highways england
driving forward

Broadberry™

Surveillance Storage for CCTV

Date:
Q3 2016

Application:
Surveillance Storage

Tags:
CCTV, Surveillance Storage, Encrypted Storage

CUSTOMER:

Highways England
Highways England is the government company charged with operating, maintaining and improving England's motorways and major A roads. Formerly the Highways Agency, they became a government company in April 2015.

SOLUTION BRIEF:

Highways England approached Broadberry Data Systems to supply surveillance storage servers capable of encryption.

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Application

- Surveillance Storage
- Encrypted Storage

Project Background

Highways England capture and store high-quality CCTV footage of traffic flow for 7 days in line with the Data Protection Act.

We were approached by Highways England to supply a number of storage appliances capable of storing a massive amount of data from roads across the United Kingdom.

Key Requirements:

- Enterprise-Grade reliability and resiliency
- Secure, Encrypted storage that won't use processing resources
- Compatible with all major surveillance software
- Compatible with existing DELL storage controller

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Broadberry Solution

Broadberry have supplied the world's largest organisations with enterprise-grade storage solutions for over 25 years.

We supplied Highways England with 6x Broadberry CybersStore 44S-JBOD storage appliances configured with 44x 12TB Enterprise-Class SAS3 12Gb/s hard drives,

We daisy-chained the CybersStore 44S-JBOD appliances to create 31 Petabytes of direct-attached-storage which connected seamlessly to an existing DELL storage controller.

Key Numbers

3.1PB
RAW Storage

16U
6x 4U Appliances

120%
Lower Cost than Alternative Vendor Quotations

Solution Specifications

Our accepted solutions was 4x Broadberry CyberStore 444S-JBOD Storage Servers daisy-chained together to produce 2.1 Petabytes of RAW storage capacity.

Each Appliance:

- 4U, 44 Bay Dual Controller SAS/SATA JBOD
- 44x Toshiba Enterprise Cloud HDD
- Redundant 1280W Platinum Level (1+1) power supplies with PMBus
- 7x 8cm (middle) hot-swap redundant cooling fans
- JBOD Power Control Board with IPMI for remote monitor and power on-off

Features:

- Complete compatibility with any server with a PCI-Express Expansion Slot including DELL, HPE, IBM, Cisco, Lenovo, Supermicro and more
- Compatible with major surveillance storage software including Indigovision, Milestone, Axis , Onvif and more
- Manage self-encrypting drives attached to MegaRAID controller cards for higher levels of security
- Reliability and redundancy via dual-channel daisy-chaining JBOD appliances

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Broadberry JBOD Solution

One of our densest JBOD's, the CybersStore 44S-JBOD storage appliance is built using the highest quality, enterprise-grade server components to ensure maximum robustness and reliability in a wide range of applications.

Military-Grade Encryption

Due to Highways Englands in-house data policies, as-well as UK data-protection laws, we were asked to ensure our proposed solution included robust encryption. For this we used the tried-and-tested LSI MegaRAID SafeStore along with SED drives.

Using specialist enterprise-class SED drives ensured robust encryption that didn't require processing resources from the storage controller.

Auto Lock with Local Key Management

Auto Lock with Local Key Management locks the SED using an authentication key. When secured in this manner, the drive's data encryption key is locked whenever the drive is powered down. In other words, the moment the SED is switched off or unplugged, it automatically locks down the drive's data. When the drive is powered back on, it requires authentication before being able to unlock its encryption key and read any data on the drive. This protects against any type of insider or external theft of drives or systems.

Instant Secure Erase

Instant Secure Erase provides instant data protection via cryptographic erase. This feature will delete the existing data encryption key and regenerate
a new data encryption key in seconds, enabling drives to be returned, retired, sold or reused securely.

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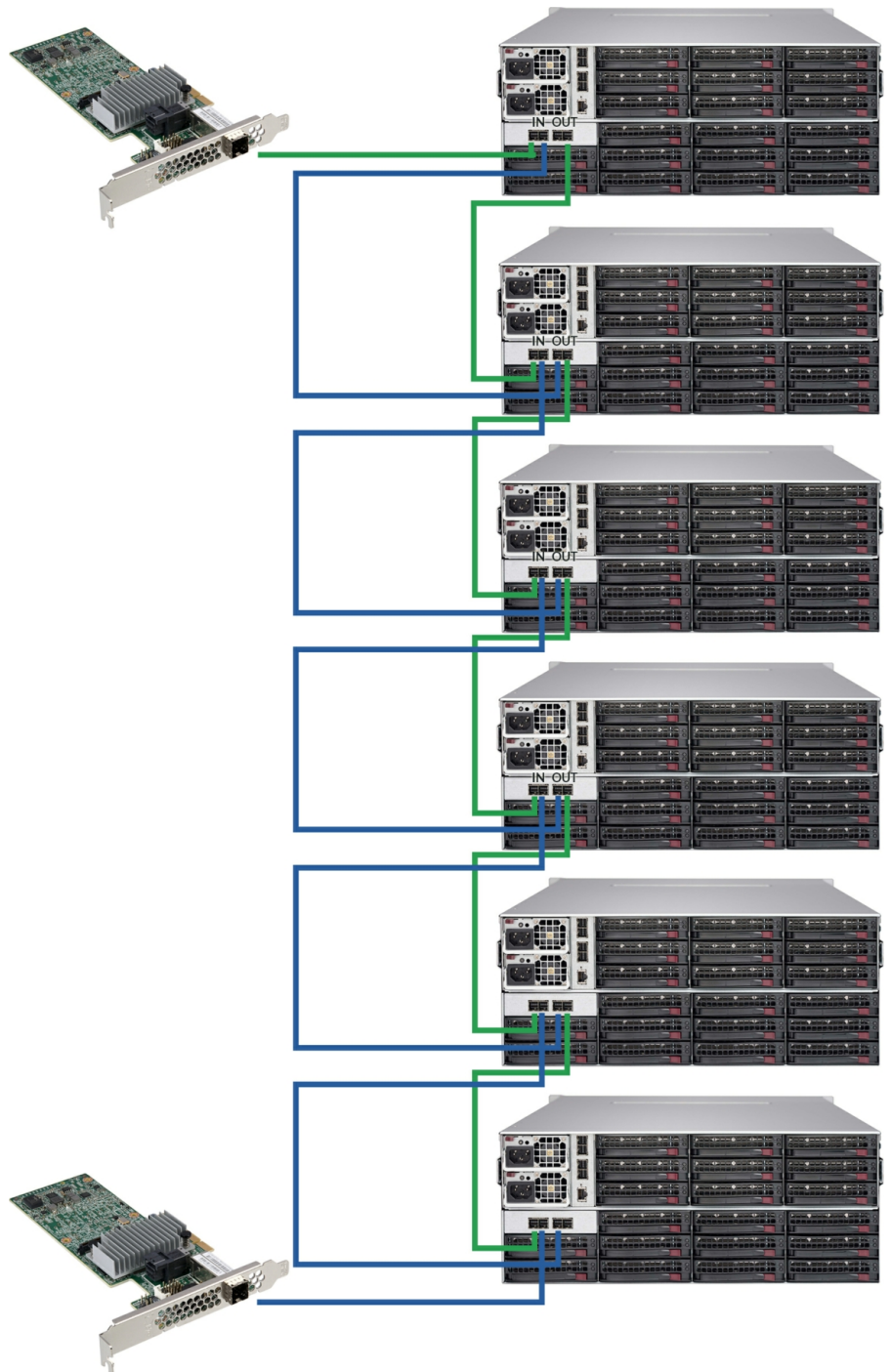
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Trusted by the Worlds Biggest Brands

We have established ourselves as one of the biggest storage providers in the UK, and since 1989 supplied our server and storage solutions to the world's biggest brands. Our customers include:

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