Highly Scalable Basic Layer 3 Core Network Configurations for IP Surveillance

Basic Layer 3 Core with Layer 2/3 PoE Access Edge Station

CORE
- Layer 3+ capabilities
- Industry standard AlliedWare Plus™ CLI and Web management interface
- Industry highest copper/fiber port options per switch
- Advanced network management
- Advanced network security
- Quality of Service (QoS)
- Access Control Lists (ACLs)

ACCESS
- Layer 2+/3 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
Medium-Sized Network Solution

This solution considers a medium-sized network, with cameras installed in different buildings. From the network point of view, we have distributed installation with one or more switches in each location connected together. Important considerations in the network design are resiliency and failover capabilities.

In this scenario we assume that:

- The network must offer link redundancy.
- Failover recovery time is not critical and less than 30 seconds of network recovery time is considered acceptable.

Reference Solution
The diagram shows a solution using an AT-x900/24XS series switch at the core of the network with AT-x600-24Ts-PoE, AT-8000GS/24PoE and AT-8624PoE at access edge of the network.

Benefits
The AT-x900 is a series of advanced Gigabit Ethernet Layer 3+ expandable switches in a highly modular platform. It provides 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.

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

The AT-x600 is a series of scalable intelligent Gigabit Layer 3+ stackable switches with advanced security features that protect your network. Network Access Control (NAC) gives unprecedented control over user access to your network. Non-blocking architecture and superior QoS ensure wire-speed delivery of all your critical IPv4 and IPv6 traffic.

AT-8000GS is a series of high performance stackable Gigabit Ethernet L2+ switches that supports 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

<table>
<thead>
<tr>
<th>Solution requirements</th>
<th>Distributed multi-site solution, link failover, easy to manage, PoE</th>
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</table>
| Solution proposed     | Core: AT-x900-24XS  
Access: AT-x600-24Ts-PoE, AT-8000GS/24PoE, AT-8624PoE |
| Key features          | Core: QoS, IGMP query, IGMP snooping, RSTP, security, redundant power supply options  
Access: IGMP snooping, RSTP, PoE |

Basic Layer 3 Core with Layer 2+3 PoE Access Edge Station

- **AT-x900/24XS**
  - Layer 3 Core
  - Advanced Gigabit Expandable Switch with 24 port Gigabit Ethernet port and 2 High Speed Expansion Bays

- **AT-x600-24TS-PoE**
  - Layer 3 Access
  - 24 port Gigabit Ethernet PoE switch with 4 SFP combo ports and 2 x 24 Gbps stacking ports

- **AT-8000GS/24PoE**
  - Layer 2 Access
  - 24 port Fast Ethernet PoE switch with 2 active combo ports

- **AT-8624PoE**
  - Layer 3 Access
  - 24 port Fast Ethernet PoE switch with 2 uplink module bays