Overview of Cisco CSR 1000v on Microsoft Azure

The Cisco Cloud Services Router (CSR) 1000v is a full-featured Cisco IOS XE router, enabling IT departments to deploy enterprise-class networking services in the Microsoft Azure cloud. Most Cisco IOS XE features are also available on the virtual Cisco CSR 1000v.

The following VPN features are supported on the Cisco CSR 1000v: IPsec, DMVPN, FlexVPN, Easy VPN and SSLVPN. You can use dynamic routing protocols such as EIGRP, OSPF, and BGP to construct multi-tier architectures within Azure, and interconnect with corporate locations or other clouds.

You can also secure, inspect, and audit hybrid cloud network traffic with application-aware Zone Based Firewall. Use IP SLA and Application Visibility and Control (AVC) to discover performance issues, fingerprint application flows and export detailed flow data for real-time analysis and network forensics.

Cisco CSR 1000v software bundles are available with the deployment template wizard that deploys the Cisco CSR 1000v on new or existing infrastructure, such as a virtual network (vNET).

This document uses the example of a Cisco CSR 1000v image with 2 vNICs. Other images with multiple vNICs are available and these images can be deployed in a similar way to the example. Refer to the Cisco CSR 1000v Release Notes for more information about the different types of image that are available.

Introduction

When deploying 2 vNIC CSR 1000v VMs, the following items are created:

- CSR 1000v virtual machine with 2 vCPU, 7G RAM and 2 interfaces.
- Public IP address to the interface on the first subnet (NIC0).
- Security group with inbound rules for the interface on the first subnet (NIC0).
- Routing table on the Microsoft Azure hypervisor router for each CSR 1000v subnet and a default route for the second subnet (NIC1) that points to the IP address of the second interface (NIC1).
An example configuration of the Cisco CSR 1000v is shown below:

Note that a Cisco CSR 1000v can be deployed on new or existing virtual networks.

**Deployment of Cisco CSR 1000v on a New Network**

- A default route (0.0.0.0/0) is created and associated to the internal facing second subnet.

**Deployment of Cisco CSR 1000v on an Existing Network**

- A default route (0.0.0.0/0) is created. However, it is not associated to the internal facing second subnet, to avoid interruption to the existing network. You can associate the default route manually.

**Subnetting Limits**

The Cisco CSR 1000v supports a subnet mask between /8 and /29 (CIDR definition).

The subnet /29 is the smallest available in Microsoft Azure, which supports 8 IP host addresses. Note that Azure reserves the use of 4 host addresses per subnet. This leaves 4 host addresses for your use.