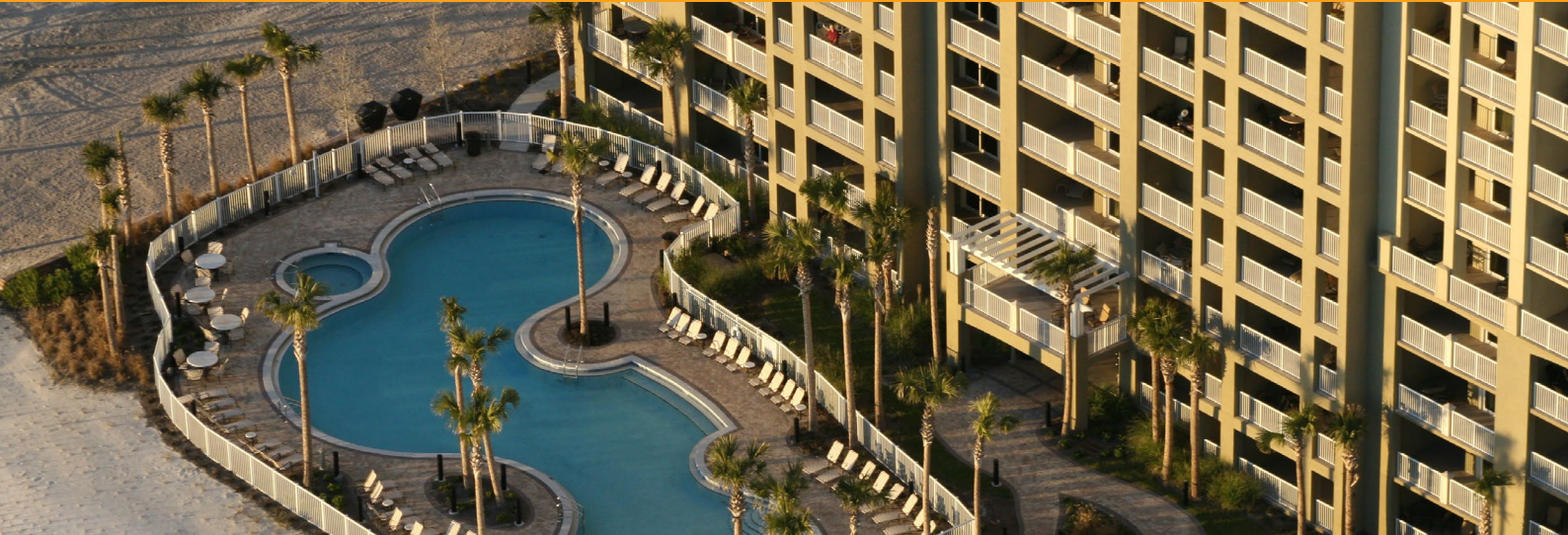


CASE STUDY: NFT 2ac & NFT 3ac

Grand Panama Beach Resort | Panama City Beach, Florida



Context

Grand Panama Beach Resort (Panama City Beach, Florida) hired Networkx Solutions, a networking services provider in North America, to redesign its Wi-Fi network. The resort used it for providing Internet access to its guests and residents, but it became underpowered.

The Grand Panama Beach Resort is one of the most beautiful vacation rentals in Panama City Beach with around 300 luxury condos and 650 feet of beach on the Gulf of Mexico.





Problem

Network Solutions faced several challenges in this project:

- The entire Wi-Fi network, extending over ~300 condos, had to be fully set up in just 30 days.
- Dense distribution of condos and concrete walls demanded careful network and channel planning so as to ensure good connectivity.
- The project required quality hardware as each access point was expected to connect anywhere from 4 to 20 end devices at once.
- Network Solutions had to look for cost-efficient hardware and software in order to keep costs low for a project as large as this.
- Since the Grand Panama Beach Resort is a modern luxury hotel with its distinct look and feel, the access points needed to fit the interior and esthetic of the resort.



Solution

The Wi-Fi network was built using LigoWave's NFT series. A total of 297 NFT access points was deployed throughout the resort. Many of them were NFT 2ac models with a handful of NFT 3ac APs installed in locations that needed more power (such as penthouses).

Network Solutions chose LigoWave because it best fit the requirements and setting of the resort.

The lower price point allowed to set up more APs compared to the previous network. Since virtually every condo now had its own dedicated access point, this effectively solved issues caused by the building's walls and ensured excellent connectivity even if there are more than 20 end devices connected to one AP at once.

A key reason for why Network Solutions chose the NFT series was that it also came with its own network management platform—the Infinity Controller. It sped up configuration with automated device onboarding, which reduced deployment time to meet the project deadline.

The Controller also allowed to plan channels effectively and to monitor the network remotely, if there is a need tweak some



settings or do troubleshooting at a later time.

Stephen Durr of Network Solutions explained "By choosing NFT 2ac, our budget allowed us to place an access point in each condo—and with such a large number of APs, network and channel planning is extremely important. We've implemented better switching, routing, and network design by using VLANs for each condominium unit, along with private SSIDs and WPA2 keys. The Infinity Controller gave us the flexibility for good channel management and was the prime reason that made this network a success, all of this inside our budget."

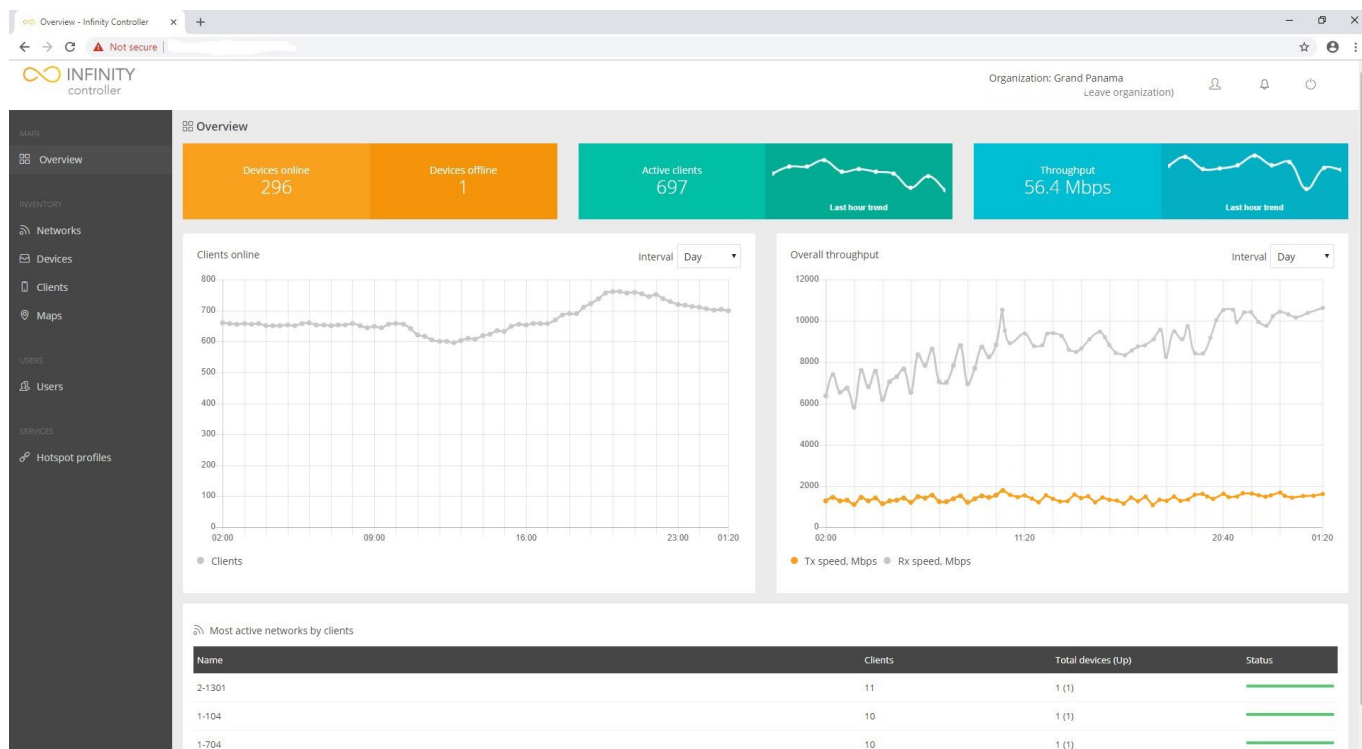
Network Solutions currently manage around 1,000 NFT access points across 10 locations using the Infinity Controller. Without the possibility to automatically apply settings and to control devices remotely, deploying and configuring hundreds of access points at a time would be near impossible.

Lastly, the resort's management were very pleased with the design of the NFT series. The 2ac and 3ac access points did not feel out of place, despite many of the condo having different interiors.



Conclusion

Wi-Fi has become a significant factor in choosing a place to stay—so significant, in fact, that failing to meet expectations may leave a hotel with a bad review and without a return customer. The Grand Panama Beach Resort was very pleased with the results, as it not only avoided potential bad reviews and lost clientele, but were also left surprised with how fast the network was deployed and how effectively it works now.



The Grand Panama Beach Resort network is quite busy with almost 800 clients connected and receiving over 10Gbps of aggregated throughput collectively.

Organization: Grand Panama (Leave organization)

View 1000

Quick device filter: All 297 Up 296 Down 1

Device name	Product	IPV4	MAC	Firmware	Date registered	Network	Clients
Ap_1	NFT 3ac	172.16.1.56	00:19:3B:0C	AP_QA-4.v7.60-1.57483	2019-01-31 16:17:35	2-708	4
Ap_1	NFT 3ac	172.16.1.130	00:19:3B:0C	AP_QA-4.v7.62.67012	2019-01-25 15:26:49	1-301	6
Ap_1	NFT 3ac	172.16.1.242	00:19:3B:0C	AP_QA-4.v7.56.50342	2019-01-16 14:42:28	1-1505	7
Ap_1	NFT 2ac	172.16.1.73	00:19:3B:10	AP_QA-3.v7.62.67011	2018-08-02 14:16:52	2-1001	7
Ap_1	NFT 2ac	172.16.1.76	00:19:3B:0D	AP_QA-3.v7.62.67011	2018-01-12 13:26:51	2-1004	2
Ap_1	NFT 2ac	172.16.2.36	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:09:58	1-2008	1
Ap_1	NFT 2ac	172.16.1.249	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:09:38	1-1603	0
Ap_1	NFT 2ac	172.16.2.33	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:09:14	1-2005	2
Ap_1	NFT 2ac	172.16.1.127	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:08:53	1-207	2
Ap_1	NFT 2ac	172.16.1.206	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:08:35	1-1105	0
Ap_1	NFT 2ac	172.16.1.235	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:08:11	1-1407	2
Ap_1	NFT 2ac	172.16.1.237	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:07:40	1-1409	2
Ap_1	NFT 2ac	172.16.1.171	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:07:15	1-706	1
Ap_1	NFT 2ac	172.16.1.98	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-11-01 18:06:34	2-1302	3
Ap_1	NFT 2ac	172.16.1.63	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-10-27 17:05:03	2-807	5
Ap_1	NFT 2ac	172.16.1.49	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-10-27 17:04:43	2-701	0
Ap_1	NFT 2ac	172.16.1.36	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-10-27 17:04:24	2-504	1
Ap_1	NFT 2ac	172.16.1.18	00:19:3B:0F	AP_QA-3.v7.62.67011	2017-10-27 17:03:58	2-302	2

A total of 297 NFT 2ac/3ac devices were deployed, each connecting up to 7 end devices at the moment of the screenshot.

Organization: Grand Panama

View 1000

Client MAC	IPV4	Device	Network	Radio	Signal	Session time	Rx	Tx
18:B4:30:1D	0.0.0.0	Ap_1	2-304	2.4 GHz	-60 dBm	1 sec.	28 B	145 B
F0:98:9D:7B	10.0.203.90	Ap_1	1-903	2.4 GHz	-53 dBm	5 sec.	16.48 KB	7.97 KB
A8:51:5B:58	10.1.38.78	Ap_1	1-1903	2.4 GHz	-85 dBm	15 sec.	1.16 KB	1.38 KB
4C:32:75:0A	10.0.209.2	Ap_1	1-909	2.4 GHz	-66 dBm	22 sec.	45.38 KB	31 KB
C8:F6:50:A6	10.1.48.22	Ap_1	1-2004	5 GHz	-79 dBm	22 sec.	2.88 KB	1.56 KB
94:E3:6D:76	10.0.147.4	Ap_1	1-301	2.4 GHz	-87 dBm	24 sec.	788 B	824 B
64:5A:ED:2D	10.0.158.73	Ap_1	1-403	2.4 GHz	-85 dBm	25 sec.	4.48 KB	2.46 KB
F0:4F:7C:17	169.254.193.22	Ap_1	1-209	2.4 GHz	-79 dBm	25 sec.	58.4 KB	11.51 KB
DC:A2:66:AC	0.0.0.0	Ap_1	1-2203	2.4 GHz	-59 dBm	26 sec.	380 B	491 B
E4:B2:FB:2E	10.1.3.10	Ap_1	1-1504	2.4 GHz	-79 dBm	26 sec.	4.49 KB	1.92 KB
18:B4:30:2C	10.1.13.41	Ap_1	1-1605	2.4 GHz	-82 dBm	31 sec.	82.22 KB	38.62 KB
FC:2A:9C:A8	10.0.204.42	Ap_1	1-904	2.4 GHz	-64 dBm	50 sec.	28.59 KB	98.99 KB
98:01:A7:AC	10.0.72.88	Ap_1	2-1001	5 GHz	-43 dBm	50 sec.	51.79 KB	48.94 KB
A0:4E:A7:80	10.0.158.74	Ap_1	1-403	2.4 GHz	-86 dBm	51 sec.	49.57 KB	87.22 KB
00:6B:9E:7B	10.0.204.4	Ap_1	1-904	2.4 GHz	-86 dBm	53 sec.	16.31 KB	73.43 KB
18:B4:30:02	10.1.40.5	Ap_1	1-1905	2.4 GHz	-55 dBm	1 min. 1 sec.	34.03 KB	26.17 KB
18:B4:30:29	10.0.18.2	Ap_1	2-303	2.4 GHz	-59 dBm	1 min. 1 sec.	53.19 KB	43.27 KB
44:EA:D8:32	10.0.181.22	Ap_1	1-608	2.4 GHz	-47 dBm	1 min. 28 sec.	436 B	442 B
F0:4F:7C:34	10.1.35.25	Ap_1	1-1809	5 GHz	-63 dBm	1 min. 31 sec.	8.01 KB	18.28 KB
8D:CA:68:B7	10.0.231.36	Ap_1	1-1204	2.4 GHz	-89 dBm	1 min. 33 sec.	11.61 KB	4.55 KB

The Infinity Controller lists all of the end devices and provides detailed statistics for analytics purposes.