Application Assurance Platform (AAP)

Overview

Leading network operators are embracing the use of software-based network appliances to increase service and application agility, while dramatically reducing both CapEx & OpEx.

The Saisei AAP is a software-based appliance that delivers an unprecedented combination of flow-based network visibility and policy control.

At the heart of the Saisei AAP is our patented flow processing engine, which enables application/user level identification of flows, correlation of 3rd party data, and policy enforcement of millions of flows in real-time.

Designed to run on standard COTS hardware in either bare metal or virtualized environments, the Saisei AAP achieves virtually limitless scale while also setting new standards for cost effectiveness versus traditional hardware-based solutions.

Key Capabilities

+ Monitors & controls millions of data flows per second in-line on the network
+ Provides application & user level visibility into data flows
+ Analyzes and reports on application health in real-time
+ Rich database that tracks L2-L7 information, including application, application metadata, user, GeoIP, BGP AS, and is extensible for custom fields
+ Enables simple policy enforcement based on the same rich information base, with the flexibility to design and enforce host, user and application level policies
+ Patented TCP/IP state awareness and flow management provides fine grained traffic management capabilities
+ Real-time flow analytics enable flow policies to auto-adjust to changing network conditions
+ Map reduces flow data to make it easier to integrate high volumes of flow data into 3rd party data analysis tools
+ Managed via open REST API with extensive Python scripting capabilities
AAP Deployment Options

The Saisei AAP can be deployed in-line or as a passive monitoring appliance and runs bare-metal or packaged as a virtual guest on standard x86 hardware.

AAP Feature Set

Visibility & Policy Control
+ Dynamic application detection
+ 5 tuple
+ Flow rate monitoring
+ TCP flow health monitoring
+ Application health scores
+ Static IP user map
+ External data correlation (GeoIP & BGP AS)

Network
+ Threshold alerts
+ Application policy control
+ User policy control
+ Host policy control
+ Policy groups
+ MS Active Directory
+ RADIUS

Management
+ SSHv2
+ REST
+ SNMP
+ Python
+ GUI
+ CLI
+ Diameter signaling

AAP System Performance & Scaling

<table>
<thead>
<tr>
<th>Link Performance</th>
<th>Cores per Interface</th>
<th>Max Flows per Interface</th>
<th>Max Hosts Internal/External</th>
<th>CPU Cores/Memory (Single bump)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100 Mbps (shared)</td>
<td>Shared</td>
<td>10,000</td>
<td>10,000/None</td>
<td>1 (shared)/64 MB</td>
</tr>
<tr>
<td>1 Gbps (Internet mix)</td>
<td>1</td>
<td>64,000</td>
<td>100,000/1,000,000</td>
<td>3/500 MB</td>
</tr>
<tr>
<td>1 Gbps (line-rate)</td>
<td>2</td>
<td>100,000</td>
<td>100,000/10,000,000</td>
<td>5/4 GB</td>
</tr>
<tr>
<td>10 Gbps (Internet mix)</td>
<td>2</td>
<td>1,000,000</td>
<td>1,000,000/10,000,000</td>
<td>5/16 GB</td>
</tr>
<tr>
<td>10 Gbps (line-rate)</td>
<td>6</td>
<td>10,000,000</td>
<td>10,000,000/100,000,000</td>
<td>15/128 GB</td>
</tr>
</tbody>
</table>

AAP Software & Hardware Requirements

<table>
<thead>
<tr>
<th>Software Host Type</th>
<th>Supported</th>
<th>Memory Required</th>
<th>Cores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubuntu 13.04</td>
<td>Yes</td>
<td>4 GB</td>
<td>2 min.</td>
</tr>
<tr>
<td>Red Hat 6.4/KVM</td>
<td>Pending</td>
<td>4 GB</td>
<td>2 min.</td>
</tr>
<tr>
<td>VMware/ESXi5i</td>
<td>Yes</td>
<td>4 GB</td>
<td>2 min.</td>
</tr>
</tbody>
</table>

x86 Platform*

<table>
<thead>
<tr>
<th>Supported</th>
<th>Memory Required</th>
<th>Cores</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-end x86 Sandy Bridge class with VT-D &amp; IOMMU</td>
<td>Yes</td>
<td>4 GB</td>
</tr>
<tr>
<td>Low-end x86 dual core VT-D &amp; IOMMU</td>
<td>Yes</td>
<td>4 GB</td>
</tr>
</tbody>
</table>

NICS

| Intel 82599 (10Gb) | Yes | N/A | N/A |
| Intel 82576 (1Gb)  | Yes | N/A | N/A |

* Platform requires minimum of 1 GigE port for management interface and 2 GigE ports for data plane.