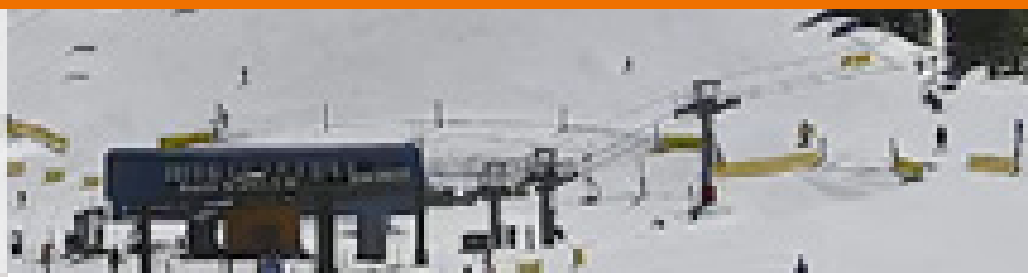
TOWN OF VAIL

Staying Connected on the Slopes

CASE STUDY



OVERVIEW

Vail, Colorado is a village located in the mountains west of Denver that just so happens to be the home of a world-renowned ski resort. With a year-round population of only about 5,000, Vail hosts nearly two million visitors and a number of major sports and entertainment events annually. Those visiting Vail are cosmopolitan world travelers with a common demand: Wi-Fi. Since the wireless service is a shared resource between the Vail Resort and the town of Vail, Vail has become the perfect model of a Smart-City.

WHAT THEY NEEDED

- A replacement for their existing, under-performing wireless network
- A reliable wireless network to service the expanding guest and city worker needs for wireless network access
- A network that could grow to support exploding demand from increased numbers of visitors

WHAT THEY DID

- Deployed 120+ Ruckus ZoneFlex 802.11n and 802.11ac indoor and outdoor access points over thirteen square miles
- Installed 2 ZoneDirector 3000 (N+1) controllers

WHAT THEY ACHIEVED

- A town and ski area network that sustains thousands of active daily users which includes guest and city workers
- Satisfied the live high definition (HD) Wi-Fi bandwidth requirements for sporting and entertainment events
- Built a network that is able to easily grow as their city business grows

VAIL'S WI-FI IS DEPLOYED FOR GUEST AND CITY PERSONNEL

People come from all over the world to ski at Vail—more than 170K per ski season. Vail has become a magnet for not only ski buffs but fishermen, general sports enthusiasts and music aficionados. Vail has become a year round attraction where visitors expect to be connected like they are at home. To meet this expectation, Vail stepped up to become one of the early "Smart Cities"—that is, they deployed Wi-Fi liberally across their city and slopes to maintain that always-on expectation. The network does more than just meet the needs of demanding visitors: the city of Vail utilizes Wi-Fi for monitoring parking lots, and ski, riverside, and park areas and to assist first responders and police.

CHALLENGE

The legacy Wi-Fi network, from AT&T, was aging, unreliable, and difficult to support. The turning point was when AT&T decided to get out of this business and the town of Vail found themselves needing a new Wi-Fi provider. Reliability, high-performance, and a design that could grow were critical decision factors in selecting the new vendor.

After evaluating several different vendors, Vail found Ruckus best met the town's requirements and they deployed a Wi-Fi network that covered some thirteen miles of outdoor terrain that included ski and village areas. To insure reliable connections to the Internet, Vail also installed a fiber backbone for guaranteeing high performance and reliability of the Wi-Fi service.

SOLUTION

The Wi-Fi network now consists of some 120+ Ruckus ZoneFlex 7782 and R600 access points that are interconnected via a fiber system. The network is controlled using a dual-ZoneDirector 3000 configuration that provides redundancy in the unlikely event of hardware failure.

The outdoor network covers some thirteen square miles of terrain where Vail municipal employees can wirelessly monitor auto traffic, river and snow levels, parking meters and assist first responders and police in emergencies. Vail guests access the WLAN for all kinds of applications of their interest.

On any given day, there can be more than 4,000 users active on the network whether on the slopes, by the river, or in the village. Some 31% of the traffic is HD video which can be from streaming services or live HD video streams from television network sources for sports or entertainment events taking place in Vail. In any given month, there can be over 60,000 unique MAC addresses on the network. Approximately 88+ TB of traffic traverses the network annually.

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"Vail is a world class ski resort and people not only expect great Wi-Fi, they demand it!"

RON BRADEN
Vail City IT manager

"We've been building public Wi-Fi for about 17 years and the Ruckus product is about the only outdoor product we feel comfortable with. Outdoor Wi-Fi is subject to a lot of interference, is in unregulated spectrum and Ruckus, with its BeamFlex+ technology, is able to give us that competitive edge over other systems... we would not be successful without the product."

JIM SELBY
CEO of Aspen Wireless, Ruckus channel partner who installed the Vail system

BENEFIT

Once Vail deployed the network, the town saw immediate benefits:

- A more reliable WLAN, providing higher data rate services to guests and municipal employees alike
- Dramatic drop in WLAN support calls, lowering the IT overhead
- A more efficient city workforce with faster responses to urgent situations
- Consistent HD services for wireless video for guests and national network TV events
- Happier skiers that stopped complaining about the Wi-Fi.

WHAT IS NEXT?

- The network continues to grow both in area covered and in bandwidth delivered.
- The next upgrade for the Vail Wi-Fi system will be migrating to Virtual SmartZone and new 802.11ac Wave 2 access points.
- Vail is planning to release its own Vail Resort App for smartphones. This app will provide ski conditions, transportation scheduling, event schedules, weather info, and hotel/restaurant information... all available over Wi-Fi.

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