Photo credit: Kim Free at Orana Wildlife Park

Orana Wildlife Park Choose UniFi Surveillance to Focus Efforts Remotely

Business
Engagement and IT Manager,
Orana Wildlife Park.

Set within an 80 hectare area, 15 minutes drive from Christchurch Airport Orana Wildlife Park provides amazing opportunities for people to connect with wildlife. We get you up close and personal with the animals.

Problem:
Orana Wildlife Park has a time consuming, complicated surveillance system which lacks clarity, speed and audio recording with poor performing night vision for their purpose.

Solution:
A cost-effective, simple to integrate UniFi surveillance system that allows for clearly viewing the animals real-time quickly and easily with the benefit of audio and night vision control.

Requirements:
2x UNVR
15x UVC-G3
1x UniFi Access Points
2x NS-5AC
2x LOCO-5AC
1x US-24
1x US-16-150W

Results:
An impressive surveillance system allowing for faster remote evaluation and greater safety measures for the animals and keepers.

"By adopting UniFi Protect, we now have greater job flexibility and efficiency with remote management. We can focus 100 per cent on animal care and education, and spend less time waiting on unncessary technology lag."

-Toby Johnson - Engagement and IT Manager for Orana Wildlife Park

Reasons for the product(s) deployment?

Orana Wildlife Park pre-existing legacy surveillance system was an extremely resource-intensive application and was overly complicated to operate, with many clicks and menus to save a single recording. "The cameras were only displaying at 8fps, which was adequate but did not lend itself to diagnosing situations from the footage, such as potential animal or keeper injuries for example" Explains Toby. The IR lighting provided by pre-existing legacy surveillance system bathed foreground objects but failed to illuminate the background, rendering night view through enclosure bars impossible. The cameras

UniFi camera installation

also lacked audio recording, an essential tool in dealing with Great Apes, which are known to vocalise extensively. Replacement of equipment was frequent, and even when under warranty cost several thousands of dollars each time.

"I am very familiar with UniFi cameras," Toby explains, after having installed eight in our office/retail area, four in the restaurant area with one uploading to the website. "This is the first time I have been able to make a direct comparison with another (pre-existing) system. Cameras were swapped over, so even their positioning is the same as the original pre-existing legacy surveillance system. The comparison is like night and day."

What do you like about the product/service?

"UniFi's simple, robust mounting and quick adoption made installation a breeze. This is a true plug and play camera replacement which has previously cost us a fortune," explains Toby, "The low resource demand on the viewer hardware also helps simplify the solution for our busy, non-techy team." Toby is particularly impressed with UniFi Controller software and its ease of use. "UniFi has improved staff flexibility and peace-of-mind, allowing us to clearly see the location of the animals and to review the nights' events from anywhere in the Park or from our keepers' homes," described Toby.

There has only been positivity from the other keepers on first observation, expressing how much clearer and smoother the footage is now, the fact that they can zoom in and the added benefit hearing animal vocalisations is fantastic. Other comments made were on how incredibly intuitive the UniFi controller is, with rapid speed and response time.

Keeper comments on first observation
 "Oh that is so much clearer."
 "Wow we can zoom."
 "That is so much smoother video" (High frame rate)
 "Being able to hear associated vocalisations is fantastic" (in-built audio recording)

Keeper comments on usability
 "Incredibly easy to use" (Intuitive UX)
 "Fast and responsive interface."
 "Night view shows animals inside cages" (previously high IR glare on bars obscured animals)
 "2-click video download is so easy."
 "The search functionality is so easy."
 "1-click save function is brilliant" (video lock/retention)

What do you dislike about the product/service?

"I don't dislike anything about the solution. Compared to what we had to deal with using pre-existing legacy surveillance system; the frequency of interruption of operation, frequency of equipment failure, drain on Remote Desktop Server implementing the client, UniFi has been a set and forget solution for us," says Toby.

What business problems are you solving with the product, and what benefits have you realised?

Night vision is far more effective than expected, allowing us an insight into night-time activity. Audio recording is providing a great deal of information that we are still in the process of researching. The softwares map view with the colour-coded motion detection has been an enormous benefit to keepers as it quickly identifies areas of the most recent movement to identify the animals locations on arrival in the building.

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Recommendations for others considering the product:

"UniFi Protect is a very afforable system for such rich functionality so we highly recommend it to anyone needing an integratable, easy surveillance system that can be managed remotely. We have hosted workshops on the camera systems employed and consulted to serveral Zoos around Australasia, advising them of an appropriate and cost-effective solution based on UniFi Protect and AirMAX wireless bridges," concludes Toby.
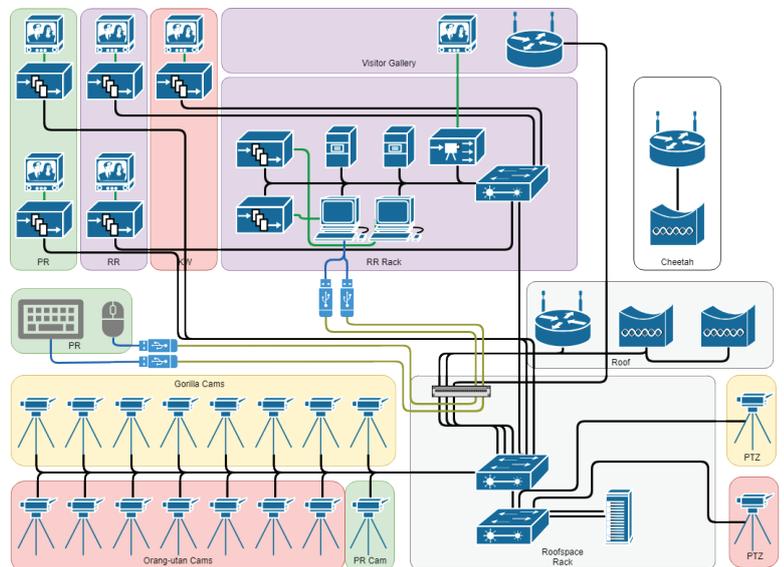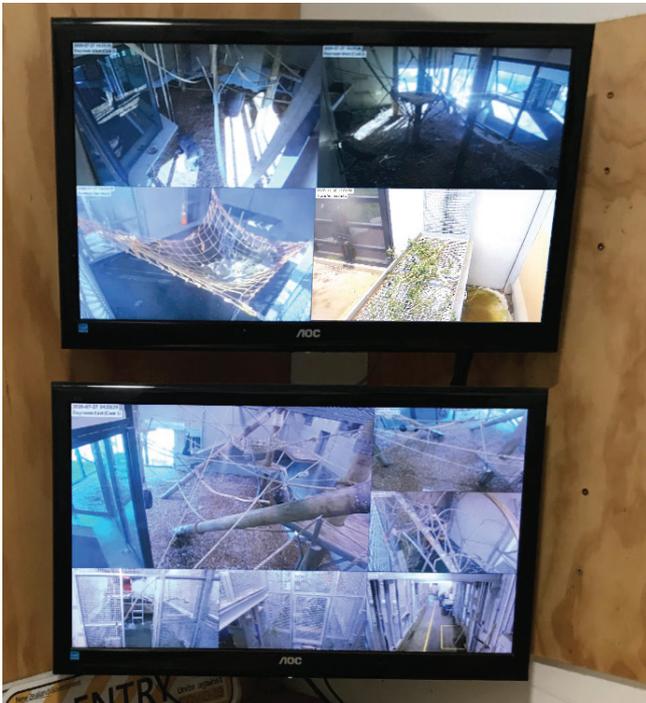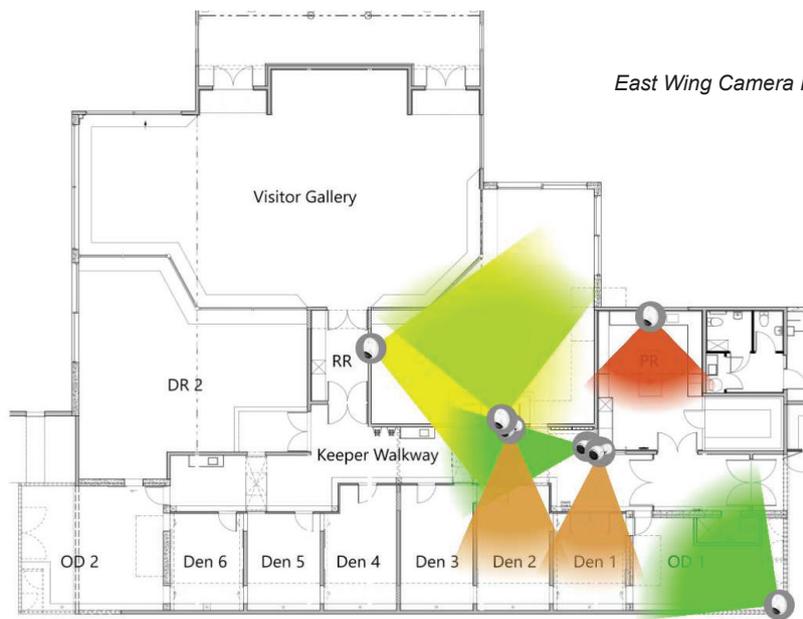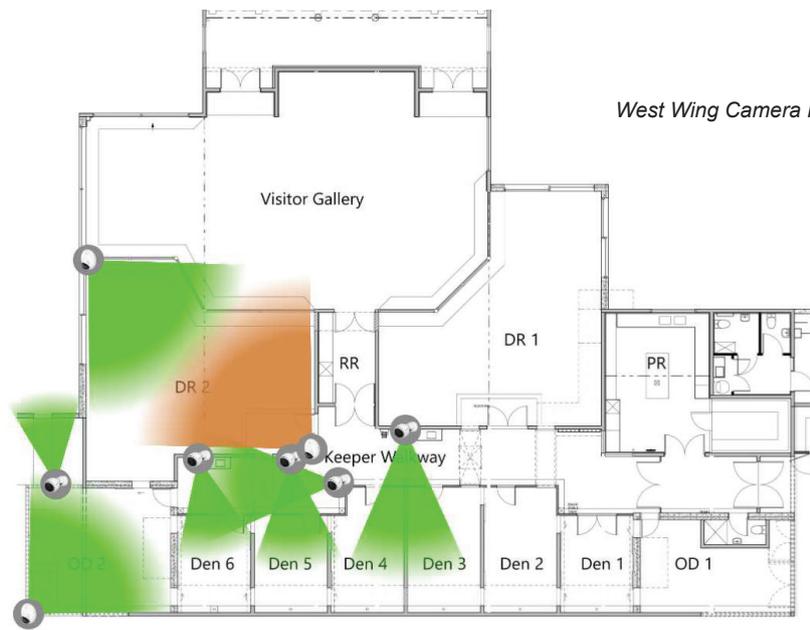
Future projects or plans for UniFi Protect:

Providing Orana Wildlife Park with the capability to check on all dangerous animals containment remotely is the aim. While there are projects planned for more UniFi cameras, an upgrade to the camera system employed to monitor cheetah breeding facilities may be required. UniFi Protect would increase surveillance ease of use and robustness while providing 950nm IR illumination, which is beyond predator perception (unlike 850nm light used on many cameras).

More Information - Notes on setup:

In effect, Orana Wildlife Park has two parallel systems; one for Siamang Gibbon and one for Gorilla areas. In total products used were; 2 x UNVR 2TB, 2 x PC, 15 x UVC-G3 cameras, 2 x third-party cameras, 2 x UniFi AP's, 1 x AirOS bridge to office/internet, 2 x UniFi Switch 24 (one is PoE):
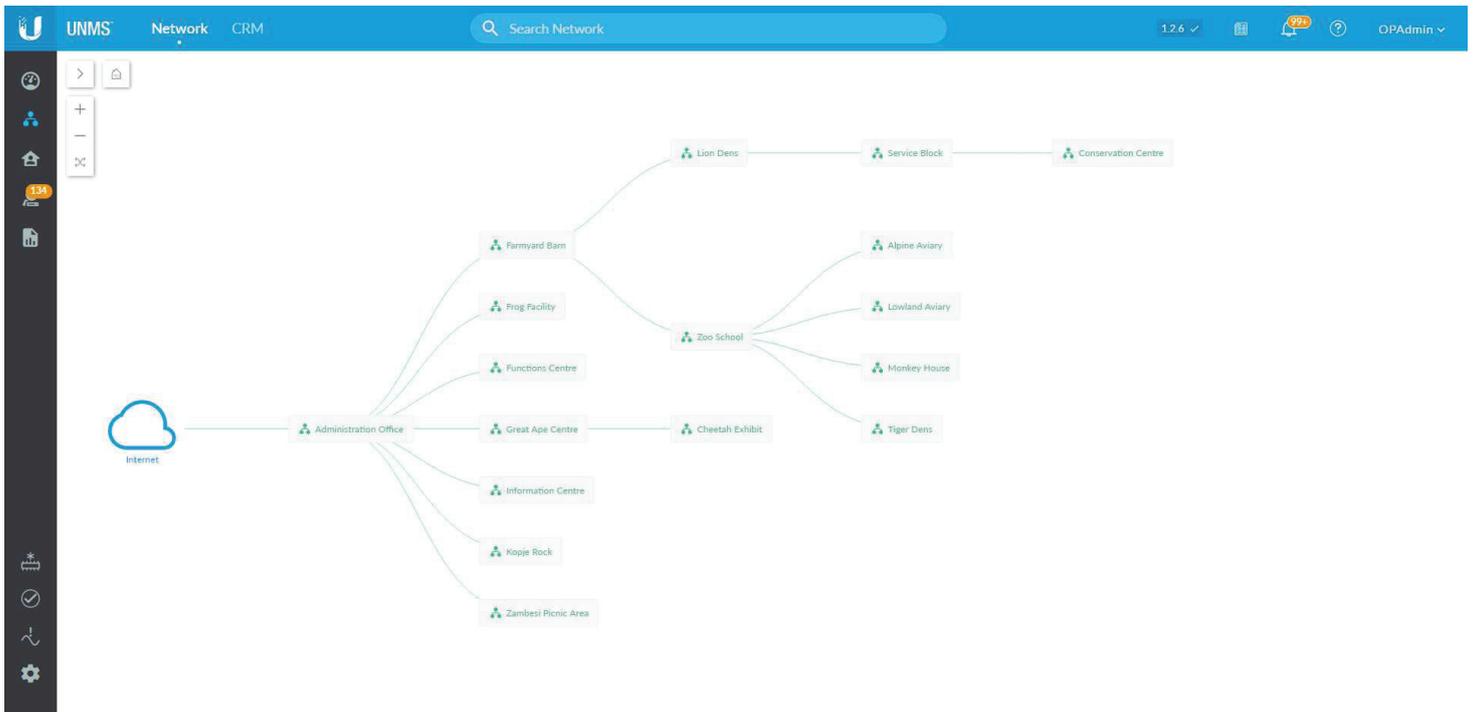
- Each PC browses one of the NVR's. The HDMI output from each PC is sent to a LenKing HDMI to IP video transmitter, which broadcasts on its allocated subnet.
- LenKing IP to HDMI video receivers are attached to each of 5 monitors
    Displays the appropriate video feeds depending on subnet
    Subnets are allocated by port profiles on UniFi Switches
        By changing the port profile on the switch, I can change whether the monitor displays the Siamang Gibbon or Gorilla.
- Dual keyboard and mouse control is effected through USB to CAT6 converters at a secondary location (PR) and direct connection to PC (RR) and InputDirector to give a software KVM capability that spans both computers
- PTZ cameras managed by IP Camera Viewer
- PR – Preparation Room
- RR – Resource Room
- RC – Roof Cabinet

West Wing Camera Management

East Wing Camera Management

UniFi SDN Controller

UniFi UNMS Structure Layout