Magnum 6K Switches Provide Networking in Nuclear Plant for Flir Perimeter Security Solution

A Surveillance & Security Application

ABOUT FLIR AND THE FLIR THERMAL FENCE

Founded in 1978, FLIR has developed into the leading designer and manufacturer of thermal imaging infrared cameras. Recently, FLIR announced the release of the FLIR Thermal Fence, a fully-integrated perimeter alert system for simultaneous threat detection and assessment capability. This thermal fence system incorporates both FLIR's thermal security cameras and the FLIR Sensors Manager (FSM) control and management software to provide a full virtual fence solution. This solution is particularly valuable for the perimeter security of critical infrastructure sites such as nuclear power plants.

THE CHALLENGE

Recently, a nuclear power generation plant installed the FLIR Thermal Fence as part of its perimeter security. Plant managers also wanted to enhance the networking in the facility with a series of hardened Ethernet switches. Many of the switches would be located outdoors and needed to be able to withstand extreme temperatures.

The switches also needed to be fitted with a variety of port types. The switches were required to have fiber and Gigabit configurability. Some of the switches were to be located at the core of the facility and required Gigabit ports for the data and video traffic. The switches would be connected in rings which would provide fault recovery. Additionally, the switches, all of which would be managed, needed to have software with security and redundancy features, and support for large numbers of VLANs.

THE SOLUTION

GarrettCom Magnum 6K Switches were selected to provide the networking for the nuclear plant. Plant managers had deployed 6K Switches for years in their substations and found them to be very reliable. The 6K Switches are configurable and include a full range of fiber port type module options as well as Gigabit, 100Mb, and 10Mb port module options. The Magnum 6K Switches selected for server rooms can support up to 32 100Mb fiber ports or eight Gigabit ports. Additionally, the 6K switches support

Ring Topology with Magnum 6K Switches Offers Redundancy for Flir Perimeter Security Solution
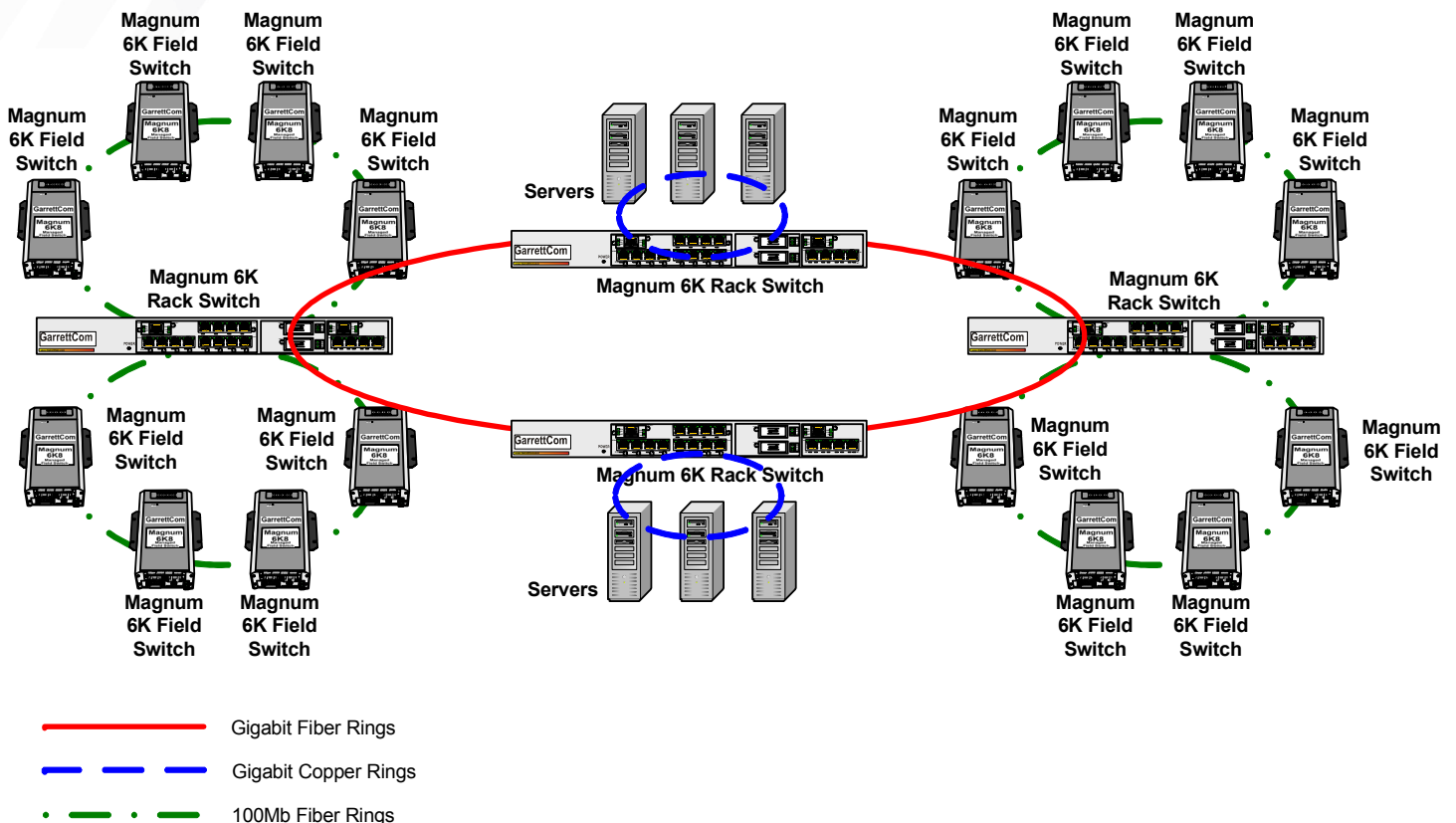
- Gigabit Fiber Rings
- Gigabit Copper Rings
- 100Mb Fiber Rings

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SOLUTION (CONT.)

managed Power over Ethernet (PoE) ports as a configuration option. The 6K Field Switches selected for outdoor locations are convection cooled with an advanced thermal design with the case serving as a heat sink.

Magnum MNS-6K-SECURE software was chosen to provide an extra level of security beyond even what MNS-6K offers. Additionally, with support for up to 256 VLANs, the nuclear plant's extensive VLAN needs were more than covered.

For self-healing ring redundancy, the 6K switch offered many fast link recovery features such as RSTP-2004 and S-Ring®. To handle and manage the multicast video traffic, the 6K management software offers IGMP Snooping and IGMP-L2, eliminating the complexity of routers in the security network.

ABOUT GARRETTCOM

GarrettCom is a leading designer and manufacturer of networking products for industrial and outdoor markets such as surveillance & security, power utilities, transportation, and factory automation. GarrettCom's focus has been on developing innovative, heavy-duty products that are designed with customer flexibility, security, and reliability needs in mind.

For the Power Over Ethernet (PoE) line, GarrettCom has developed a range of industrial Power-Source PoE products based on the IEEE 802.3af standard specification supporting security products such as IP-cameras & badge readers. To learn more about GarrettCom's range of hardened and innovative video surveillance products, visit www.GarrettCom.com/surveillance_security.htm.
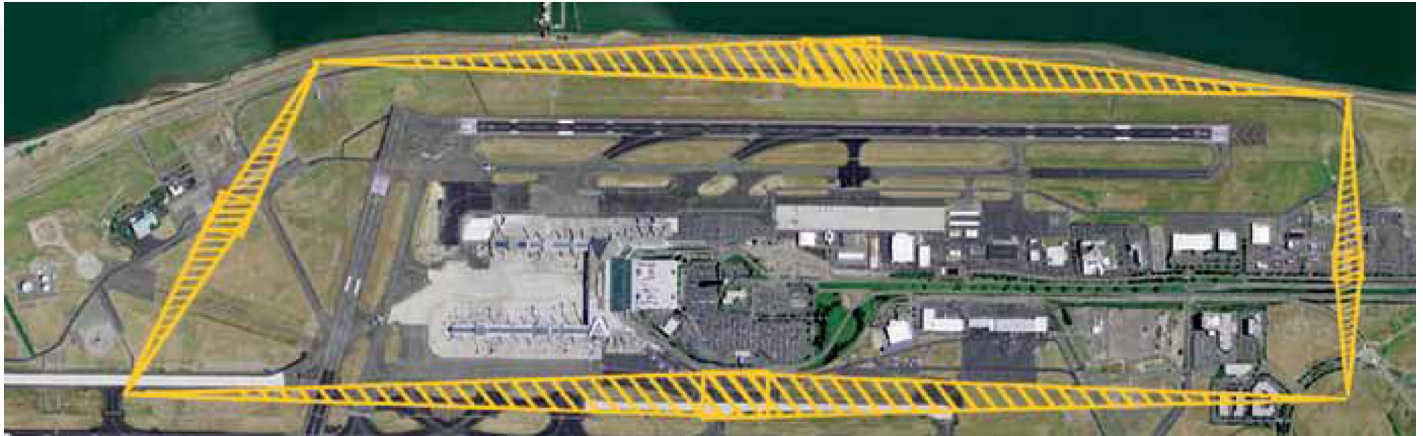
Aerial view of thermal camera layout delineating the FLIR Thermal Fence perimeter.