

# Cisco Nexus 1000V Essential and Advanced Editions

## Introduction

**Q.** What is the Cisco® Virtualization Networking solution?

**A.** Cisco's vision is to offer virtual networking solutions for multiple hypervisors, multiple services, and multiple cloud environments:

- **Multiple hypervisors:** Cisco provides virtual networking solutions (Cisco Nexus® 1000V Series Switches, Cisco Cloud Services Router (CSR) 1000V Series, and virtual services) across all major hypervisors (VMware ESX, Microsoft Hyper-V, Linux Kernel-Based Virtual Machine (KVM), and Citrix Xen).
- **Multiple services:** Cisco provides network services through virtual form factors: through Cisco CSR 1000V Series as a virtual router, Cisco Adaptive Security Appliance (ASA) 1000V Cloud Firewall as a virtual firewall, Cisco Virtual Security Gateway (VSG) as a zone-based virtual firewall, Cisco Virtual Wide Area Application Services (vWAAS) as a virtual application acceleration service, etc. In addition, customers can bring virtual machine traffic to physical appliances, such as the Cisco ASA 5585, in which multitenancy is applied through virtual contexts.

In addition, Cisco provides the following unique differentiation:

- **Physical and virtual consistency:** Uses Cisco NX-OS Software switching, Cisco IOS® Software routing, Cisco ASA firewall, Cisco WAAS application acceleration, etc.
- **Separation of duties:** Lets network teams manage physical and virtual and cloud networks using Cisco Nexus 1000V Series port profiles, Cisco Nexus 1010 Virtual Services Appliance, Cisco VSG and ASA 1000V security profiles, etc.
- **Troubleshooting tools:** Lets network operators use an existing model for troubleshooting and a comprehensive set of instrumentation that Cisco provides through the Cisco NX-OS command-line interface (CLI) and Simple Network Management Protocol (SNMP) MIBs.
- **Cisco Technical Assistance Center (TAC) support:** Provides best-in-class support for network troubleshooting across physical and virtual environments with decades of experience, network knowledge across a wide customer base, and codified patterns and solutions.
- **Solutions and Cisco Validated Designs:** Provides preconfigured, pretested reference solutions and validated designs (Cisco Virtualized Multiservice Data Center [VMDC], Cisco Virtualization Experience Infrastructure [Cisco VXI™], virtual workload mobility, hosted collaboration, PCI 2.0, etc.)
- **Infrastructure pods:** Provides Vblock™ Infrastructure Packages and Cisco FlexPod.

The Cisco Nexus 1000V Series has been shipping for more than 3 years and is licensed to more than 6000 customers. It also has been shipping the Virtual Extensible LAN (VXLAN) virtual overlay for more than 6 months, and Cisco vPath technology for virtual service insertion (for 18 months) with Cisco VSG, ASA 1000V, and vWAAS integration.

## Announcement Overview

Cisco is announcing a new go-to-market (GTM) model for the Cisco Nexus 1000V Series virtual switch for Cisco Nexus 1000V Series Release 2.1 - 4.2(1)SV2(1.1). The Cisco Nexus 1000V Series Release 2.1 software is being offered in two editions: Essential and Advanced.

- Cisco Nexus 1000V Essential Edition:** Cisco Nexus 1000V Essential Edition provides most of the comprehensive Layer 2 networking features of the Cisco Nexus 1000V Series, including VXLAN, Cisco vPath for service insertion and chaining, and VMware vCloud Director integration, as well as the operation simplification enhancements of Release 2.1 (such as the VMware vCenter plug-in, vTracker, and enhanced upgrade). This version will enable rapid, adoption of Cisco's virtual network technology in a single- or multiple-hypervisor environment.
- Cisco Nexus 1000V Advanced Edition:** This version offers value-added security features such as Domain Host Control Protocol (DHCP) snooping, IP source guard, Dynamic Address Resolution Protocol (ARP) Inspection, and Cisco TrustSec<sup>®</sup> Secure Group Access (SGA) support (a new feature in Release 2.1). The Cisco VSG zone-based virtual firewall is also included in the Advanced Edition.

**Note:** Cisco VSG will no longer be sold separately.

## General Questions

**Q.** What are the differences between the two Cisco Nexus 1000V Switch editions (Essential and Advanced)?

**A.** Cisco Nexus 1000V Switch is being offered in two editions as shown in Table 1.

**Table 1.** Cisco Nexus 1000V Essential and Advanced Editions

	Cisco Nexus 1000V Essential Edition	Cisco Nexus 1000V Advanced Edition (with Cisco VSG)
Layer 2 switching features: VLANs, private VLANs, loop prevention, multicast, virtual PortChannel (vPC), Link Aggregation Control Protocol (LACP), access control lists (ACLs), etc.	Included	Included
Network management features and interfaces: Cisco Switched Port Analyzer (SPAN), Encapsulated Remote SPAN (ERSPAN), and NetFlow Version 9; VMware vTracker and vCenter Server plug-in; SNMP; RADIUS; etc.	Included	Included
Advanced features: ACLs, quality of service (QoS), and VXLAN	Included	Included
Cisco vPath (for virtual service insertion)	Included	Included
Cisco Integrated Security Features (ISF): DHCP snooping, IP source guard, and Dynamic ARP Inspection	Not supported	Included
Cisco TrustSec SGA support	Not supported	Included
Cisco VSG	Supported <sup>1</sup>	Included
Other virtual services: Cisco ASA 1000V, vWAAS, etc.	Available separately	Available separately
Product list price (per CPU)	US\$0	US\$695

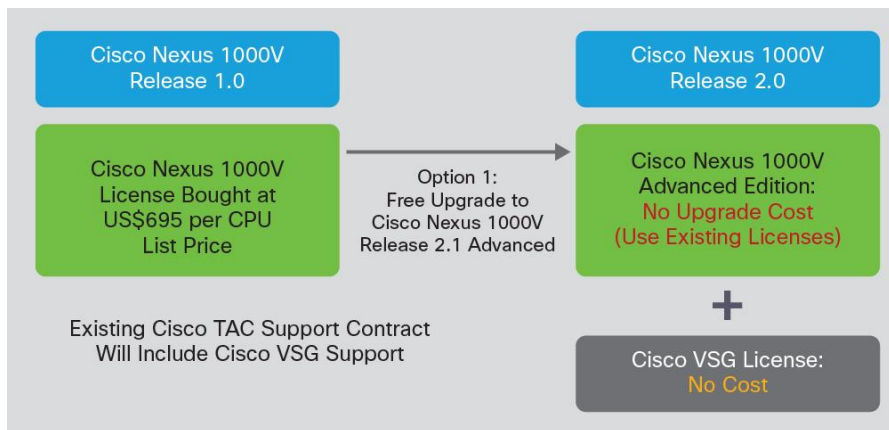
<sup>1</sup> Shipping Cisco VSG is supported on both Cisco Nexus 1000V Essential and Advanced Editions. With Cisco Nexus 1000V Release 2.1, new Cisco VSG licenses can be procured only through purchase of the Advanced Edition (Cisco VSG can no longer be ordered as a standalone product).

The Cisco Nexus 1000V Essential Edition clearly offers a comprehensive feature set and additional benefits such as upcoming multiple-hypervisor support, multiple-services support, Cisco NX-OS consistency across physical and virtual environments, and segregation of duties in comparison to other free virtual switches such as the VMware Virtual Distributed Switch (vDS), Microsoft Hyper-V switch, and Open vSwitch (OVS).

- Q.** What does this two-edition strategy mean for the existing Cisco Nexus 1000V customers?
- A.** Current Cisco Nexus 1000V customers are automatically upgraded to the Advanced Edition with Release 2.1. Current customers can continue to use existing licenses after they upgrade to Cisco Nexus 1000V Release 2.1 (CX release). The Cisco TAC service contract will continue to support the Advanced Edition (Figure 1).

Existing Cisco Nexus 1000V customers are offered one-time free Cisco VSG licenses until July 2014. Please contact your Cisco representative to secure your free Cisco VSG licenses today.

**Figure 1.** Options for Existing Cisco Nexus 1000V Customers



- Q.** Can a current customer downgrade to Cisco Nexus 1000V Essential Edition?
- A.** There is no specific downgrade process; upgrade to Cisco Nexus 1000V Release 2.1 software and change the switch edition to Essential, or perform a clean installation of Cisco Nexus 1000V Release 2.1 in the Essential Edition. Existing service contracts will continue to support the Essential Edition. Upon expiration of the existing Cisco TAC service contract, the customer can purchase Essential Edition support for continued Cisco TAC support. Please contact your Cisco representative for more details.
- Q.** What are the other new features of Cisco Nexus 1000V Release 2.1?
- A.** Cisco Nexus 1000V Release 2.1 (CX) further simplifies and enriches the user experience with the product. The release features set include:
- VMware vCenter plug-in: Provides a holistic view of the virtual network from within VMware vCenter
  - Support for Cisco TrustSec: Extends Cisco TrustSec security solutions for network-based segmentation of users and physical workloads to virtual workloads connected to Cisco Nexus 1000V, using security group tags (SGTs) to define security segments
  - VMware vTracker: Adds visibility into virtual and physical networks (such as fabric information, virtual machine name, and VMware vMotion events)
  - Cross-data center high availability: Supports split active and standby Cisco Nexus 1000V Virtual Supervisor Modules (VSMs) across two data centers to implement cross-data center clusters and virtual machine mobility while helping ensure high availability

- Enhanced installer application: Simplifies the installation process by providing a single-pane view for all steps
- Simplified upgrade process: Supports rolling upgrade process that allows customers to upgrade to a newer version of Cisco Nexus 1000V across multiple maintenance windows and allows configuration changes during the upgrade process
- Support for Cisco Nexus 1000V Essential and Advanced Editions

**Q.** Can I purchase Cisco VSG separately as a standalone part number?

**A.** No. From, now on, customers will not be able to buy Cisco VSG separately. To procure Cisco VSG, simply purchase the Cisco Nexus 1000V Advanced Edition license. Cisco VSG is now bundled with the Advanced Edition. Contact your Cisco representative to purchase Advanced Edition licenses.

### Technical Questions

**Q.** What are the steps for customer to install Cisco Nexus 1000V Essential Edition?

**A.** Follow these steps:

1. Download Cisco Nexus 1000V Release 2.1 when it is available.
2. Install the Cisco Nexus 1000V manually or using the enhanced installer application.

**Note:** By default, the switch will be functional in the Essential Edition.

3. Create port profiles on the VSM and start using the Cisco Nexus 1000V virtual switch. The customer does not need to procure or install any licenses to use the Cisco Nexus 1000V Essential Edition in perpetuity.

Contact your Cisco representative to purchase Cisco TAC support for the Cisco Nexus 1000V Essential Edition.

**Q.** What are the steps for a customer to install Cisco Nexus 1000V Advanced Edition?

**A.** Follow these steps:

1. Contact the Cisco account team to procure Cisco Nexus 1000V Advanced Edition licenses.
2. Download Cisco Nexus 1000V Release 2.1 when it is available.
3. Install the Cisco Nexus 1000V using the enhanced installer application.

**Note:** By default, the switch will be functional in the Essential Edition.

4. Register the license product authorization key (PAK) at <http://www.cisco.com/go/license> and download individual licenses.

5. Install the licenses.

6. Change to the Advanced Edition by entering following command:

```
config t
svs switch edition advanced
```

7. Create port profiles and start configuring the Cisco Nexus 1000V virtual switch.

Contact your Cisco representative to purchase Cisco TAC support for the Cisco Nexus 1000V Advanced Edition.

- Q.** How can a customer upgrade from the Cisco Nexus 1000V Essential Edition to the Advanced Edition?
- A.** There is no software upgrade required to enable the Cisco Nexus 1000V Advanced Edition. The following steps show the process for enabling the Advanced Edition:

1. Contact your Cisco account team to procure Cisco Nexus 1000V Advanced Edition licenses.
2. Verify that the customer is using Cisco Nexus 1000V Release 2.1.
3. Register the license PAK at <http://www.cisco.com/go/license> and download individual licenses.
4. Install the licenses.
5. Switch to the Advanced Edition by entering following command:

```
config t
svs switch edition advanced
```

The Advanced Edition features are enabled on the Cisco Nexus 1000V Switch.

The customer will need to either purchase or upgrade the customer's service contract to the Cisco Nexus 1000V Advanced Edition support contract. Contact your Cisco representative for more details.

- Q.** Can a customer revert back to the Cisco Nexus 1000V Essential Edition from the Advanced Edition?
- A.** Yes. Revert back to the Cisco Nexus 1000V Essential Edition by entering following command:

```
config t
svs switch edition essential
```

- Q.** What is the show command to display current switch edition?
- A.** To display the current enabled switch edition, use the following command:

```
show switch edition
```

**Note:** The **show license usage** command will continue to display the licenses installed on that particular VSM regardless of the switch edition.

- Q.** What version of VMware vSphere is needed for the Cisco Nexus 1000V Essential and Advanced Editions?
- A.** Both editions require the VMware vSphere Enterprise Plus edition. They are compatible with VMware vSphere Versions 4.0, 4.1, 5.0, and 5.1.
- Q.** Is there a demonstration (trial) period for the Cisco Nexus 1000V Advanced Edition?
- A.** The customer can use the Cisco Nexus 1000V Advanced Edition in demonstration mode for 60 days from the installation date. After 60 days, the customer must purchase Advanced Edition licenses to use Advanced Edition features. The customer does have the option to downgrade to the Cisco Nexus 1000V Essential Edition during or after the 60-day trial period.

## Cisco Nexus 1110 and 1010 Virtual Services Appliances and Cisco VSG

- Q.** My customer is using the Cisco Nexus 1000V Switch Essential Edition. Can the customer still use Cisco Nexus 1110 and 1010 Virtual Services Appliances?
- A.** Yes. The Cisco Nexus 1110 and 1010 can be used to host Cisco the Nexus 1000V VSM for both Cisco Nexus 1000V Essential and Advanced Editions. Contact your Cisco representative to purchase the Cisco Nexus 1110.

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Note that Cisco Nexus 1110 and 1010 can host multiple VSMS in any combination of Cisco Nexus 1000V Release 1.0, 1000V Essential Edition, and 1000V Advanced Edition. When Cisco Nexus 1000V for Microsoft Hyper-V and Linux KVM are released, their respective VSMS can be hosted on the same Cisco Nexus 1110 or 1010 appliance.

- Q.** Which Cisco Nexus 1000V edition is part of the Cisco Nexus 1110 bundles?
- A.** From now on, all Cisco Nexus 1110 bundles will include Cisco Nexus 1000V Advanced Edition licenses.
- Q.** Can the customer buy Cisco VSG separately as a standalone part number?
- A.** No. From now on, the customer will not be able to buy Cisco VSG separately. If a customer wants Cisco VSG, the customer will have to buy Cisco Nexus 1000V Advanced Edition licenses. Cisco VSG is now bundled with the Advanced Edition.

### For More Information

- Q.** Where can I get more information?
- A.** For more information about the Cisco Nexus 1000V Series, refer to the Cisco Nexus 1000V Series product page at <http://www.cisco.com/go/nexus1000v>.



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