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EDB POSTGRES IMPROVES RESILIENCE BY 92%
FOR LONDON TUNNEL MONITORING SYSTEM

GOALS

- Achieve greater resilience by reducing transition time between primary and secondary systems.
- Choose between an external provider or developing the solution in-house with proprietary and open source technologies.
- Deploy a flexible and low-cost solution that met multiple core objectives

BENEFITS OF EDB POSTGRES

- Reduced transition time by 92% between primary and second systems.
- EnterpriseDB's enterprise-class products and deep expertise were a better investment than alternatives.
- Key features in the open source-based EDB Postgres Platform enabled a strategic configuration that met core technology goals at a low cost.

Highway monitoring solutions provider Costain (formerly Simulation Systems Limited) was building a new system to support vehicular traffic surveillance cameras that monitor tunnels throughout London. Transport for London required constant monitoring capabilities in the tunnels to ensure safety. The number one goal for Costain was to build a new system with greater resiliency, reducing the transition time from the primary surveillance system to a standby to ensure Transport for London maintained this consistent view into the tunnels. At the time, the transition time was two minutes, which was far too long.

Tunnels are one of the most critical parts of London's road network, and systems require the reliable integration of a large range of inputs, associated operations, and outputs in response. The inputs include air quality monitors; smoke and fire detection; flood and sump level sensors; loop- or video-based detection of vehicles; and video-based detection of animals and pedestrians.

Any significant disruption in the surveillance systems would require Transport for London to close tunnels due to safety concerns. The result would be gridlock in London, a city where over 26 million road journeys begin each day.

ACHIEVING GREATER RESILIENCE

Costain is highly regarded for providing integrated hardware and software-based solutions across a broad spectrum of traffic monitoring and management requirements.

In building the new system for Transport for London, Costain deployed the EDB Postgres™ Platform from EnterpriseDB® (EDB™) with the EDB Postgres™ Replication Server. The new

SIBIN PAUL

Principal Software
Engineer, Costain

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system reduced transition time between systems to 10 seconds from two minutes, a 92 percent reduction.

Costain considered multiple approaches in building the new system for Transport for London. Because of the company's expertise, the team considered building the solution in-house using a mix of proprietary technology, drawing on its specialty in traffic monitoring, and open source technology. Costain wanted to use open source in order to limit costs. That option, however, meant the company risked losing expert knowledge workers; not having support for the open source software; and investing resources to build something that was already on the market. Ultimately, Costain determined that EnterpriseDB's high performance, low cost, and superior quality of offerings, as well as the prospect of having a long-term partner, was a better investment.

EnterpriseDB enhances the capabilities of the open source database PostgreSQL for the EDB Postgres Platform, which gives customers the highest levels of performance, scalability, manageability, security, and compatibility. Customers that use the EDB Postgres Platform receive all of the enterprise capabilities necessary to manage multi-model data, connect with existing systems, and deploy rapidly across multiple environments so that they can modernize to meet today's digital business demands.

EnterpriseDB was able to support multiple goals for Costain:

New Application Development: Costain developed two distinct mission-critical systems for Transport for London using EDB Postgres. One manages surface-street systems and the other manages the tunnel cameras, which supports 400 cameras and 150 different operators.

Modernization: Costain deployed EDB Postgres Replication Server alongside EDB Postgres to support system backup requirements. However, the configuration served a strategic purpose as well. Two-way synchronization, a feature in EDB Postgres Replication Server with a great deal of flexibility in configuration, ensured against data loss should the secondary system ever have to take over during restoration of the primary system. Any changes made while the secondary system runs are preserved and recorded in the primary system.

Seamless Transition

"If Transport for London cannot see into the tunnel, they have to shut down the tunnels, so it was critical they had a seamless transition from primary to secondary system," said Sibin Paul, Principal Software Engineer, Costain. "EDB Postgres gave us the performance, reliability, and flexibility to deliver on our goals."

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