

Appliance Specifications

ForeScout CounterACT® can be deployed on virtual or physical appliances. For virtualized environments, VMware® ESXi, Microsoft® Hyper-V, and KVM hypervisors are supported. Large networks that require multiple physical or virtual appliances can be centrally managed by the Enterprise Manager.

VIRTUAL APPLIANCES

(ForeScout Flexx Licensing)

Virtual appliances operating in the Flexx Licensing mode can be deployed with Counter 8.0 in four sizes: X-Small, Small, Medium, and Large.

Virtual appliances are supported on the following hypervisors:

- VMware ESXi v5.1, v5.5, v6.0, v6.5
- Microsoft Hyper-V Server 2012, 2012 R2, 2016
- KVM on Red Hat Enterprise Linux (RHEL)/CentOS 7.0

Hardware Requirements

- Maximum disk latency of 5ms
- Recommended I/O Read 200MB/s or higher, I/O Write 200MB/s or higher
- No CPU over commitment on virtual hosts
- The CPUs and memory must be dedicated/reserved to the virtual appliance
- Additional disk space may be required to store local debug logs; virtual drives up to 2TB are supported

Note: In virtual environments, factors such as the CPU type, hypervisor version, memory and network I/O options may impact virtual appliance performance.

Performance Specifications	X-Small	Small	Medium	Large
Devices ^{2,3}	Up to 100	Up to 1,000	Up to 5,000	Up to 10,000
Switch/WLAN devices ³	Up to 4	Up to 20	Up to 100	Up to 200
802.1x Authentications per second ⁶	Up to 5	Up to 10	Up to 42 (+2 vCPUs & 4GB Memory) ⁴	Up to 86 (+4 vCPUs & 4GB Memory) ⁴
Traffic Monitoring ⁵ + Captive portal HTTP logins/min	Up to 100 [Mb/s] 25 [KPPS] 5 HTTP logins/min	Up to 1 [Gb/s] 250 [KPPS] 10 HTTP logins/min (+2 vCPUs & 4GB Memory) ⁴	Up to 3 [Gb/s] 750 [KPPS] 88 HTTP logins/min (+8 vCPUs & 12GB Memory) ⁴	Up to 3 [Gb/s] 750 [KPPS] 88 HTTP logins/min (+8 vCPUs & 12GB Memory) ⁴
Virtual Machine Specifications ¹	X-Small	Small	Medium	Large
vCPUs	4 vCPUs	6 vCPUs	10 vCPUs	14 vCPUs
Memory	8 GB	14 GB	24 GB	32 GB

Minimum Hard Drive Storage	200 GB	200 GB	200 GB	200 GB
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Dedicated Virtual Appliance for managing switch devices

When a CounterACT virtual appliance does not manage any endpoints, but instead, only manages switch devices, the maximum number of switch devices that the appliance can manage is as follows:

Performance Specifications	Small	Medium	Large
Maximum Number of Managed Switches ^{3,7}	Up to 120	Up to 280	Up to 400
Virtual Machine Specifications	Small	Medium	Large
vCPUs	6 vCPUs	10 vCPUs	14 vCPUs
Memory	14 GB	24 GB	32 GB
Minimum Hard Drive Storage	200 GB	200 GB	200 GB

Virtual Enterprise Manager Deployment

Enterprise Manager Performance Specifications	Small	Medium	Large
Managed Appliances	Up to 10	Up to 100	Up to 200
Virtual Machine Specifications	Small	Medium	Large
vCPUs	4 vCPUs	8 vCPUs	10 vCPUs
Memory	12 GB	16 GB	24 GB
Minimum Hard Drive Storage	200 GB	200 GB	200 GB

The maximum number of CounterACT appliances that can be managed will vary based on several factors, including but not limited to, network environment, product configuration and use cases.

----- 5100 SERIES PHYSICAL APPLIANCES ----- (ForeScout Flexx Licensing)

ForeScout 5100 Series appliances operate in Flexx Licensing mode and are offered in several different sizes to meet your specific needs.

Performance Specifications	5110	5120	5140	5160
Devices ^{2,3}	Up to 100	Up to 1,000	Up to 5,000	Up to 20,000
Switch/WLAN devices ³	Up to 4	Up to 20	Up to 100	Up to 400
802.1x Authentications per second ⁶	Up to 5	Up to 11	Up to 42	Up to 166
Traffic Monitoring + Captive Portal (HTTP logins/min)	Up to 100 [Mb/s] 25 [KPPS] Up to 5 HTTP logins/min	Up to 1 [Gb/s] 250 [KPPS] Up to 10 HTTP logins/min	Up to 5 [Gb/s] 1250 [KPPS] Up to 50 HTTP logins/min	Up to 10 [Gb/s] 2500 [KPPS] Up to 200 HTTP logins/min
Hardware Specifications	5110	5120	5140	5160
Form Factor	Shelf / Desktop	1RU 19" Rack Mount	1RU 19" Rack Mount	1RU 19" Rack Mount
Fixed Network Interfaces	4x10/100/1000 Mbps Copper	4x10/100/1000 Mbps Copper	4x10/100/1000 Mbps Copper	4x10/100/1000 Mbps Copper

SFP Network Interfaces	N/A	4 (2 x 1G/10G dual rate SR Fiber SFPs included in base configuration)	4 (2 x 1G/10G dual rate SR Fiber SFPs included in base configuration)	4 (2 x 1G/10G dual rate SR Fiber SFPs included in base configuration)
I/O Support	1 serial port (RJ45)	1 serial port (DB9)	1 serial port (DB9)	1 serial port (DB9)
USB Ports	2, USB 2.0-compliant	1 4-pin, USB 2.0-compliant and 1 5-pin micro-USB 2.0 management port (front), 2 9-pin USB 3.0-compliant (Rear)	1 4-pin, USB 2.0-compliant and 1 5-pin micro-USB 2.0 management port (front), 2 9-pin USB 3.0-compliant (Rear)	1 4-pin, USB 2.0-compliant and 1 5-pin micro-USB 2.0 management port (front), 2 9-pin USB 3.0-compliant (Rear)
Video (VGA)	1 (DB15)	1 (DB15)	1 (DB15)	1 (DB15)
DVD-ROM	N/A	1	1	1
Hard Drives	1 HDD	3 HDD (RAID-1+HS) 600GB	3 HDD (RAID-1+HS) 600GB	3 HDD (RAID-1+HS) 1.2TB
Environmental Specifications	5110	5120	5140	5160
Power Supply	1 @ up to 60W 100-240VAC (External)	2 750W AC redundant power supply units, 100-240VAC, auto-ranging	2 750W AC redundant power supply units, 100-240VAC, auto-ranging	2 750W AC redundant power supply units, 100-240VAC, auto-ranging
Power Consumption (max)	45.3W	744W	744W	744W
Operating Temperature	5°C to 40°C (41°F to 104°F)	10°C to 35°C (50°F to 95°F)	10°C to 35°C (50°F to 95°F)	10°C to 35°C (50°F to 95°F)
Storage Temperature	0°C to 70°C (32°F to 158°F)	-40°C to 65°C (-40°F to 149°F)	-40°C to 65°C (-40°F to 149°F)	-40°C to 65°C (-40°F to 149°F)
Heat Dissipation (max)	N/A	2891 BTU/hr	2891 BTU/hr	2891 BTU/hr
Humidity	20% – 90%	Operating (10% to 80%)	Operating (10% to 80%)	Operating (10% to 80%)
Appliance Dimensions (Length,Width,Height)	11cm x 21.06cm x 4.45cm (7.13" x 8.29" x 1.75")	4.28cm x 48.18cm x 70.51cm (1.68" x 18.97" x 27.76")	4.28cm x 48.18cm x 70.51cm (1.68" x 18.97" x 27.76")	4.28cm x 48.18cm x 70.51cm (1.68" x 18.97" x 27.76")
Shipment Package (Length,Width,Height) +Weight	38.1cm x 30.48cm x 16.51cm (15" x 12" x 6.5") Weight: 5.9 pounds	84.18cm x 62.87cm x 27.94cm (33.14" X 24.75" X 11.0") Weight: 61 pounds	84.18cm x 62.87cm x 27.94cm (33.14" X 24.75" X 11.0") Weight: 62.4 pounds	84.18cm x 62.87cm x 27.94cm (33.14" X 24.75" X 11.0") Weight: 62.4 pounds

Dedicated Appliance for managing switch devices

When a CounterACT Appliance does not manage any endpoints, but instead only manages switch devices, the maximum number of switch devices that the appliance can manage is as follows:

Performance Specifications	5120	5140	5160
Maximum Number of Managed Switches ^{3,7}	Up to 700	Up to 1,900	Up to 1,900

Physical Enterprise Manager Deployment

Enterprise Manager Performance Specifications	5110	5120	5140	5160
Managed Appliances	N/A	Up to 10	Up to 100	Up to 200

The maximum number of CounterACT appliances that can be managed will vary based on several factors, including but not limited to, network environment, product configuration and use cases.

¹ Extended Modules are not included as part of the VM specification. In order to run extended modules on virtual appliances, it is required to allocate more hardware resources to the VM depending on the module required and usage.

² Device count, as determined by ForeScout appliance, is the number of devices known to the appliance by either their MAC address and/or their IP address. Devices may be detected by the appliance when on-site or off-site, or they may be made known to the appliance via third-party integrations. A device may be counted more than once if it uses multiple IP addresses and/or multiple MAC addresses. Devices include user endpoints (such as laptops, tablets and smartphones), network infrastructure devices (such as switches, routers and access points), non-user devices (such as printers, IP phones, security equipment, medical devices, manufacturing equipment) and virtual machines. Device information is retained in the appliance from initial discovery until such time the information is purged, based on aging preferences set in the product.

³ The maximum number of devices manageable will vary based on several factors, including but not limited to, network environment, product configuration and use cases. It is recommended to manage the switch devices and the connected endpoints with the same appliance to achieve optimal performance. The recommended maximum number of switches that an appliance can manage assumes that 50 endpoints connect to a switch on average. In cases where the average switch device has more endpoints connected to it, such as stacked switch devices, the overall number of managed switch devices will be lower (e.g., if the average switch device has 100 endpoints connected to it, each switch device will be accounted as two switches).

⁴ The hardware resources specified in brackets for different functions in the specification table refer to the resources that need to be added to the basic VM specification in case this functionality is required.

⁵ The maximum bandwidth per E1000/ Hyper-V Network Adapter vNIC is 750Mb/s using 1G interface, and up to four (4) E1000/Hyper-V Network Adapter vNICs are supported on a single virtual appliance to obtain 3Gb/s aggregate monitoring bandwidth. Support for VMXNET3 interfaces is available for the VCT-2000/4000/10000: The maximum bandwidth per VMXNET3 vNIC is 1Gb/s using 10G interface, and up to two (2) VMXNET3 vNICs are supported on a single virtual appliance to obtain 2Gb/s aggregate monitoring bandwidth. Support for Hyper-V Network Adapter is available for the VCT-2000/4000/10000: The maximum bandwidth per interface is 1.2Gb/s using a 10G interface and up to three (3) Hyper-V Network Adapters are supported on a single virtual appliance to obtain 3.6Gb/s aggregate monitoring bandwidth. HTTP login is done by injecting HTTP redirect into an endpoint's browser session and authenticating it using Active Directory.

⁶ Performance shown in the table is for 802.1x EAP-TLS authentications without Fast Reconnect.

⁷ The appliance should be manually configured to a fixed number of subprocesses to work as a dedicated switch appliance. The number of subprocesses should be set to 10 for small virtual appliance, to 15 for medium virtual appliance, to 20 for the large virtual appliance and for the 5120 physical appliance and to 50 for the 5140/5160 . Instructions for configuring the number of subprocesses can be found in the Switch Plugin manual, under section "Determining the Number of Sub-Processes to Run".