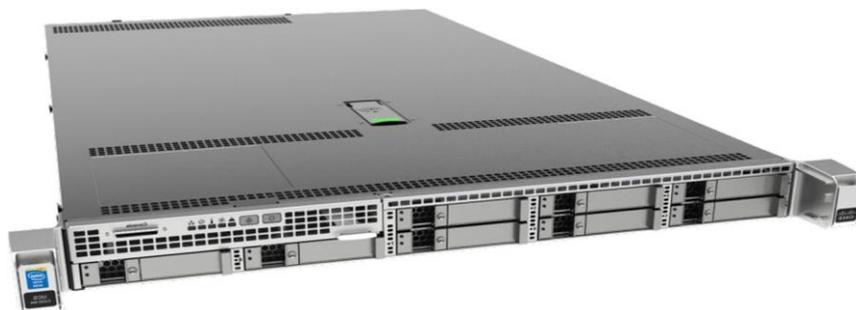


# Cisco NetFlow Generation Appliance 3340

## Product Overview

Today's high-performance data centers need a highly scalable, cost-effective architecture for cross-device flow generation. The Cisco® NGA 3340 generates, unifies, and exports flow data. Network operations, engineering, and security teams are thus empowered to boost network operations excellence. Enhance services delivery. Implement accurate billing. And harden network security. Figure 1 shows the appliance.

**Figure 1.** Cisco NetFlow Generation Appliance 3340



## Features and Benefits

Built on best-in-class Cisco Unified Computing System™ (Cisco UCS®) C220 M4 Rack Server hardware, the Cisco NetFlow Generation Appliance (NGA) enables flow visibility in high-throughput Gigabit Ethernet networks typical of most data centers and campus core deployments. Simplifying operational manageability, the appliances can be deployed at key observation points such as the server access layer, fabric path domains, and Internet exchange points. Visibility is dramatically amplified when NGA is connected to multiple network devices, allowing Layer 2 and Layer 3 flows to be analyzed hop by hop, essential for security, capacity planning, and troubleshooting.

Designed for high performance and maximum deployment flexibility, the appliance gathers network data from platforms such as the Cisco Nexus® 9000, Nexus 7000, Nexus 6000, Nexus 5000, and Nexus 3000 Switches, Cisco Catalyst® 6500 Series Switches using Switched Port Analyzer (SPAN), and network taps. It implements a large active flow cache (80 million) and can be configured to export NetFlow records (Version 5 [v5], Version 9 [v9], and IPFIX) to multiple collectors concurrently to provide a single source of flow visibility for business-critical management applications such as security, billing, capacity planning, and more. Cisco NGA can export NetFlow records in weighted round-robin fashion to achieve load balancing or flow replication across collectors. It also offers up to 10 filters per destination, permitting customization of the exports to address specific management needs (Figure 2).

**Figure 2.** Cisco NGA Deployment Scenario

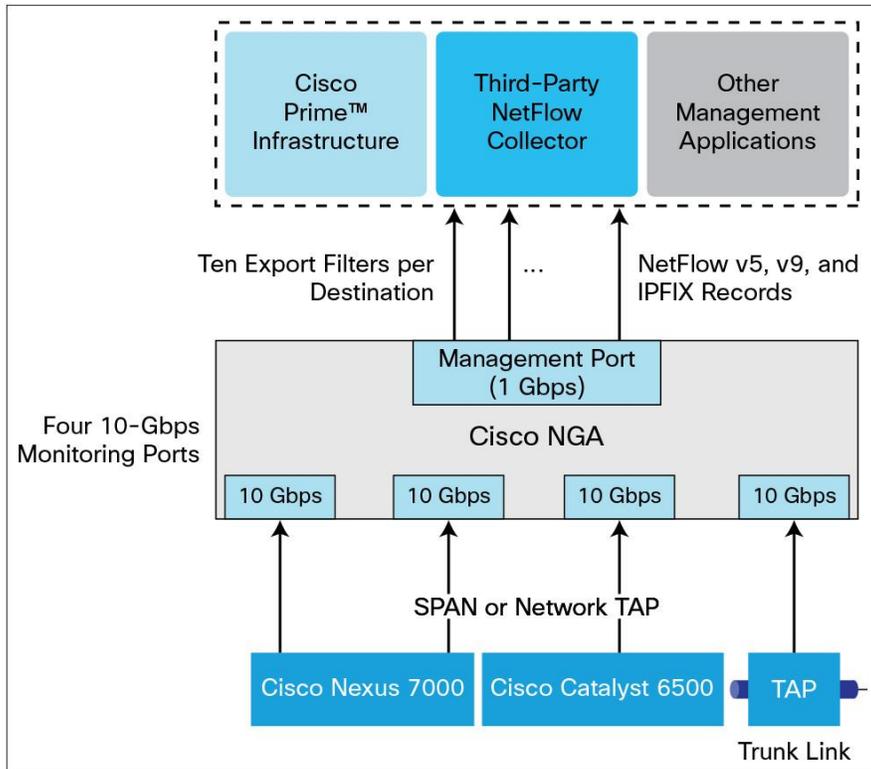


Table 1 lists the key features and benefits of Cisco NGA.

**Table 1.** Features and Benefits

Feature	Benefit
<b>Purpose-built appliance</b>	<ul style="list-style-type: none"> <li>Meet the rigorous performance demands of high-speed data centers.</li> <li>Achieve 100-percent accuracy with full visibility into traffic flows.</li> </ul>
<b>NetFlow v5, v9, and IPFIX export formats</b>	<ul style="list-style-type: none"> <li>Preserve investments in your existing NetFlow collection infrastructure.</li> </ul>
<b>SPAN and network tap support</b>	<ul style="list-style-type: none"> <li>Integrate transparently with flexible setup and configuration options, and without affecting the existing infrastructure.</li> <li>Focus on the specific traffic of interest using the rich SPAN configuration option.</li> <li>Connect to multiple devices to unify flow visibility and allow hop-by-hop analysis.</li> <li>Streamline flow collection with a single source of flow visibility for multiple management applications such as security, billing, capacity planning, network monitoring, and more.</li> <li>Customize the exports to address specific management needs; for example, a security application would require 100-percent flow visibility, whereas a billing application would be interested in specific application traffic terminating on select endpoints.</li> <li>This effective deployment design maximizes collection scalability.</li> </ul>
<b>Advanced filters for custom exports</b>	
<b>Load balancing and flow replication across multiple collectors (up to six)</b>	
<b>Layer 2 and Layer 3 NetFlow support</b>	<ul style="list-style-type: none"> <li>Create a comprehensive view of traffic flows in the data center.</li> </ul>
<b>Up to 80 million active flow cache entries</b>	<ul style="list-style-type: none"> <li>Mitigate the risk of compromising accuracy when the cache becomes full.</li> <li>Scale to a variety of traffic profiles with a mix of short- and long-lived flows.</li> </ul>
<b>Interface support with managed device</b>	<ul style="list-style-type: none"> <li>Extract interface information, namely ifName, ifDescr, ifAlias, ifType, ifMtu, ifSpeed, and ifHighSpeed, and make it available for the NetFlow collectors.</li> </ul>
<b>TCP flag export</b>	<ul style="list-style-type: none"> <li>Enhance security auditing and detection of security threats with inclusion of TCP flags in the exported flow records. The included TCP flags are those observed since the last export (based on timeout interval) for the same flow.</li> </ul>

Feature	Benefit
<b>TCP session timeout based on FIN packet</b>	<ul style="list-style-type: none"> <li>Learn about the closing of the TCP session instantly with TCP flow expiry from the cache based on FIN packet detection.</li> </ul>
<b>Application awareness</b>	<ul style="list-style-type: none"> <li>Recognize application flows on the basis of port, port ranges, and built-in heuristics.</li> </ul>
<b>Embedded GUI and command-line interface (CLI) for configuration</b>	<ul style="list-style-type: none"> <li>Configure the product quickly with an easy-to-use GUI.</li> </ul>
<b>Trusted Platform Module (TPM)</b>	<ul style="list-style-type: none"> <li>Securely store artifacts used to authenticate the platform. These artifacts can include passwords, certificates, or encryption keys.</li> <li>Store platform measurements that help ensure that the platform remains trustworthy, helping ensure authentication and authorization.</li> </ul>

## Management

Cisco Integrated Management Controller (IMC) is a built-in management service available with the Cisco NGA 3340. It innovatively differentiates the solution by providing simplified management using a web-based GUI to access, configure, administer, and monitor the NGA. Some of the IMC functions include:

- Power on, power off, power cycle, reset, and shut down the NGA.
- Toggle the locator LED to locate the NGA with a blinking blue LED in the lab.
- Remotely manage the NGA using the keyboard, video, and mouse (KVM) console. The console is an interface accessible from IMC and emulates a direct KVM connection to the NGA. The KVM console allows you to connect to the NGA from a remote location. It also provides the Virtual Media feature that is used for recovery and ISO install.

## Platform Support and Compatibility

You can deploy Cisco NGA 3340 with any Cisco network device that you can configure as a SPAN data source. The “managed device” feature is supported with platforms indicated in Table 2.

**Table 2.** Platform Support for the Managed Device Feature

Platform	Cisco Nexus OS Version	Supported with Cisco NGA Software Version
		1.1(1)
<b>Cisco Nexus 9000 Series</b>	7.0(3)I1(2), and later	√
<b>Cisco Nexus 7000 Series</b>	5.2(1), 5.2(4), 6.0(2), 6.1(1), and later	√
<b>Cisco Nexus 6000 Series</b>	6.0(2)N1(2) and later	√
<b>Cisco Nexus 5000 Series</b>	5.1(3)N1(1), 5.1(3)N2(1), 5.2(1)N1(1b), and later	√
<b>Cisco Nexus 3000 Series</b>	5.0(3)U1(2), 5.0(3)U3(1), 5.0(3)U4(1), and later	√

\* Cisco NGA 3340 supports the software starting with Version 1.1(1).

## Product Specifications

Table 3 lists the specifications of Cisco NGA 3340.

**Table 3.** Product Specifications

NGA 3340 Feature	Description
<b>Chassis</b>	1 rack unit (1RU)
<b>Processor</b>	2 Intel Xeon E5-2660v3 processors
<b>Memory</b>	64-GB (four 16-GB) industry-standard double-data-rate (DDR4) main memory
<b>Hard-disk drive</b>	Two 1-TB SAS drives
<b>Monitoring ports</b>	Four 10 Gigabit Ethernet Small Form-Factor Pluggable plus (SFP+) ports
<b>Management port</b>	10/100/1000 RJ-45
<b>Monitoring performance</b>	Traffic monitoring throughput (sustained) <sup>*</sup> : 32+ Gbps; characterized based on typical traffic conditions simulated on the test bed
<b>Power supply</b>	Redundant 770W
<b>Front-panel connector</b>	One KVM console connector (supplies 2 USB, 1 VGA, and 1 serial connector)
<b>Front-panel locator LED</b>	Indicator to help direct administrators to Cisco NGA in large data center environments
<b>Physical dimensions</b>	1RU, H x W x D: 1.7 x 16.9 x 29.8 in. (4.32 x 43 x 75.6 cm); depth is without bezel or mounting hardware
<b>Temperature: Operating</b>	41 to 95°F (5 to 35°C) (operating, sea level, no fan fail, no CPU throttling, turbo mode)
<b>Temperature: Non operating</b>	-40 to 149°F (-40 to 65°C)
<b>Humidity: Operating</b>	10 to 90 percent noncondensing
<b>Humidity: Non operating</b>	5 to 93 percent noncondensing
<b>Altitude: Operating</b>	0 to 10,000 ft (0 to 3000m); maximum ambient temperature decreases by 1°C per 300m
<b>Altitude: Non operating</b>	0 to 40,000 ft (12,000m)
<b>Supported topologies and data sources</b>	<ul style="list-style-type: none"> <li>• Traffic monitoring: SPAN, Remote SPAN (RSPAN), VLAN ACL (VACL), and network tap</li> <li>• NetFlow export: v5, v9, and IPFIX</li> </ul>
<b>Supported interfaces</b>	<ul style="list-style-type: none"> <li>• HTTP/Secure HTTP (HTTPS) with embedded web-based interface for configuration</li> <li>• Telnet/Secure Shell (SSH) Protocol with CLI</li> <li>• Simple Network Management Protocol Version 1 (SNMPv1) and v2c</li> </ul>
<b>NetFlow Generation Software Version 1.1(1)</b>	<ul style="list-style-type: none"> <li>• Embedded in Cisco NGA 3340</li> <li>• Web-based: Requires Microsoft Internet Explorer 9 or Firefox ESR 10 or later</li> <li>• Supports Secure Sockets Layer (SSL) security with up to 256-bit encryption</li> </ul>
<b>MIBs</b>	<p>The Cisco NGA is standards-compliant and supports the following major MIB groups:</p> <ul style="list-style-type: none"> <li>• MIB-II (RFC 1213)-All groups except Exterior Gateway Protocol (EGP) and transmission</li> <li>• EntityMIB (RFC 2737)</li> </ul>
<b>Application ID</b>	<p>Cisco NGA identifies hundreds of unique protocols and applications. Protocols supported include (this list is not all-inclusive):</p> <ul style="list-style-type: none"> <li>• TCP and User Datagram Protocol (UDP) over IP including IPv6</li> <li>• HTTP and HTTPS</li> <li>• Voice over IP (VoIP) including Skinny Client Control Protocol (SCCP), Real-Time Protocol/Real-Time Control Protocol (RTP/RTCP), Media Gateway Control Protocol (MGCP), and Session Initiation Protocol (SIP)</li> <li>• SigTran protocols</li> <li>• Mobile IP protocols including GPRS Tunneling Protocol (GTP)</li> <li>• Storage area network protocols</li> <li>• Database protocols</li> <li>• Peer-to-peer protocols</li> <li>• Switch and router protocols</li> <li>• Cisco proprietary protocols</li> <li>• Unknown protocols by TCP/UDP ports, Remote Procedure Call (RPC) program numbers, and so on</li> </ul>

## Regulatory Standards

Table 4 lists regulatory standards-compliance information.

**Table 4.** Regulatory Standards Compliance: Safety and EMC

Specification	Description
<b>Safety</b>	<ul style="list-style-type: none"><li>• UL 60950-1 No. 21CFR1040 Second Edition</li><li>• CAN/CSA-C22.2 No. 60950-1 Second Edition</li><li>• IEC 60950-1 Second Edition</li><li>• EN 60950-1 Second Edition</li><li>• IEC 60950-1 Second Edition</li><li>• AS/NZS 60950-1</li><li>• GB4943 2001</li></ul>
<b>EMC: Emissions</b>	<ul style="list-style-type: none"><li>• 47CFR Part 15 (CFR 47) Class A</li><li>• AS/NZS CISPR22 Class A</li><li>• CISPR2 2 Class A</li><li>• EN55022 Class A</li><li>• ICES003 Class A</li><li>• VCCI Class A</li><li>• EN61000-3-2</li><li>• EN61000-3-3</li><li>• KN22 Class A</li><li>• CNS13438 Class A</li></ul>
<b>EMC: Immunity</b>	<ul style="list-style-type: none"><li>• EN55024</li><li>• CISPR24</li><li>• EN300386</li><li>• KN24</li></ul>

## Warranty Information

You can find warranty information on Cisco.com at the [Product Warranties](#) page.

## Ordering Information

To place an order, visit the [Cisco Ordering Homepage](#). To download software, visit the [Cisco Software Center](#). Refer to Table 5 for NGA ordering information.

**Table 5.** Cisco NGA Ordering Information

Product Name	Part Number
<b>Cisco NetFlow Generation Appliance (NGA) 3340</b>	NGA3340-K9
<b>NetFlow Generation Software Version 1.1(1)</b>	NGA-SW1-NGA1.1N-K9

For ordering convenience, the SFP part numbers (Table 6) are available on the Cisco Ordering Homepage when you order the Cisco NGA. Please refer to [Cisco 10GBASE SFP+ Modules Data Sheet](#) for ordering information related to these Cisco SFP+ modules and related cables.

**Table 6.** SFP Ordering Information

Product Name	Part Number
<b>10G base Short-Range SFP Module (Spare)</b>	SFP-10G-SR=
<b>10G base Long-Range SFP Module (Spare)</b>	SFP-10G-LR=
<b>10G base Long-Range Multimode SFP Module (Spare)</b>	SFP-10G-LRM=

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**Table 7.** Cisco Technical Services

Technical Services
Cisco SMARTnet <sup>®</sup> support provides: <ul style="list-style-type: none"><li>• Global 24-hour access to the Cisco Technical Assistance Center (TAC)</li><li>• Access to online knowledge base, communities, and tools</li><li>• Hardware replacement options, including 2-hour, 4-hour, and next business day (NBD)<sup>*</sup></li><li>• Ongoing operating system software updates<sup>**</sup></li><li>• Smart, proactive diagnostics and real-time alerts on devices enabled with Smart Call Home</li></ul>

<sup>\*</sup> Advance hardware replacement is available in various service-level combinations. For example, 8 x 5 x NBD indicates that shipment will be initiated during the standard 8-hour business day, 5 days a week (the generally accepted business days within the relevant region), with next - business-day delivery. Where NBD is not available, same-day shipping is provided. Restrictions apply; please review the appropriate service descriptions for details.

<sup>\*\*</sup> Cisco operating system updates include maintenance releases, minor updates, and major updates within the licensed feature set.

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### For More Information

For more information about the Cisco NetFlow Generation Appliance, visit <http://www.cisco.com/go/nga>, contact your local Cisco account representative, or send an email message to [nga-info@cisco.com](mailto:nga-info@cisco.com).



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