Arbor Sightline


The dual forces of rapid growth in network data and costs and the loss of revenues to over-the-top (OTT) services are squeezing traditional Service Providers, while Enterprises with large networks are evolving into operations that resemble Service Providers. For all network operators, solving key business problems starts with proper visibility. Built for owners of small to large and complex networks and proven to scale cost-effectively across your entire global network, Arbor Sightline analyzes various forms of network telemetry from across the network to transform raw data into operational excellence and business intelligence. This enables you to act on these insights to solve your business problems from network planning and engineering to service availability and enablement.

Visibility and Analytics That Evolve With Your Business

As a network operator, you demand a solution that evolves with your business needs. Arbor Sightline has been evolving with operators over the last decade and continues to be the de facto platform for understanding how traffic is flowing through your network. Arbor Sightline addresses the following key business objectives:

Gain Business Insights, Not Just Data
The network is the business. Operators must optimize resources and thus save money, but also mine traffic data to better understand the value of network connectivity. Arbor Sightline provides robust capabilities from network-wide capacity planning and managing overlay networks to comprehensive customer analytics. This pervasive network intelligence can also be leveraged to make routing and peering design decisions, lower transit costs and provide marketing insights.

Keep the Network and Services Running
Time is money. Operators must quickly detect and resolve problems before they impact the business. Arbor Sightline can generate customer-oriented traffic analytics, detect potential outages from network hotspots, BGP hijacks, DDoS attack traffic or even network misconfiguration. Then, Arbor Sightline contributes to root cause analysis to quickly identify and resolve issues, including DDoS attacks with its mitigation capabilities of BGP Flowspec, Blackhole, and Access Control Lists (ACL).

Launch Revenue Generating Services
Growth is crucial. Operators must support and drive top-line growth. With Arbor Sightline, operators can propose new service offerings such as DDoS Mitigation, Quality of Service (QoS) and MPLS/BGP VPNs. Current investments and infrastructure can be utilized to quickly launch new services or enhance existing ones. The built-in portal, multi-tenant customer scoping and RESTful API help operationalize these new revenue-generating services quickly and efficiently.

Sightline with Layer-7 Visibility
Leveraging NETSCOUT® Smart Data through InfiniStreamNG® integration, Sightline provides deep insight into the application layer, delivering over-the-top (OTT) traffic analysis across complex networks. Today, network optimization is not just about the total volume of network traffic, it is about delivering desired content most efficiently while minimizing peering and transit costs. Sightline allows network operators to understand where and how major content services are traversing the network in order to optimize both user experience and peering and transit relationships.

KEY BENEFITS

Optimize Network Resources
Use comprehensive traffic, customer and geographic reports for smarter traffic engineering. Reduce transit costs, improve utilization and intelligently plan for the growth of your network.

Serve the Business
Provide insights to the business leveraging built-in and ad hoc traffic and market reports. Uncover trends, including traffic intelligence and market breakdowns, to help the business grow and provide reporting to management.

Minimize Outage Time
Through proactive detection of network or service availability threats, quickly diagnose and prevent misconfigurations, flash crowds or malicious threats such as DDoS attacks from impacting availability.

Launch Services
Leverage the same Arbor Sightline platform used for network visibility and threat detection to easily provision, deliver and maintain services such as DDoS Mitigation, Quality of Service (QoS) and MPLS/BGP VPNs.

Global Analytics and Visibility
The AIF subscription for Arbor Sightline and Omnis® Insight combines your local traffic analytics and visibility to a global experience with ATLAS® Intelligence Feed.

Automate Processes
A RESTful API enables full integration with other operational systems so you can automate processes and drive more value from your network. The API can also access Omnis Insight’s big data lake.

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Sightline With Sentinel

Sightline with Sentinel employs Flowspec to provide Network Orchestration. While scanning Flowspec it will identify attack targets, detect attack vectors and analyze attack traffic patterns. Using this information it will match vectors to Flowspec rules, announce customized rules specific to the attack and then initiate other mitigation actions in parallel for example with TMS. Once the attack is defeated it will report details of dropped traffic during the attack, report on automated and manual Flowspecs and finally, produce per router and interface views of the attack.

Sightline With Sentinel also provides a unique, fully integrated inter-network signaling mechanism also allows networks to share attack data and coordinate defense against DDoS attacks, enabling services that span network boundaries and helping network operators to cooperate at an unprecedented level to collectively stop DDoS attacks nearer to their source.

Sightline With Sentinel uses Smart data to identify advanced cyber threats, such as infected hosts or IoT devices, throughout the network at Tbps scale. It can detect botnet hosts and other malware infestations, enabling the network operator to pro-actively clean up the network and prevent future botnet attacks from impacting network services. It also adds additional value to managed security services at extremely low cost, greatly expanding the opportunity to grow security service revenue.

Arbor Sightline Deployment Scaling

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGP Routes (Unique)</td>
<td>25,000,000</td>
</tr>
<tr>
<td>Flows Per Second (Non-Sampled)</td>
<td>48,000,000</td>
</tr>
<tr>
<td>Monitored Routers</td>
<td>5,000</td>
</tr>
<tr>
<td>Monitored Interfaces</td>
<td>200,000</td>
</tr>
<tr>
<td>Total Interfaces</td>
<td>550,000</td>
</tr>
<tr>
<td>Appliances/Virtual Machines</td>
<td>150</td>
</tr>
<tr>
<td>Arbor APS Appliances (Cloud Signaling)</td>
<td>200</td>
</tr>
<tr>
<td>Arbor TMS Appliances (Managed)</td>
<td>100</td>
</tr>
<tr>
<td>Data Handling Rules (Managed Objects)</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Arbor Sightline Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Capabilities (Per Instance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic, Routing, &amp; Analysis</td>
<td>• Collects flows from up to 32 core routers or 100 edge routers in an Arbor Sightline deployment</td>
</tr>
<tr>
<td>User Interface</td>
<td>• Dedicated user interface for Sightline deployment management and reporting</td>
</tr>
<tr>
<td></td>
<td>• Supports up to 100 concurrent users or 700 per deployment</td>
</tr>
<tr>
<td></td>
<td>• Supports up to 200 Arbor APS appliances to receive Cloud Signaling™ from and is used for managed services, supporting multi-tenant customer portals, portal API and more concurrent users</td>
</tr>
<tr>
<td>Data Storage</td>
<td>• Dedicated management platform for creating monitored and protected managed objects (customers, networks, resources)</td>
</tr>
<tr>
<td></td>
<td>• Each supports up to 1,000 Managed Objects (MOs)</td>
</tr>
</tbody>
</table>

ARBOR SIGHTLINE FLEX LICENSING OPTIONS

**Purchase**

Purchase perpetual Arbor Sightline Flex Licenses as and when needed, then only pay annual Maintenance & Support going forward. Ideal for high-growth and CAPEX-centric network operators.

**Site License**

Purchase a one-time perpetual Arbor Sightline Flex License covering the entire deployment (current or projected needs), then only pay annual Maintenance & Support going forward. Ideal for larger, high-growth and CAPEX-centric network operators.

**Subscription**

Pay an annual license subscription that includes Maintenance & Support. Great for OPEX-centric organizations adapting to rapidly changing market conditions and unpredictable growth needs.
Arbor Sightline Virtual Machine Requirements

<table>
<thead>
<tr>
<th></th>
<th>VMware</th>
<th>KVM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypervisor</td>
<td>VMware Sphere v5.5, 6.0 and 6.5</td>
<td>KVM QEMU v2.11</td>
</tr>
<tr>
<td>vCPUs</td>
<td>8 to 32</td>
<td>8 to 32</td>
</tr>
<tr>
<td>Network Interfaces</td>
<td>1 to 10</td>
<td>1 to 10</td>
</tr>
<tr>
<td>Memory</td>
<td>16, 24 or 32GB</td>
<td>16, 24 or 32GB</td>
</tr>
<tr>
<td>Storage</td>
<td>100GB min</td>
<td>100GB min</td>
</tr>
</tbody>
</table>

Note: Consult the product documentation for specific recommendations.

Arbor Sightline Appliances Specifications

<table>
<thead>
<tr>
<th></th>
<th>SP 7000</th>
<th>SP 7500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Interfaces</td>
<td>SP 7000:</td>
<td>2 x 1/10 G (copper) via onboard interfaces and 4 x 10 G (SFP+ for SR/LR only) via NIC</td>
</tr>
<tr>
<td>Embedded OS</td>
<td>ArbOS is Arbor’s proprietary, embedded operating system, based on Linux</td>
<td></td>
</tr>
<tr>
<td>Rack Unit</td>
<td>2 Rack Unit (2RU)</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>3.45 in (876 mm) Height 17.14 in (435.4 mm) Width 20 in (508 mm) Depth</td>
<td>2 x 1/10 G (copper) via onboard interfaces and 4 x 10 G (SFP+ for SR/LR only) via NIC</td>
</tr>
<tr>
<td>Weight</td>
<td>36.95 lbs (17.7 kg)</td>
<td>44 lbs (20 kg)</td>
</tr>
<tr>
<td>Mounts</td>
<td>Standard 19 inches and 23 inches rack mountable</td>
<td></td>
</tr>
<tr>
<td>Power Rating</td>
<td>Redundant, load sharing and auto-sensing 850W dual power supplies; AC: 100-240 VAC, 50/60 Hz, 12/6 Amp DC: -40 to -72 V, 28/14 Amp max</td>
<td>Redundant, load sharing and auto-sensing 850W dual power supplies; AC: 100-240 VAC, 50/60 Hz, 10/5 Amp DC: -40 to -72 V, 25/12.5 Amp</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>41 °F to 104 °F (5 °C to 44 °C)</td>
<td>41 °F to 131 °F (-5 °C to 55 °C)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>95%, non-condensing at 73 °F to 104 °F (23 °C to 40 °C)</td>
<td>95%, non-condensing at 23 °C (73 °F) to 40 °C (104 °F)</td>
</tr>
<tr>
<td>Regulatory Approvals</td>
<td>UL60950-1/CSA 60950-1; EN60950-1; IEC60950-1; CB Certificate &amp; Report including all international deviations; SONCAP; EAC; Mark; CE—Low Voltage Directive 2014/35/EU; KCC Mark, RoHS 2011/65/EU; ETSI EN 300 019; NEBS; ETSI EN 300 753; cULus mark; IC ICES-003 Class A; CE mark to EMC Directive, 2014/30/EU; EN55022, Class A; EN55024; EN61000-3-2; EN61000-3-3; CISPR 22, Class A; CISPR 24 Immunity; FCC 47 CFR Parts 15, Class A</td>
<td>UL/cUL/EN/IEC 62368-1; EN 55032; EN 55035; CISPR 32, 35; ETSI EN 300 386; cULus Mark; IC ICES-003 Class A; EN 61000-3-2; EN 61000-3-3; EMC Directive 2014/30/EU; Low Voltage Directive 2014/35/EU; UL 60950-1 2nd edition/CSA C22.2 No.60950-1-07 2nd Edition; FCC 47 CFR Parts 15, Class A; CB Certificate &amp; Report including all international deviations; RoHS 2011/65/EU; Moroccan Conformity Mark; VCCI (Japan); BIS (India); CCC (China); RCM (Australia/New Zealand); KCC (South Korea); EAC-R Approval (Russia); South Africa LoA; Mexico (UL-CoC for Mexico); NEBS-ready</td>
</tr>
</tbody>
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