



# Vectra Networks Distributed Architecture

Vectra® Networks delivers a flexible, scalable architecture to ensure full visibility into cyber attack behaviors across the enterprise network. Regardless of size or geographic spread, this distributed architecture provides unified threat detection coverage of all network traffic in campuses, distributed offices and virtualized data centers.

## Scalable, distributed architecture

The scalable, distributed Vectra architecture enables customers to deploy a combination of physical S-series sensors, virtual sensors (vSensors) and X-series appliances across multiple locations for centralized analysis, detection and correlation of threats.

## X-series appliances

Vectra X-series software can be ordered preloaded on a full-depth rack-mountable appliance that scales to accommodate the largest networks. The X-series is deployable in three modes – Brain, Sensor or Mixed.

In Brain mode, the X-series only receives metadata from one or more sensors. In Sensor mode, the X-series ingests traffic, extracts metadata and forwards it to another Brain or Mixed-mode X-series for processing. In Mixed mode, the X-series performs both Brain and Sensor functions.

## Physical S-series sensors

Vectra S-series sensors are easily deployed at remote sites or with access switches on internal network segments to extend the reach of your Vectra deployment. Small, dedicated devices, S-series sensors passively monitor network traffic, extract critical metadata and forward it to the X-series appliance for analysis and attack detection.

S-series sensors can be deployed in-line as a bump-in-the-wire that fails-open or on a SPAN or network TAP. The small size and simple deployment model of the S-series sensors ensure that there is comprehensive coverage across the entire network, especially at remote sites such as small offices, clinics and retail locations.

## Virtual sensors

Vectra vSensors run in VMware ESXi 5.0 or later, making it easy to extend threat detection coverage across the physical network and into virtualized data centers. The vSensors can connect to any VMware vSwitch in the data center to provide visibility into all traffic and detect threats that pass between workloads in the virtual environment. Vectra also integrates with VMware vCenter for an authoritative, always up-to-date view of the virtual environment.

# X-Series Platforms

## S-Series Sensor

### SOFTWARE/NETWORKING FEATURES

<b>FIPS 140-2 Validated</b>	<b>FIPS-Approved Algorithms:</b> <ul style="list-style-type: none"> <li>• AES (Cert. #2273)</li> <li>• HMAC (Cert. #1391)</li> <li>• DSA (Cert. #709); ECDSA (Cert. #368)</li> <li>• RSA (Cert. #1166)</li> <li>• SHS (Cert. #1954)</li> <li>• Triple-DES (Cert. #1420)</li> <li>• DRBG (Cert. #281)</li> <li>• CVL (Cert. #44)</li> <li>• RNG (Cert #1132)</li> </ul>	<b>Other Algorithms:</b> <ul style="list-style-type: none"> <li>• RSA (key wrapping)</li> <li>• Key establishment methodology provides between 112 and 256 bits of encryption strength</li> <li>• Non-compliant less than 112 bits of encryption strength</li> <li>• EC Diffie-Hellman key agreement</li> <li>• Key establishment methodology provides between 112 and 256 bits of encryption strength</li> <li>• Non-compliant less than 112 bits of encryption strength</li> </ul>
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### HARDWARE SPECIFICATIONS

	S2 Sensor	X24 Platform	X80 Platform
<b>Capture Ports</b>	<ul style="list-style-type: none"> <li>• Four 10/100/1000 BASE-T</li> <li>• A total of two ports can be used in passive mode</li> </ul>	<ul style="list-style-type: none"> <li>• Four 10/100/1000 BASE-T</li> <li>• Two 10 Gigabit Ethernet SFP+</li> </ul>	<ul style="list-style-type: none"> <li>• Four 10 Gigabit Ethernet SFP+</li> </ul>
<b>Management Ports</b>	<ul style="list-style-type: none"> <li>• One 10/100/1000 BASE-T out-of-band management port</li> <li>• One 10/100/1000 BASE-T out-of-band support port</li> <li>• One RJ-45 serial console port</li> </ul>	<ul style="list-style-type: none"> <li>• Two 10/100/1000 BASE-T ports</li> <li>• One VGA video port</li> <li>• Two USB 2.0 ports</li> <li>• One DB-9 serial port</li> </ul>	<ul style="list-style-type: none"> <li>• One 1000 BASE-T port</li> <li>• One 10 Gigabit Ethernet SFP+</li> <li>• One VGA video port</li> <li>• Two USB 2.0 ports</li> <li>• One DB-9 serial port</li> </ul>
<b>Storage Capacity</b>	<ul style="list-style-type: none"> <li>• 1 TB hard disk drive</li> </ul>	<b>Raw Storage:</b> <ul style="list-style-type: none"> <li>• 4 TB hard disk drive</li> </ul> <b>Configured Storage:</b> <ul style="list-style-type: none"> <li>• Four redundant 1 TB hard disk drives for operating system and striping for data</li> </ul>	<b>Raw Storage:</b> <ul style="list-style-type: none"> <li>• 12 TB hard disk drive</li> </ul> <b>Configured Storage:</b> <ul style="list-style-type: none"> <li>• Two redundant 1 TB SSD drives for operating system</li> <li>• Eight 1 TB hard disk drives as disk striping for data</li> </ul>
<b>Input Voltage</b>	<ul style="list-style-type: none"> <li>• 100-240 VAC, 50-60 Hz</li> </ul>	<ul style="list-style-type: none"> <li>• Auto-sensing 100-240 VAC, 50-60 Hz</li> </ul>	<ul style="list-style-type: none"> <li>• Dual modular power supplies; auto-sensing 100-240 VAC, 50-60 Hz</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>• 60 watts</li> </ul>	<ul style="list-style-type: none"> <li>• 1800 watts</li> </ul>	<ul style="list-style-type: none"> <li>• 1800 watts</li> </ul>
<b>Current</b>	<ul style="list-style-type: none"> <li>• 5 A</li> </ul>	<ul style="list-style-type: none"> <li>• 7.5 A-18 A</li> </ul>	<ul style="list-style-type: none"> <li>• 7.5 A-18 A</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• 1.74 in. (44.19 mm) H x 9.09 in. (230.88 mm) W x 7.74 in. (196.59 mm) D</li> </ul>	<ul style="list-style-type: none"> <li>• 1.7 in. (43 mm) H x 17.2 in. (437 mm) W x 27.82 in. (707 mm) D</li> </ul>	<ul style="list-style-type: none"> <li>• 1.7 in. (43 mm) H x 17.2 in. (437 mm) W x 27.82 in. (707 mm) D</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• 5.18 lbs (2.3 kg)</li> </ul>	<ul style="list-style-type: none"> <li>• 26 lbs (11.8 kg)</li> </ul>	<ul style="list-style-type: none"> <li>• 26 lbs (11.8 kg)</li> </ul>
<b>Environment</b>	<b>Operating Temperature:</b> <ul style="list-style-type: none"> <li>• 32° to 104° F (0° to 40° C)</li> </ul> <b>Non-Operating Temperature:</b> <ul style="list-style-type: none"> <li>• -4° to 158° F (-20° to 70° C)</li> </ul>	<b>Operating Temperature:</b> <ul style="list-style-type: none"> <li>• 50° to 95° F (10° to 35° C)</li> </ul> <b>Non-Operating Temperature:</b> <ul style="list-style-type: none"> <li>• -40° to 158° F (-40° to 70° C)</li> </ul>	<b>Operating Temperature:</b> <ul style="list-style-type: none"> <li>• 50° to 95° F (10° to 35° C)</li> </ul> <b>Non-Operating Temperature:</b> <ul style="list-style-type: none"> <li>• -40° to 158° F (-40° to 70° C)</li> </ul>

### VIRTUAL SENSORS

<b>Throughput</b>	<ul style="list-style-type: none"> <li>• 400 Mbps</li> <li>• 1 Gbps</li> <li>• 2 Gbps</li> </ul>	<ul style="list-style-type: none"> <li>• 2 virtual CPU cores</li> <li>• 4 virtual CPU cores</li> <li>• 8 virtual CPU cores</li> </ul>	<ul style="list-style-type: none"> <li>• 8 GB RAM</li> <li>• 8 GB RAM</li> <li>• 16 GB RAM</li> </ul>	<ul style="list-style-type: none"> <li>• 150 GB disk space</li> <li>• 150 GB disk space</li> <li>• 150 GB disk space</li> </ul>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>• VMware ESXi 5.0 or later</li> <li>• Intel CPUs supporting SSE3 and SSE4</li> <li>• Two network interfaces</li> </ul>			



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