

Director of Information Technology Scott Mahler worked closely with CDW to overhaul the Trump National Doral Miami's technological infrastructure.

# TECH HELPS TRUMP BUILD ULTIMATE GOLF RESORT

State-of-the-art technology is part of the Trump Organization's major renovation of the newly acquired Trump National Doral Miami.

## At a Glance

**ORGANIZATION:** Trump National Doral Miami

**LOCATION:** Doral, Fla.

**EMPLOYEES:** 1,000

**I.T. STAFF:** Three full-time

**DESCRIPTION:** Trump National Doral Miami is a golf resort and spa that features 693 guest rooms housed in 10 villas, five golf courses, more than 100,000 square feet of meeting space and a 48,000-square-foot spa with 33 treatment rooms. The property, originally called the Doral Golf Resort & Spa, opened in 1962.



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Time had not been kind to Doral Golf Resort & Spa near Miami. Built in 1962, the sprawling 800-acre retreat was once the epitome of luxury. But in the decades since, its décor had become outdated; the property had lost some of its splendor. Who better to restore the resort to its former glory than new owner Donald Trump?

The Trump Organization purchased Doral in 2012 for \$150 million and is investing another \$250 million to renovate the property. The massive facelift, which began last spring, includes gutting and rebuilding the clubhouse and the hotel's 693 guest rooms and 48 suites; modernizing ballrooms, spa facilities and restaurants; and enhancing the resort's five golf courses, including the famous Blue Monster course, which is home to the World Golf Championships-Cadillac Championship every March.

The two-year construction project, dubbed "Return to Grandeur," includes state-of-the-art technology throughout — from Wi-Fi wireless access and smart thermostats in every room to Voice over Internet Protocol (VoIP) and IPTV — all of which rides on a fast, new local area network (LAN).

"When we bought the resort, it was tired and worn down. We're putting \$250 million into it to make it the best golf resort in the world. Our properties always have to be the best, and IT is a serious component to that," says Donald's son Eric Trump, executive vice president of development and acquisitions for the Trump Organization.

## Nuts and Bolts

Renovations at the newly renamed Trump National Doral Miami resort started a year ago last March after the conclusion of the WGC-Cadillac Championship. As construction

crews knocked down walls, the IT department focused on the network first, building two fiber networks to ensure redundancy and installing new CAT 6 cabling as each building was retrofitted.

This provided Scott Mahler, the resort's director of information technology, the foundation to upgrade the resort's antiquated 10/100 megabit-per-second Ethernet LAN. The three-person IT team standardized on new Cisco Systems networking equipment last July. A Cisco Nexus 7000 Series switch, featuring 10 gigabit-per-second speeds, lies at the core and is paired with 75 Cisco Catalyst 3850 Series edge switches, providing 1Gbps speeds from the wiring closet to individual nodes.

Mahler and his team designed the network with scalability and redundancy in mind. The Cisco Nexus 7000 switch can expand to 40Gbps and 100Gbps speeds. It also features two power supplies and two power supply supervisors. If one power supply or supervisor goes down, the other keeps the switch running, says CDW Network Solution Architect Manuel Rocha, who helped design the network.

The new network's faster speeds and larger capacity allow the IT staff to install a high-speed Wi-Fi wireless network, migrate from an old analog phone system to VoIP and run all applications, including the property management system, security cameras and a new audio-visual system for meetings.

"With the backbone network in place, we could integrate all the other systems that run on top of it," Mahler says. "Everything is riding on IP — even our mini bars are being recorded from IP for tracking purposes."

When guests check in to their rooms, for example, the resort's new temperature control system automatically lowers the thermostat from 76 degrees to a more

# 425

802.11n wireless access points have been installed at Trump National Doral Miami. When the renovations are complete in early 2015, the resort will have up to

# 1,000

access points.

SOURCE: Trump National Doral Miami



comfortable 72. But when guests check out, it automatically increases the temperature back to 76 to save on costs.

"We utilize energy incredibly efficiently," Trump says.

## Mixing New and Old

The installation of a new network and a VoIP system wasn't as simple as ripping out and replacing old equipment. Because the Trumps were taking a phased renovation approach and keeping the resort open during construction, the IT department needed to integrate old and new while having both systems running simultaneously. As each building is renovated, the IT staff cuts everything over to the new systems.

Mahler decided to switch to VoIP because of the efficiencies the technology brings. An IP phone system is much easier to manage and maintain, and instead of having to update the wiring for analog phone lines, the IT staff could simply use the converged IP network, cutting down on cabling costs.

Because the resort is doing a phased rollout of the new system, integration with its existing Avaya PBX is important. So Mahler stayed with the same vendor and purchased Avaya's VoIP system, Aura Communications Manager 6.0.

CDW played a significant role by designing and installing the new Cisco network and Avaya VoIP system as well as integrating them with the existing infrastructure. With the phone system, for example, Faruk Azam, the principal consulting engineer for CDW, created a bridge that links the traditional PBX to the VoIP system, allowing voice calls from the old system to be routed via VoIP.

Azam "got all the systems talking together, so they could communicate and work simultaneously," Mahler says.

## Power and Backup

Last summer, Mahler and his staff also built a new server room with two new HP ProLiant DL380p servers, VMware virtualization software and an HP P2000 G3 MSA Array System with 15 terabytes of storage. The previous data center equipment was old and had no redundancy, so it was time for an upgrade, Mahler says.

Eight or nine virtual machines are now running the resort's property management software, two VoIP servers, the



## The Wi-Fi Game

To manage and bill for wireless Internet access, Trump National Doral Miami's IT staff purchased two Nomadix AG 5800 gateway appliances: one that provides dedicated bandwidth for groups that come to the resort for conferences, meetings and social events, and the other for individual guests.

If a group wants to provide users with 50 megabits per second of bandwidth, for example, the IT staff can set up a personalized portal page where guests can log in with a special password given to them when they arrive, says Scott Mahler, the resort's director of information technology.

The second Nomadix appliance is tied into the resort's property management system. When guests check in, they can log in to a Nomadix captive portal page and choose between different wireless bandwidth plans. Guests are given 10Mbps speeds, but they can double it to 20Mbps for a fee.

point-of-sale system, a database and file-and-print servers.

CDW partnered with APC to provide Mahler with a power and cooling assessment to determine the type of racks and power and cooling equipment the resort required for the new server room, says CDW Field Account Executive Joe Rodriguez.

As a result, the resort bought six APC NetShelter SX 42U AR3100 server racks to house the new HP servers, along with Cisco networking gear and an APC Smart-UPS VT 30kVA uninterruptible power supply to protect against blackouts, brownouts and power surges.

While the old APC system provided a mere 10 minutes of battery backup, the new system delivers between 45 minutes to an hour of emergency power, Mahler says.

"We are a 24-hour property, and we can't allow downtime to impact our business," he says. "The new APC unit gives us more time in case of emergencies and if power goes out."

## Wi-Fi and Guests

For Trump National Doral Miami, it's not good enough just to have a wireless network. The resort must have a Wi-Fi network with the speed and capacity to handle thousands of notebook, tablet and smartphone users at any given time.



The guest rooms are built with thick concrete, which reduces wireless signal strength and prevents IT workers from simply placing hotspots along the hallways and having each access point (AP) serve multiple rooms.

To ensure optimal wireless coverage, Mahler placed APs in every guest room. He standardized on Ruckus Wireless' Wi-Fi equipment, whose APs double as four-port switches. Doing so simplifies cabling into each room and aids with the VoIP installation.

The built-in switch supports Power over Ethernet, which allows the IT department to connect and power two IP phones in each room, provides guests with a wired network connection and delivers IP-based television to each room's 55-inch LED TV.

"The built-in switch on the APs saved us from having to run multiple cables and add extra power sources into the rooms," Mahler says.

He hired a CDW service provider to perform a site survey, determine the best placement of APs and ensure full coverage indoors and outdoors. "There is no dead spot or weak signal throughout the property," Mahler adds.

**"We're putting \$250 million into it to make it the best golf resort in the world."**

— Eric Trump, executive vice president of development and acquisitions, Trump Organization

## Five-Star and Luxurious

The posh resort is taking advantage of mobile devices and the wireless network to improve customer service and make it more efficient. Restaurant and pool servers — as well as workers at golf course concession stands — all use tablets as point-of-sale devices to take orders and handle transactions.

The IT staff has also issued Apple iPod Touch devices to about 100 housekeepers. When a guest calls the front desk and requests extra towels, the request is typed into a customer service application and the next available staffer is notified through an app on the mobile device. Supervisors and managers are equipped with iPad devices, so they can conduct inspections and make sure everything is in order.

## Trump National Doral Miami Renovation Timeline

**March 2013** — Laid fiber for two fiber networks and added new CAT 6 cabling in buildings

**July 2013** — Installed Cisco network and built new server room with APC racks and power and cooling equipment

**July 2013** — Deployed Avaya VoIP system

**September 2013** — Installed Ruckus Wireless Wi-Fi equipment and Nomadix gateway appliances to bill guests for wireless usage

**September 2013** — Installed HP servers, VMware and an HP storage area network

**October 2013** — Continued to deploy Wi-Fi access points and IP phones

**December 2013** — Equipped employees with iPod Touch and iPad devices



Overall, the resort is well on its way to becoming an ultimate golf and vacation destination and a perfect venue for events, Trump says. Despite keeping the resort open during construction, work is being completed at a rapid pace.

The Blue Monster golf course reopened in mid-December, and the new clubhouse opened its doors this February, just in time for the resort to host the annual WGC-Cadillac Championship in March. The ballrooms and meeting facilities have been remodeled, and while half the guest rooms have been rebuilt, the rest will be completed by early 2015.

"What we've done at Doral is nothing short of incredible in the amount of time we've owned it," Trump says.

Mahler says CDW played a pivotal role, from supplying technology to design and installation. CDW even held weekly meetings with Mahler to make sure everything was on track, says CDW Executive Account Manager Brian Huber. "He was running all these projects concurrently, and we helped him orchestrate it," he says.

About 25 different technology systems are now up and running at Trump National Doral. So far, everything is going smoothly as Mahler accomplishes the finishing IT touches.

"It feels like the whole world is riding on the network, but everything is working seamlessly," he says. "It was very hard work, but it's a huge success."

Brian Smith



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