APCON’s IntellaView platform is designed to accommodate unprecedented levels of bandwidth and enable network visibility for hybrid workloads running in all environments, including private cloud, public cloud, and on-premises infrastructures.
HIGH SPEED / HIGH DENSITY
NETWORK VISIBILITY CHALLENGES

Networks are increasingly complex and dense. Therefore maintaining visibility is a significant challenge. Network traffic, speeds, and capacity grow every year and network analysis tools proliferate. Tools that can't scale with throughput or handle diverse traffic flows don't maintain their ROI, costing enterprises even more. Many data centers were designed to support 1-gigabit or 10-gigabit pathways between servers, routers, and switches, but today's Ethernet roadmap extends to 40-gigabit and 100-gigabit, while 400-gigabit and even 1-terabit Ethernet loom within a few years.

Customers today require more ports and higher throughput to meet their imminent digital business goals.

Challenges Driving the Need for Better Network Visibility

- Migration to 40/100G architectures enabling exponential traffic flow
- Large data throughput overwhelms current security tools, potentially leading to exposure
- Adoption of 400G is driving network monitoring innovations and challenges

HYBRID VISIBILITY FOR DIGITAL BUSINESS TRANSFORMATION

C-level executives cite many roadblocks that drive a feeling of confusion about Digital Business Transformation, such as a lack of alignment on digital priorities, difficulties integrating with existing infrastructure and processes, and a perceived lack of relevant skills. However, customers are still moving forward with both public and private cloud initiatives.

- 72% pursuing a hybrid cloud computing strategy in 2018
- 40% of organizations responded that cloud was a top investment¹

Bringing On-Premises and Cloud Together

One of the difficulties of integrating hybrid infrastructures is ensuring both the fidelity of the network traffic from all sources (on-premises, public & private cloud) and the clarity (filtering) of that traffic to the various security and performance monitoring tools.

Many workloads are moved to public cloud services for geographic efficiencies, deployment speed and controlling up-front investment costs, but still need to be visible and monitored by the current security tool infrastructure and investment.

Network visibility of east-west traffic is especially challenging for hyperscale datacenter architectures that expand and contrast with the needs of the business.

¹. Gartner (Infrastructure, Operations Management, and Data Center Operations Conference 2018)
**APCON INTELLAVIEW PLATFORM**

**Hybrid Visibility Solution**

<table>
<thead>
<tr>
<th>PHYSICAL DATA CENTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Diagram of network setup" /></td>
</tr>
</tbody>
</table>

### Tool Optimization
- Packet Slicing
- Protocol Stripping
- Deduplication
- Load Balancing
- Tunnel Termination

### APCON ADVANCED HYBRID VISIBLEITY PLATFORM

- Security, Network Analysis and Application Performance Tools

### APCON HYBRID VISIBILITY SOLUTIONS

- **IntellaTap-VM** for Private Cloud
- **APCON Termination** for Cisco ACI
- **IntellaCloud** for Public Cloud

---

**The APCON IntellaView Solution Capabilities**

<table>
<thead>
<tr>
<th>Optical TAPS</th>
<th>Network Visibility Platform</th>
<th>Virtual TAPS</th>
<th>APCON Management Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete line of 1G, 10G, 40G, and 100G optical TAPs enabling 100% visibility without impact to network device performance.</td>
<td>Introducing the world’s highest capacity visibility platform offering unprecedented scale and access to critical Enterprise monitor data.</td>
<td>Capture network traffic from Virtual Private Cloud and Public Cloud environments.</td>
<td>The intuitive user interface allows you to easily maintain control and visibility over your hybrid network environment.</td>
</tr>
</tbody>
</table>

---

**World’s Highest Capacity Visibility Platform**

The APCON IntellaView Platform provides a fully meshed network, greatly increasing port density and bandwidth over previous-generation technologies. Customers require a visibility infrastructure that can keep up with the additional bandwidth needed for data-intensive applications (such as IoT, AI, and Big Data).

- **End-to-end infrastructure** that enables monitoring, securing and analyzing of physical, virtual, and cloud networks.
- **Intuitive software** for configuration and management.
- **Chassis** — high availability, high capacity, and high blade-to-blade traffic bandwidth.
- **Multi-Function Blades** — 36 ports at 40G/100G and 52 ports at 48 x 1G/10G/25G and 4 x 40G/100G.

The APCON IntellaView Platform delivers higher port densities that optimize existing network infrastructure, IT efficiencies and ROI. IntellaView also delivers instant data access and virtual/cloud monitoring integration for visibility to secure critical workloads.

- **HyperEngine Blade** — 600G high-performance packet processor for real-time processing of 1/10/40/100G feeds.
- **Easy Management and Integration** — SNMP support for traffic statistics and REST API for custom integrations.
- **Advanced features** — aggregate, filter, load balance, and advanced packet processing such as deduplication, protocol header stripping, packet slicing, tunnel termination, tunnel initiation, and NetFlow Generation (with HyperEngine Blade installed).
INTELLAVIEW CHASSIS

The APCON IntellaView Chassis options consist of the ACI-4020-C 3RU, ACI-4040-C 5RU and the ACI-4080-C 9RU chassis, the next generation of APCON network visibility appliances.

Up to two front-facing controller cards with a touchscreen can be installed to provide fail-over operation for uninterrupted continuity.

Each of the ACI-4020-C, ACI-4040-C and the ACI-4080-C can be configured with up to six next-generation switch fabric cards, providing full mesh connectivity with the blades through the backplane, and offering a dramatic increase in bandwidth potential, up to five times over that achieved in previous generation products. The more fabric cards you install, the higher the blade-to-blade traffic bandwidth.

INTELLAVIEW BLADES

The APCON IntellaView consists of the ACI-4030-E36 and the ACI-4030-E52 Multi-Function Blades as well as the ACI-4033-E00 HyperEngine Packet Processor Blade. The aggregation and filtering technology of the multi-function blades make it easy to monitor high-speed networks. With the broadest range of advanced features including packet slicing, protocol stripping, load balancing, port tagging, tunnel termination, packet deduplication (ACI-4030-E36-2 blade or ACI-4033-E00-1 blade only) and NetFlow generation (with ACI-4033-E00-1), network engineers are confident the right traffic is delivered to the right tools all the time.

HyperEngine Packet Processor

The HyperEngine blade delivers advanced features for ultra-high-speed network infrastructure. It adds superior, industry-leading processing power (600Gbps) to the IntellaView for real-time packet processing and delivering enhanced network visibility with significantly increased efficiency and effectiveness of the network security, analytics and performance monitoring solutions.

- 6 configurable service engines.
- Real-time processing across 1G/10G/40G/100G feeds.
- Packet Deduplication.
- NetFlow generation.

40G and 100G Port Density

The ACI-4030-E36 blade is a highly-flexible packet aggregation switch that includes the following port and density options.

- The ACI-4030-E36 blade supports 36 × 40/100G front panel ports capable of supporting 40G and 100G QSFP28 fiber modules.
- The QSFP28 ports support port breakout. Port breakout breaks one 40G port into 4 × 10Gbps ports or one 100G port into 4 × 25Gbps ports.
- The ACI-4030-E36-2 blade includes a hardware module that supports the Packet Deduplication feature.
- Supported features include Port Tagging, Packet Slicing, Protocol Header Stripping, Tunnel Termination, Tunnel Initiation, and Packet Deduplication (E36-2 only).

1/10/25G and 100G Port Density

The ACI-4030-E52 blade is a customizable packet aggregation switch that includes the following port and density options.

- 48 SFP+ ports capable of supporting 1G, 10G, or 25G.
- 4 QSFP28 ports capable of supporting 40G or 100G.
- The QSFP28 ports support port breakout. Port breakout breaks a 40G port into 4 × 10Gbps ports or a 100G port into 4 × 25Gbps ports using breakout cables.
- Supported features include Packet Slicing, Protocol Header Stripping, Tunnel Termination, and Tunnel Initiation.
### Access Control Lists (ACL) Filtering
The E36 & E52 blades support filtering utilizing access control lists (ACL) filters. An ACL filter works by selectively permitting or denying traffic based on specified criteria. Filtering of the following is supported:

- Layer 2: MAC, VLAN, MPLS, or Ethertype
- Layer 3: Source and Destination IPv4 and IPv6 sessions, DSCP, or IP Protocol
- Layer 4: Port Number or TCP Control

### Connections
The E36 & E52 blades can be configured to support the following types of connections between ports:

- One-to-One  
- One-to-Many  
- Many-to-Many  
- Many-to-One  
- One-to-Load Balance Group (LBG)  
- Many-to-Load Balance Group (LBG)

The following modes are supported in each of the above connection types:

- Standard connections
- Aggregated TAP connections
- Duplex connections

### Forward Error Correction (FEC)
FEC is supported on a per port basis in compliance with:

- Reed-Solomon for 100GE
- Reed-Solomon and Fire Codes for 25GE

Enabling, disabling, and choosing an FEC mode is available through either the CLI or GUI.

### Load Balancing
The E36 & E52 blades support egress load balance groups (LBGs).

### Features
The following features are supported through either the CLI or GUI:

- GRE Tunnel Initiation
- Tunnel Termination/De-Encapsulation – ERSPAN, GRE and VxLAN
- Packet Slicing
- Deduplication
- Port Tagging
- NetFlow Generation (with HyperEngine Blade installed)
- Protocol Header Stripping – All ports are able to strip the following protocol header types:
  - NVGRE
  - VxLAN
  - GRE
  - ERSPAN for Cisco ACI
  - VLAN
  - Fabric Path
  - MPLS
  - MPLS PWE (Pseudo Wire Emulation)
  - MPLS over GRE
**IntellaView: Single-Switch Management Interface**

**IntellaView**, a best-in-class, easy-to-use Graphical User Interface (GUI), offers IT resources an easy way to build, save, view and recall various SPANs/TAPs connections to the IntellaView platform. Users also control the connections between the IntellaView blades and chassis and the network performance monitoring and security tools. The interface delivers intuitive provisioning of large, high-port-count network monitoring architectures.

Access Control Lists (ACLs) filter network traffic by controlling whether packets are forwarded or blocked based on criteria specified within the ACL analytics and performance monitoring solutions.

**IntellaView Advanced: Multi-Switch Management Interface**

**IntellaView Advanced** adds the capability to manage various settings of up to five IntellaView switches with a single user login. It allows users to clone settings and permissions to multiple IntellaView blades and chassis for easy setup. This intuitive software offers streamlined switch-level maintenance including routine tasks such as backing up and restoring switch settings and pushing a scheduled software upgrade to a maximum of five IntellaView switches.

**WiFi Compatible**

With WiFi connection enabled, users also have the flexibility to quickly configure and manage their IntellaView platform with a laptop or tablet through the IntellaView management interface.

**Traffic Overview**

Provides a list of Deployed and Inactive Traffic Connections.

**Connections**

Flexible configuration of traffic connections of the blades.

**Deduplication**

Full customization of duplicate match conditions and configurable window size in milliseconds.
IntellaView Mobile App

When Bluetooth is enabled, the IntellaView blades and chassis can be accessed and configured using an Android tablet or smartphone through the IntellaView Mobile App. Users can view various IntellaView chassis information at a glance. IPv4 and IPv6 settings (including IP addresses, mask and gateway) are editable on the LAN Settings screen.

Titan: Enterprise Class Multi-Switch Management Software

Titan delivers remote enterprise management of the entire APCON Network Visibility Infrastructure from a single screen. A secured HTML5-based Graphical User Interface (GUI) enables authorized users single login access to the entire monitoring network. The easy-to-use graphical interface provides network-wide visibility of status, alarms, events, and statistics dashboards as well as scheduling of configuration backups or firmware updates.

With the support of a REST API interface, Titan allows users to easily develop custom applications, allowing integration and interfacing with all IntellaView and IntellaFlex XR network visibility switches.

Easily access any device on the network by selecting it on Titan's Global View, providing IntellaView and WebXR features directly on a tab within Titan.

<table>
<thead>
<tr>
<th>Features</th>
<th>IntellaView</th>
<th>IntellaView Advanced</th>
<th>Titan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Control List (ACL) Filtering</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>ACL Stacks and Connections</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Port Properties and Statistics</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Allows Sharing of Settings/Filters</td>
<td>—</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Single Login and Manage all Switches</td>
<td>—</td>
<td>Up to 5</td>
<td>More than 5</td>
</tr>
<tr>
<td>Reports Inventory</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Consolidates Statistics and Alerts</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Scheduling</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Integration with IntellaTap-VM</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
Service and Support

APCON's professional services team of certified engineers has years of experience optimizing network visibility strategies for businesses across the globe. In addition to providing installation assistance of existing analysis tools, this team proudly provides around-the-clock troubleshooting services and support.

About APCON

A privately held corporation, APCON is headquartered near Portland, Oregon, where it has operated since 1993. APCON's in-house staff manages product design and development, manufacturing, quality assurance and final testing, customer training and long-term servicing of its solutions — whether for a system with a single switch or a global installation that spans across multiple geographical or cloud locations.