High capacity wireless network brings blast of colour to North Canterbury

About: Inspired by the traditional Indian Holi Festival, the Rangiora Festival of Colour focuses on bringing life and colour to our community and celebrate it's diversity and energy with music, food, dance & of course throwing colour over friends, family & strangers!

Need:
To blanket the area with a high capacity wireless network capable of hosting multiple clients.

Solution:
A number of Ubiquiti outdoor access points mixed with Ubiquiti point-to-multi-point wireless.

Requirements:

UDM

AP-FlexHD

UWB-XG-Basestation

Switch XG 6 POE-1

LAP-120

NBE-5AC-GEN2

Results:
An impressive network set-up with low latency and extremely high speed allowing multiple users to log on at once.

"This is the first-time we have had a professional Wi-Fi setup at one of our festivals. In the past we have had makeshift arrangements which simply haven't performed as we needed. At this years Rangiora Festival of Colour, the WiFi provided by Go Wireless NZ performed above expectations."

- Karl Horwarth, Event Manager.

Reasons for the product(s) deployment?

At events there is an expectation to supply the audience access to WiFi and at the Rangiora Colour Festival we were anticipating a crowd of 2500-3000 people. "It is to our benefit that users can log in, live stream and share photographs and footage from the day, tagging us on social media for fast spreading endorsements which instantly encourages larger attendance," says Karl Horwarth, Event Manager for the Rangiora Colour Festival.

What do you like about the product/service?

"As a networking engineer, the best feature of UniFi is the cloud monitoring that comes free in the UniFi Controller software when purchasing Ubiquiti UniFi Hardware," Explains Matt Wilson, Director of WiFi Guys Ltd who deployed the wireless network. This quality checking offers peace of mind when running an event and live statistics to offer a high quality service to the customer. The UniFi Controller also offers the capability to make configurations on the fly if required. Similar to the UniFi Controller, the UNMS (Ubiquiti Network Management System) offers rich monitoring and control of the PTMP (Point-to-Multipoint) network."

What do you dislike about the product/service?

"Nothing I can think of, it proved to be a reliable solution that did the job, the customer was happy with the results," Matt says.
"The main challenges which we resolved with this installation was the ability to have line-of-site to the PTMP network, explains Matt. "We had to locate the repeater hardware in the correct location, get access to power while keeping the deployment secure and away from the public to eliminate the risk of vandalising or stealing of equipment." says Matt.

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

"This is the first-time we have had a professional Wi-Fi setup at one of our festivals," says Karl. "In the past we have had makeshift arrangements which simply haven't performed as we needed. At this year's Rangiora Festival of Colour, the WiFi provided by Go Wireless NZ performed above expectations. It was not only used by the public (which made posting photos and hashtags from the event much easier, a huge publicity benefit) but it also provided volunteers, event organisers and our infrastructure partners with a very useful tool. As organisers we were able to live stream, volunteers could also assist on social media, and our infrastructure partners could access the internet on their laptops to assist with broadcasting to the big screen - images, clips and sound," concludes Karl. "We were incredibly happy with the results."
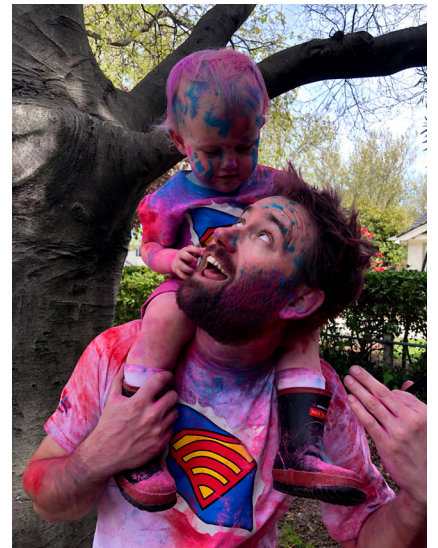
Recommendations for others considering the product:

"We recommend Ubiquiti Networks hardware and software for event wi-fi. The monitoring and control provided by the free software makes for a stress free event and a high quality service to the customer," Matt suggests.

"By adding extra Nanobeams with PoE passive pass through and UniFi cameras to this deployment, you could have the option of additional live stream or security to an event like this for such areas as lost and found."

More information - Notes on setup:

Internet access was provided to The Rangiora Colour Festival by local WISP Amuri Net, while Matt Wilson of WiFi Guys deployed the solution which was terminated at the Town Hall using a UniFi Dream Machine.

A PTMP (point-to-multipoint) solution was created using a LAP-120 access point at the town hall, covering a 120° area where multiple NBE-5AC-GEN2 were connected as client devices for the festival.

Using a combination of UniFi Flex HD and UniFi BaseStation XG access points provided free wireless to clients. These were powered off a UniFi Switch XG 6POE.

Carpark Entrance

Waimakariri District Council Carpark
Park Entrance

Vehicle Access

STAGE

ST JOHNS

PARTY ZONE

KIDZONE

FOOD ZONE

CUBE
25m
17m
9m
5m
43m
33m
28m
15m
28m
44m
11.5m

Percival Street

Queen Street

Park Entrance

Bollards	
Rubbish Bins	
Park Bench	
Picnic Table	
Trees	
Flower Bed	
Surrounding park benches	
Pathways	
Power Boxes	
Rotunda	
Gardens	
Hedges	
Carparks	
Playground	
Toilet	
Fountain	
Water Tap	

UniFi Network

Traffic Stats

Add category   Clear categories

14.7 GB TRAFFIC

Network Protocols	6.39 GB	Streaming Media	58.8 MB	Security Update	256 KB	Unknown	7.39 GB
File Transfer	429 MB	Games	3.05 MB	Business	210 KB		
Web	265 MB	Instant messaging	967 KB	Network Management	154 KB		
Social Network	202 MB	Mail and Collaboration	478 KB	Voice over IP	97.8 KB		

Overview   Apps   Users

Network protocols
6.38 GB TRAFFIC

HTTP Protocol over TLS ...	6.3 GB
Google APIs(SSL)	59.9 MB
SSL/TLS	17.6 MB
Lets Encrypt	1.56 MB
Google User Content(SSL)	1.27 MB
Microsoft Authenticatio...	719 KB
Unknown / Other	4.78 MB

File sharing services and tools
429 MB TRAFFIC

Web File Transfer	427 MB
iCloud	2.21 MB
OneDrive	442 KB

Web services
265 MB TRAFFIC

Google Play	156 MB
AppStore	70.4 MB
Amazon	13 MB
Akamai.net	7.86 MB
QUIC	6.59 MB
HTTP	6.42 MB
Unknown / Other	4.51 MB

Social networks
202 MB TRAFFIC

Facebook	110 MB
Instagram	42.2 MB
LinkedIn	47 KB

Media streaming services
58.8 MB TRAFFIC

Youtube	29.8 MB
Netflix	20.1 MB
Web Streaming	4.6 MB
iTunes	2.54 MB
Spotify	1.42 MB
MP4	158 KB

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vodafone NZ   85% 3:31
192.168.1.1:8880/gues

Go Wireless NZ Ltd.
WIFI GUYS Making WiFi Simple...
amuri.net

Internet provided by Amuri Net
WiFi installation by WiFi Guys
Equipment provided by Go Wireless NZ

Guest Access
CONNECT

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vodafone NZ   78% 8:50

Devices

Ablution Block Access Point	23h 49m	
AP-FlexHD		CONNECTED
Router WiFi Controller	1d 5h	
Dream Machine		CONNECTED
Stage Access Point	4h 29m	
AP-FlexHD		CONNECTED
Stage Access Point XG	4h 28m	
AP-XG-BaseStation		CONNECTED
Stage Switch	4h 30m	
Switch XG 6 POE-1...		CONNECTED (1000 FDX)

Dashboard   Devices   Clients   Statistics   Control

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vodafone NZ   78% 8:50

Dashboard

Everything is good!
Average device satisfaction is 93 %

93 %
Wi-Fi Experience

Utilization Past 24Hrs   43%

Internet connection is OK

139 Clients
115   24

Most Active Clients
60:14:66:20...   f0:51:36:77...   Georgias-i...   Chloe   Blakes-iPh...

Most Active Applications

Dashboard   Devices   Clients   Statistics   Control

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vodafone NZ   78% 8:51

Statistics

OVERVIEW   TRAFFIC

6.5 GB TRAFFIC

Network protocols	2.6 GB
Media streaming services	491.5 MB
Web services	420.2 MB
Social networks	418.7 MB
File sharing services and tools	22.7 MB
Instant messengers	4 MB
Online games	3.4 MB
VoIP services	1.3 MB
Unknown / Other	2.6 GB

Overview   Apps   Users

Network protocols
2.6 GB

HTTP Protocol over T...	2.5 GB
Google APIs(SSL)	36.3 MB
Lets Encrypt	6.2 MB

Dashboard   Devices   Clients   Statistics   Control

UBIQUITI NETWORKS

amuri.net

WIFI GUYS Making WiFi Simple...