Highly Scalable Layer 3 Core Network Configurations for IP Surveillance

Layer 3 Core with Layer 2 PoE Access Edge Station

**CORE**
- Layer 3+ capabilities
- Industry standard AlliedWare Plus™ CLI and Web management interface
- Extensive copper / fiber port options per switch
- Flexible ports speeds and feeds options
- Ethernet Protected Switched Ring (EPSSring™)
- Virtual Chassis Stacking (VCStack™)
- Advanced network management
- Advanced routing protocols
- High Availability

**ACCESS**
- Layer 2+ capabilities
- Extensive Power over Ethernet (PoE) options
- Stackable switching solutions
- Extensive port speed and cabling options
- Secure encrypted Web and CLI management with SSHv2 and SSL
- Advanced Quality of Service (QoS)
- Advanced Access Control Lists (ACLs)

**PROFESSIONAL SERVICES**
- Basic network design and Bill of Materials (BOM) generation
- Extended warranties
- Flexible phone support options
- Pre-staged product shipments
- Remote network support and configuration options
- On-site network support and configuration options

Connecting The IP World
Large-Sized Network Solution

In large IP Surveillance networks, or a metro-area network, the video surveillance system is typically overlaid on an infrastructure that has been designed to carry multiple applications and services. Such a network, supporting a significant number of end-users, needs to be very reliable, manageable, and scalable.

These requirements are best met by a network design in which different services are partitioned into separate VLANs and transported over resilient rings that are protected by an extremely fast failover mechanism.

Reference Solution

The diagram shows a possible solution using AT-x908 and AT-x900-24XT series switches at the core of the network with AT-8000S/48PoE and AT-8000S/24PoE at the access edge of the network.

Benefits

The SwitchBlade™ AT-x908 is an advanced Layer 3+ modular switch for the modern enterprise network core where resiliency, reliability and high performance are the key requirements. The AT-x900 is a series of advanced Gigabit Ethernet Layer 3+ expandable switches in a highly modular platform. The AT-x908 and AT-x900 provide port and speed flexibility by using expansion modules (XEMs), which are all hot-swappable allowing you to maintain and reconfigure the network without affecting networking uptime.

Ethernet Protected Switched Rings (ePSRing™) allow the SwitchBlade x908, with a number of x900 switches, to form a protected ring with 50ms failover that is perfect for high performance at the core of the Enterprise network.

VCStack™ provides excellent resiliency by allowing you to create a single “virtual chassis” from two physical devices. It allows you to manage the stack as a single node on the network, greatly simplifying your management tasks.

Comprehensive low-latency wirespeed QoS provides flow-based traffic management with full classification, prioritization, traffic shaping and min/max bandwidth profiles.

AT-8000S is a series of high performance stackable Fast Ethernet L2+ switches that support IGMP snooping and IEEE 802.1x port-based authentication. Access Control Lists (ACLs) enable inspection of incoming frames and classify them based on various criteria. Specific actions can then be applied to these frames in order to more effectively manage the network traffic.

Solution summary

| Solution requirements                      | Large, distributed multi-service network, requiring extremely high availability and performance |
| Solution proposed                         | Core: AT-x908, AT-x900-24XT Access: AT-8000S/48PoE, AT-8000S/24PoE |
| Key features                              | Core: ePSR, VCStack, QoS, IGMP query, IGMP snooping, Multicast routing, security, redundant power supply options Access: IGMP snooping, PoE |

Layer 3 Core — Layer 2 PoE Edge Station

SwitchBlade™ x908

AT-x900-24XT

AT-8000S/48PoE

AT-8000S/24PoE

Layer 3 Core

Advanced Modular Switch with 8 High Speed Expansion Bays

Layer 3 Core

Advanced Gigabit Expandable Switch with 24 port Gigabit Ethernet port and 2 High Speed expansion bays

Layer 2 Access

48 port Fast Ethernet PoE switch with 2 active combo ports

Layer 2 Access

24 port Fast Ethernet PoE switch with 2 active combo ports

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