

Leading Financial Institution Expands APCON Intelligent Network Monitoring to Asia-Pacific Centers



Case Study

One of the world's largest multinational financial services companies expanded its use of APCON intelligent network monitoring switches throughout Asia and the Pacific region, creating a global standard of proactive network monitoring. This comprehensive approach to network monitoring features second-generation tools including network performance analyzers, latency measurement, and intrusion detection systems for security – with each tool set monitoring specific network activities.



- **Worldwide Network Monitoring**
Sites in the Americas, Europe, and Asia
- **Net Aggregation**
Designed to shift from reactive response to proactive monitoring, resulting in improved QoS, pinpoint accuracy, and 100% visibility
- **Cost Savings**
Immediate ROI realized with reduced tool purchase requirements
- **APCON Solutions**
40G trunking, high availability, and Multi Stage Filtering create a worldwide standard for intelligent network monitoring

Network monitoring at this scale and depth requires global deployment of APCON aggregation and filtering. This customer employs over 90 APCON Series 3000 chassis installed worldwide. These APCON switches collect input from hundreds of points in each data center, amounting to thousands of points worldwide. The APCON switches then direct relevant data to the correct tools without oversubscription or packet loss. This integrated monitoring system template approach has been perfected in data centers located in the United States and Europe, and is now extended to the company's multiple Asian data centers.

“This project – called Net Aggregation – is designed to move our network from reactive monitoring to proactive monitoring. The APCON solution gave us the kind of bandwidth and port density we needed to connect an entire data center to the network monitoring solution,” says the company's Global Network Management Instrumentation Lead Engineer.

The APCON solution also provides flexibility as needs change, and the ability to scale the monitoring system to meet future growth in the core data centers.

New Challenges Require New Thinking

The network monitoring tools in use at these data centers included Nixsun NetVCR and NetScout Infinistream data recorders, Endace probes, CorviiNet and Correlix latency monitoring tools, McAfee intrusion detection and prevention systems, FireEye web and e-mail security systems and Riverbed Opnet ARX application performance monitoring tools, among others.

Each of these tools is designed to monitor a network for specific activity, or to look at particular packets to measure network performance. With the wide variety of highly specific tools in use and thousands of worldwide data sources, the challenge before the network engineers was to sift through the flood of data and get the right packets to the right tools without overwhelming the data connections or the tools – and without losing crucial information.

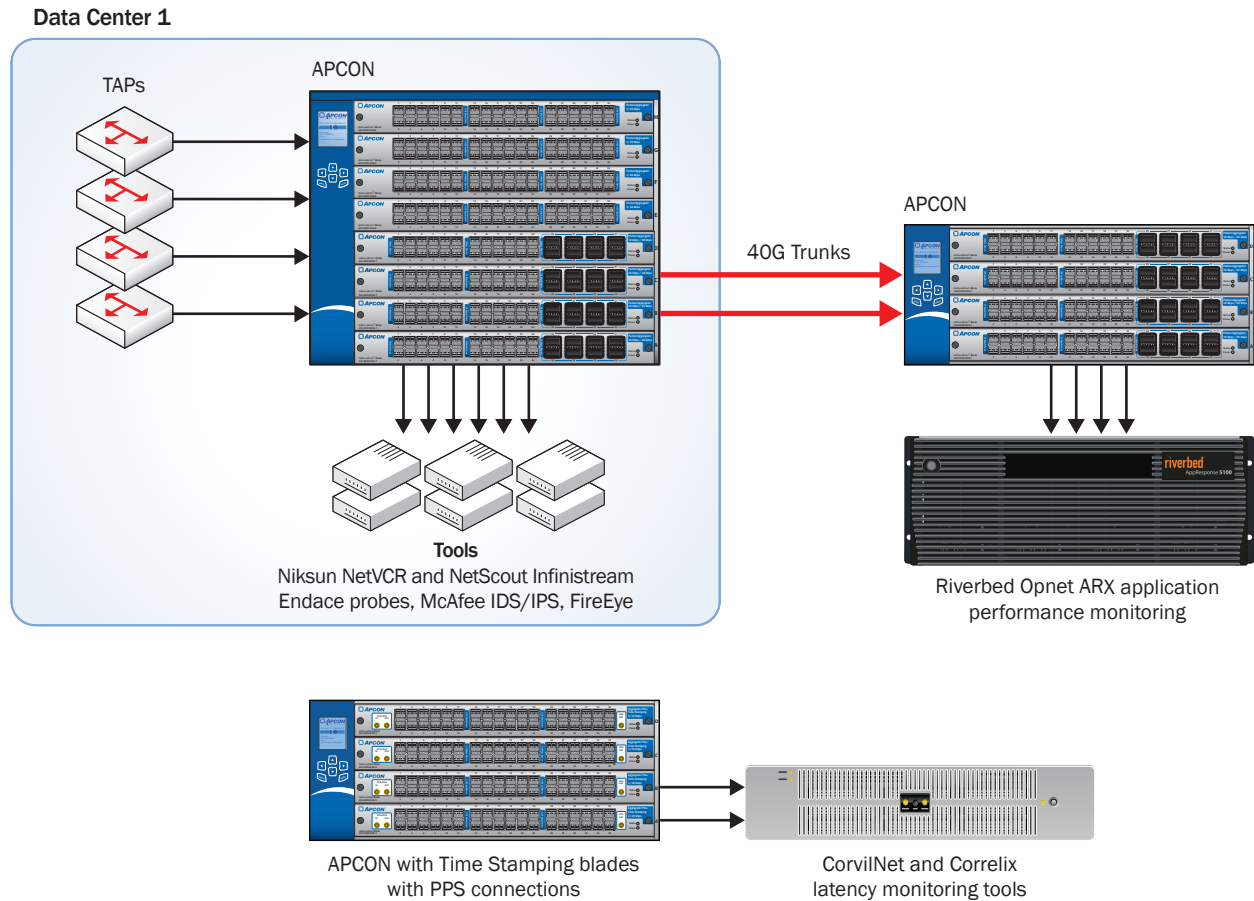


Figure 1 – APCON’s state of the art intelligent network monitoring technology includes 40G trunk connections between switch chassis, and precise Multi Stage Filtering. These features support massive collection of data that can then be directed to the proper tools without risk of packet loss. For latency measurement, APCON’s Time Stamping technology is the most precise and accurate on the market today, with precision resolved to less than 10 nanoseconds.

APCON’s unique Multi Stage Filtering feature allows a large data stream to be sorted and distributed among any set of network monitoring tools. Multi Stage Filtering allows you to untangle the raw packet flow and send each tool only those packets it needs to see. Packet filters are arranged in “stacks” that enable you to precisely direct matching packets to certain tools while passing unmatched packets to additional filters for further processing.

Solution: Scalable Intelligent Network Monitoring

As the company evaluated the competing offerings in the industry, it became clear that Tap proliferation was a growing problem. The solution to the growing number of Taps producing many streams of data was to implement scalable, high port count intelligent network monitoring switches to aggregate the data sourced from Taps and transfer the aggregated stream to additional switches where the individual streams could be filtered, restored and directed to the analysis tools.

Figure 1 shows an example configuration with 1G tapped data arriving at several switches connected by 10G inter-switch links, known as “trunks”. Several trunk lines connect one of these switches with additional switches used for distributing data to tools. Several of the switches are only partially populated to leave room for future growth in both ports and features.

Selecting the Right Solution

The company chose to expand their APCON intelligent network monitoring solution for several reasons – APCON’s market leading port density, overall switch size and scalability, and also APCON’s enterprise-grade highly available design. APCON’s redundant switch controllers can be replaced at any time, and will preserve configured connections and keep data flowing through the switch at all times, even when the controller is removed. Redundant power supplies with automatic failover keep APCON switches running when other network monitoring switches fail.



ABOUT APCON

APCON develops innovative, scalable technology solutions to enhance network monitoring, support IT traffic analysis, and streamline IT network management and security. APCON is the industry leader for state-of-the-art IT data aggregation, filtering, and network switching products, as well as leading-edge management-software support. Organizations in over 50 countries depend on APCON network infrastructure solutions. Customers include Global Fortune 500 companies, banks and financial services institutions, telecommunication service providers, government and military, and computer equipment manufacturers.

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any questions

“High availability is important to this customer, so they always arrange for backup power supplies and controllers. One thing I like to point out is that APCON switches all use the same power supplies and controllers, so customers can save money on spares inventory while still ensuring they have the replacement parts they need when they need them,” says APCON Regional Sales Manager Jason Tucker.

After several years of proven success in America, this solution has now been replicated for use at 4 separate data centers in the Asia-Pacific region, with a total of fourteen data centers protected worldwide. The entire global monitoring network is managed using APCON’s TITAN EP software, which allows the company to automate backups, batch-process firmware upgrades, and direct data flows anywhere in the world from a central location.

“With increased web traffic, our data requirements have also increased. Our response time is critical, so we’ve opted to spread out our data services to bring them closer to customers,” the company’s lead engineer says.

Return on Investment

A healthy return on investment for this company began in the planning phase. By using APCON’s advanced aggregation and multi stage filtering to deliver exactly the right data to each tool, this customer saved millions of dollars in replicated tools. For example, each network data recorder in use on this company’s network costs about \$150,000. By using APCON’s economy of scale and unique aggregation and filtering abilities, the company was able to dramatically reduce its purchases of expensive probes compared to any other equally comprehensive monitoring plan, saving precious budget resources. Now that this model is being replicated around the globe, it is driving significant productivity, by providing the opportunity to leverage scarce resources, to leverage incremental tool capabilities rather than replicating what they already have.