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data



Case study

Africa | South Africa | Conservation | Digital infrastructure

Connected Conservation solution *protects rhino for future generations*

At a glance

Which services?

- professional services
- managed services
- cloud services

Which technologies?

- a secure park area network; data collection and analysis via CCTV/ biometric scanning ; Wi-Fi and local area networks at each entrance; LORA technology throughout the reserve; seismic sensors and/or magnetic sensors on the reserve periphery; sensors for tracking vehicles entering and exiting the reserve; thermal imaging along the park perimeter; connection to a national database; multiple devices with access to all data; threat alerts to help proactive decision-making; automatic backup and continuous system availability; predictive modelling; drone-based surveillance; helicopters to ensure prompt response to identified threats.

Which partners?

- Cisco
- EMC

‘If we go to zero kills in the park and create safe haven, that will be a great step forward for us all as humanity, for which Dimension Data and Cisco have made an enormous contribution.’

Dave Varty, Security Sub Committee member, Private Game Reserve.

Why Connected Conservation makes sense

A game reserve adjacent to the Kruger National Park wanted more effective means to prevent rhino poaching and, thereby, conserve rhino for future generations. We harnessed the power of technology to protect the rhino by tracking the movement of people.

[Read more](#)

How focusing on people protects wildlife

Conventional reactive conservation approaches pose a risk for rhino. Our Connected Conservation solution minimises the risk by providing the real-time intelligence needed to enable preventative action against poachers. Poaching in the reserve has dropped by 96%.

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What Connected Conservation technology achieves

Innovative application of IT infrastructure, managed services, data analytics, multiscreen communication, secure network and data flow, a point-to-point reserve network, CCTV cameras, and biometric scanning have enabled reduction of incursions into the reserve by 68%.

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Case study

‘We are already in discussion with other conservation organisations wanting non-invasive, highly adaptable, easily deployable ways to protect their animals and environments.’

Bruce Watson, Group Executive, Cisco Alliance

Why Connected Conservation makes sense

A game reserve adjacent to the Kruger National Park wanted more effective means to prevent rhino poaching and, thereby, conserve the rhino for future generations. We harnessed the power of technology to protect the rhino by tracking the movement of people.

South Africa is home to 70% of the remaining rhinos in the world. With populations being decimated by poaching to the extent that rhinos could be extinct by 2025, a private game reserve took the lead in finding a technology-based way to deter poachers.

Every day, hundreds of staff, suppliers, contractors, security personnel, and tourists enter and exit the reserve. Their activity wasn't monitored because, as is usual, the reserve is in a remote location with basic IT infrastructure and access control, manual security processes, and very limited communication. Partnering with Cisco, Dimension Data deployed a solution that connects multiple types of technology in order to track the movement of people so as to identify those with harmful intent. This pre-empts harm to the animals.

Technology accelerates digital business

‘Technology always seems more relevant and more easily applicable in cities and business precincts. But our Connected Conservation solution shows that digital transformation is possible – and immensely beneficial – in any environment, even under the sea or in challenging industrial situations.’ – Bruce Watson, Group Executive, Cisco Alliance

How focusing on people protects wildlife

Conventional reactive conservation approaches, such as dehorning, pose a risk for rhino. Our Connected Conservation solution minimises the risk by providing the real-time intelligence needed to enable preventative action against poachers. Poaching in the reserve has dropped by 96%.

The purpose of using an end-to-end solution is to proactively stop people entering the reserve illegally. If an incursion takes place, the solution triggers an alarm in the control centre. An alert with exact co-ordinates for the incursion is sent to armed rangers' mobile devices. The rangers are then mobilised both on the ground and in a helicopter.

‘The solution is capable of protecting any endangered species, including elephants, lions, and pangolins in Africa, tigers in India and Asia, and even rays, sharks and whales in the ocean,’ says Bruce Watson, Dimension Data's Group Executive – Cisco Alliance. ‘So we are already in discussions about replicating it in other reserves in South Africa, Africa, and globally.’

What Connected Conservation technology achieves

Innovative application of IT infrastructure, managed services, data analytics, multiscreen communication, secure network and data flow, a point to point reserve network, CCTV cameras, and biometric scanning has enabled the reduction of incursions into the reserve by 68%.

Preventing incursions is possible only if you are able to observe the boundaries of the reserve comprehensively. We achieved this by using a point-to-point reserve area network (RAN) to create a high-security perimeter ‘net’. CCTV cameras and biometric scanning extended the reserve's IT infrastructure into remote areas. Wi-Fi and local area networks at each gate allowed communication between security personnel and game rangers both on the ground and in the air. Connectivity to the national database of poaching suspects and backing up of reserve generated data to a secure cloud service-enabled real-time data analysis.

‘Connected Conservation is a prime example of the Internet of Things enabling the saving of human and animal lives,’ Watson says. ‘Without it we couldn't have deployed a connected system to remote and harsh environments with minimal communication or used world-class compute and storage facilities to store the resulting data in the cloud.’