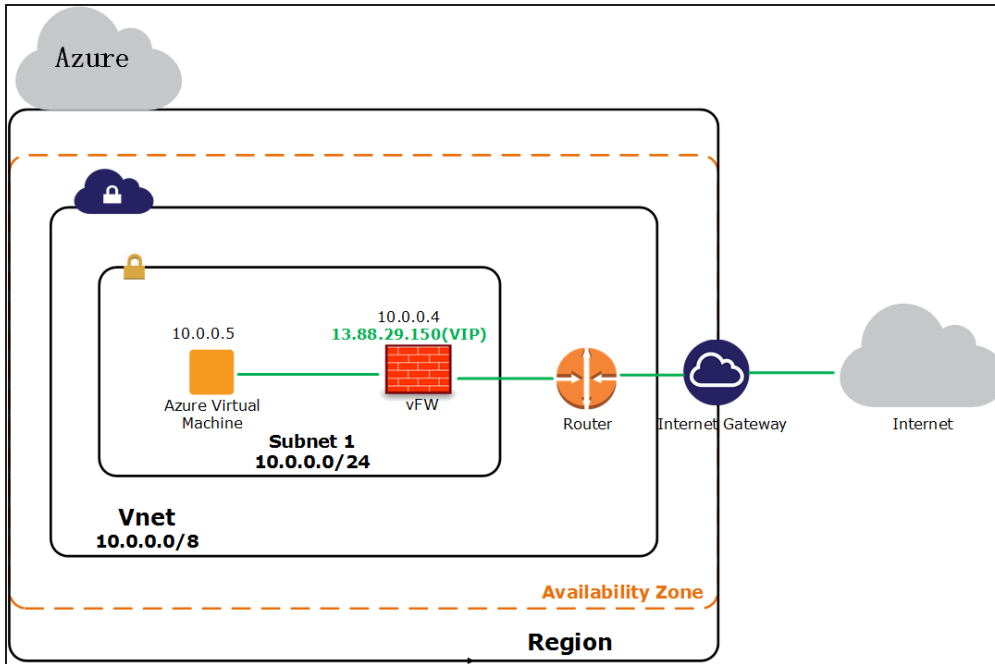

Installing CloudEdge

CloudEdge will be running in a virtual machine of the Azure Vnet. After installation, you will have a running virtual StoneOS system which you can visit via CLI and WebUI.

Step 1: Purchasing CloudEdge and Creating a virtual machine

1. Log into Microsoft Azure. Select **Virtual machines** in the left navigation pane, and then click **Add** on the top of the right page.
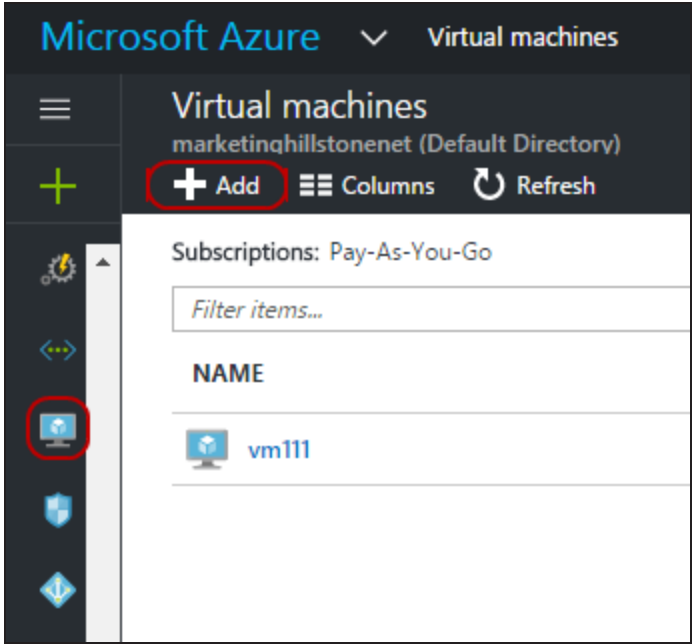
2. Type "hillstone" in the Search box. Select the CloudEdge version you need in the searching results list, and then click **Create** in the pop-up window.
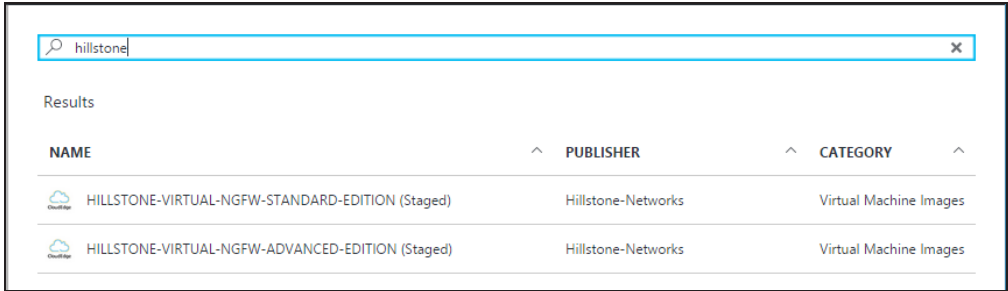
3. In the Basics page, configure the settings as follows, and then click **OK**.

> **Note:**
> - If you specify the username as hillstone and change the password, the system will update the password; if the new created username is not hillstone, the system will update the password which belongs to the hillstone user to the new, and a new user will be created, the password will be the same as hillstone user.

> - If a resource group has been created , you can use the existing one; otherwise, you can create a new resource group.
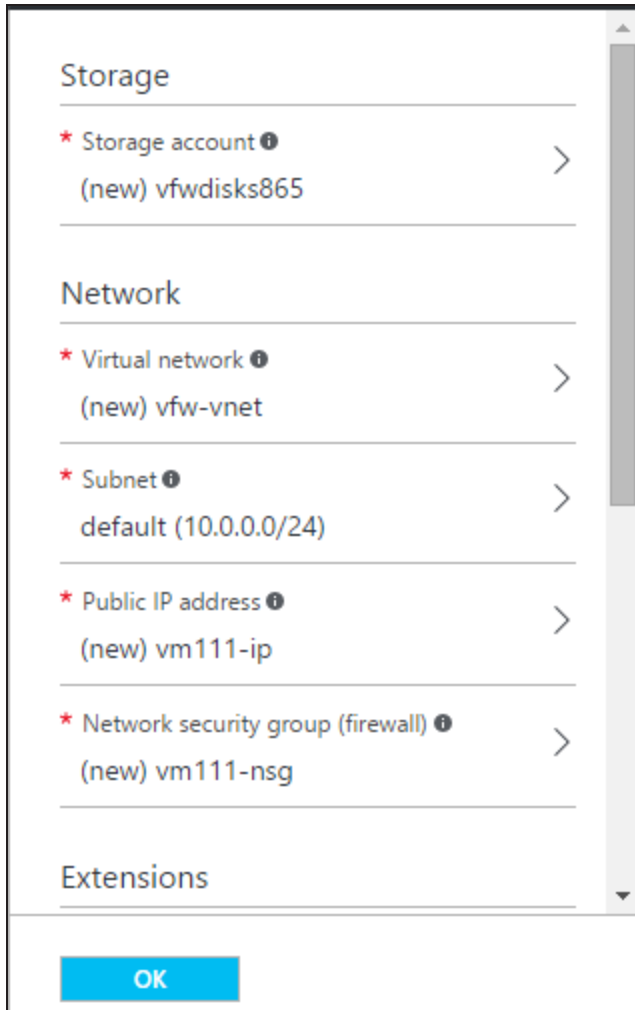
4. In the Size page, choose virtual machine size according to your CloudEdge version, and then click **Select**.

5. In the Settings page, configure the settings as follows, and then click **OK**.

The above items will be created or allocated automatically, including storage account, virtual network, public IP address, network security group and diagnostics storage account . If you want to edit them, click ⟩ in the right side.

6. Check the detailed configurations in the Summary page, and then click **OK**.

7. Click **Purchase** to pay for the virtual machine in the Buy page.

   After a few minutes, the virtual machine will be deployed successfully.
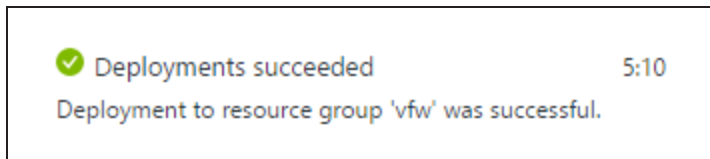
Step 2: Viewing Public IP Address

In the pop-up new virtual machine window, you can view the public IP address of CloudEdge in the Essentials tab.

Essentials ⌃

Resource group	Computer name
vfw ✎	vm111
Status	Operating system
Running	Linux
Location	Size
West US	Standard DS2 v2 (2 cores, 7 GB memory)
Subscription name	Public IP address/DNS name label
Pay-As-You-Go ✎	13.88.29.150/<none>
Subscription ID	Virtual network/subnet
d23e3fa9-048b-4423-9bbc-b5b85f969278	vfw-vnet/default

Step 3: Visiting CloudEdge

After virtual machine is created successfully, CloudEdge will be started automatically.

To Login CloudEdge via SSH2

1. Open a remote terminal login software. We will use SecureCRT as an example.

2. Click **File > Quick Connect** , and then select **SSH2** in Protocol drop-down menu.

3. Enter the public IP address in Hostname text box.

4. Enter username(azure).

5. Click **Connect** to connect this session.

6. Enter password(The new login password). Press the **Enter** key to log in.

To Login CloudEdge via HTTPS

1. Open the browser and enter **https://13.88.29.150** in the address bar.

2. Enter the username(azure) and password(The new login password) on the login page.

3. Press the **Enter** key to log in.

Step 4: Purchasing and Applying for License Software

After you purchased CloudEdge, CloudEdge Licenses are also needed, which ensure CloudEdge run normally in Azure.

Contact Hillstone salesperson to buy the license you need. To install the license in CloudEdge, see "Installing License" on

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