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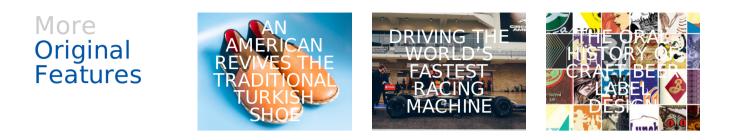
## Standing Alert with the UPS Hot Spares

FEATURES By JAN TEGLER on 4.22.15 Photo by JAN TEGLER

t precisely 2200 Zulu (7 PM EDT) on the night of March 31, we sit down with eight aircrew members and a coordinator around a long wood veneer table in a ready-room. A live speakerphone on the table adds meteorologists and maintenance and operations specialists from a nearby command center to the mix. A briefing ensues. Flight crews are given weather information via the meteorologists and a live CONUS (continental United States) weather map projected on a large screen across the room. Each crew member



scans a preflight information sheet, which includes fuel status and weight and balance information for their assigned aircraft.



Moments before, we had been on the flight deck of a large twin-engine jet, going through preflight procedures with one of the crews seated at the table. After roughly six minutes, the brief is concluded and the highly experienced pilots relax, some finding comfortable seats in the ready-room, others checking into crew quarters nearby.

"I think the hardest thing, though it doesn't happen too often, is when you're asleep and you're called", says Captain Lance Mussler. "You've got to launch in 30 minutes. You've got to wake up and have your wits about you. It's important to be safe and you try to cover everything but there's pressure to get airborne."

Mussler, along with First Officer Gary Bernard and the other aircrew are on alert. But we're not at a military air base. And the command center on the phone wasn't the NORAD (North American Aerospace Defense Command) Integrated Command Center at Peterson Air Force Base in



Colorado Springs.

Hot-spare aircraft and crews are on alert to "protect" inbound and outbound "Next Day Air" volume. We're in Louisville, Kentucky at the UPS Worldport, the largest fully automated package handling facility in the world and the main air hub for the shipping and logistics behemoth in the United States.

Bernard, Mussler and a rotating roster of company pilots are on-alert every night of the year — not to intercept unidentified aircraft penetrating the

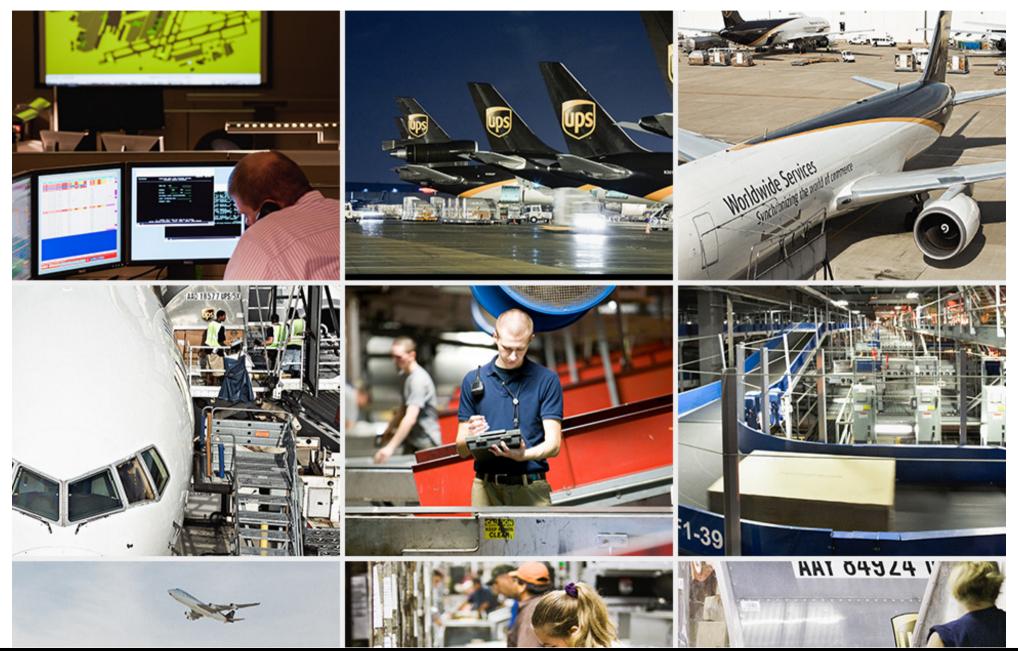
nation's Air Defense Identification Zones — but to rescue "volume", assuring that the package you sent or are expecting via UPS gets to you on time.

They're part of the UPS "hot-spares" program, a contingency operation with roots extending back to the late 1980s, a handful of years after the shipping giant entered the global air freight business. How and by whom the program was created has faded from corporate memory but there's little doubt it was modeled after the US Air Force's alert force, exemplified by the fighter-interceptors of Air Defense Command during the Cold War and today's NORAD structure.

The basic idea is simple. Hot-spare aircraft and crews are on alert to "protect" inbound and outbound "Next Day Air" volume, which amounts

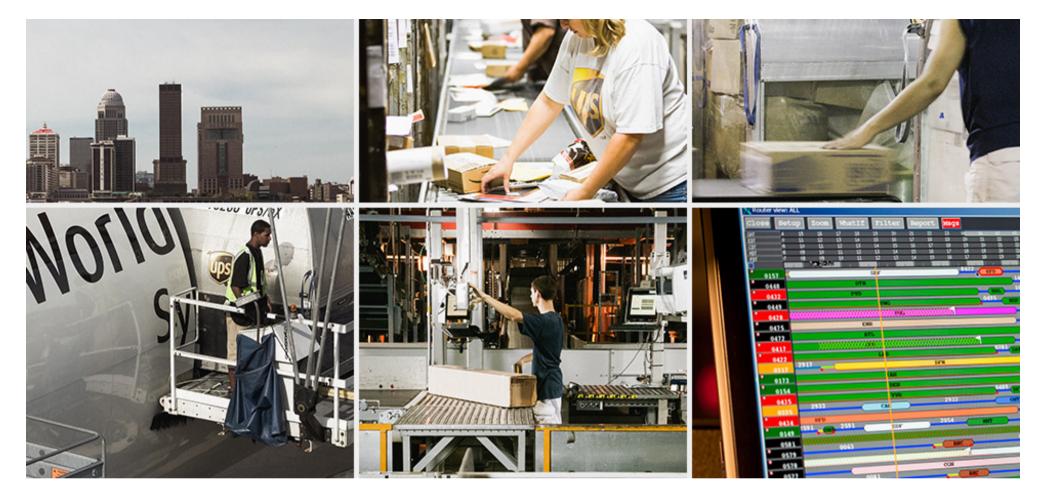


to nearly 1.6 million packages coming to Worldport (primarily) from collocated UPS air hubs and sort-hub facilities domestically and internationally every night.



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Packages gathered at 11 air hub/sort facilities across the US and beyond at 9:00 p.m. start arriving in Louisville near 11:00 p.m. The airspace over Louisville International Airport literally lights up as an average 105 jets (nearly half of UPS Airlines' 237-jet fleet) land over the course of the next three hours.

During that period, a dizzying flurry of well-choreographed sorting takes place in the 5.2 million-square-foot Worldport sort-hub. Standing in the small-package section of the gigantic facility just after midnight with



hundreds of thousands of parcels whizzing around us on conveyor belts we felt as if we were adrift in a river of freight. In less than three hours those packages would be sorted and loaded onto aircraft for the outbound leg of their 24-hour journey to your doorstep.

But during the airborne portion of that odyssey, anything can happen. That's why hot-spares aircraft and aircrew are on alert. "Most commonly, we launch hot-spares because of aircraft breaking or due to weather", Steve Merchant, UPS Contingency Department Manager, tells me.

Just behind where we're conversing, through a large glass window, is the UPS command center. Dozens of air freight coordinators, crew schedulers, flight-planners, meteorologists, maintenance reps and Contingency Department specialists sit in a huge darkened room in front of banks of computers surrounded by jumbo monitors mounted on walls.

"But it can be anything", Merchant continues. "Late-arriving volume, Crews never know exactly where they may end up when launched, but given the aircraft type they're assigned they have a good idea.



additional volume during peak seasons, a crew member falls during a preflight walk-around and hits his head, potato beetles infesting planes — we've even had a mouse in the cockpit." All are reasons to launch one of the four types of hot-spare aircraft (Boeing 757 and 767, Airbus A300 or MD-11) on hand in Louisville. But launching a hot spare is never done lightly.

"Contingency has to evaluate the best course of action before we launch a hot", Merchant stresses. "What resources do we have available? First, what's in the sky? What's close by to any contingency? Then we look at what's on the ground. Do I have crews that can crew that aircraft sitting on the ground? Then we ask, what ferry flights might we have in the sky? What existing flights are in the sky? What's my next course of action?"

Once all other options are exhausted, the command center calls flight control and a hot spare appropriate to handle the size and volume of packages (narrow-body or wide-body) to be rescued is scrambled.

30 minutes after the briefing is over several loud tones echo through the ready room. Pagers are squawking and Julie Hollkamp, Lead Coordinator of Next Day Air, runs to a phone. Captain Mussler and First Officer Bernard (we watched them preflight earlier), manning the Airbus A300, perk up but realize the alert is not for them.



An MD-11 in Dallas has a maintenance issue. During preflight, the aircrew discovered a problem with the captain's side of the windshield. The freighter isn't going anywhere until maintenance solves the problem. Hollkamp gets the MD-11 alert-crew moving. Time is critical if the hot spare is to get to Dallas, rescue the cargo — up to 207,000 pounds of it — from the broken MD-11 and get back to Louisville in time for it to be sorted and head outbound.

In 2014, UPS scrambled 275 hot spares, recovering 1.5 million packages for about \$32 million in revenue and a 90 percent effective on-time delivery rate. "Typically we head right to the crew vans from here", ex-Maryland Air National Guard C-130 pilot Bernard explains. "If we're awoken, we call Julie and ask what's up. They tell us where we're going and give us our block-out time. We head to the airplane. It's already fueled and preflighted. Shortly after we get there the flight plan is delivered. We look it over and sign it. The load plan's already there. Then maintenance shows up. We get everything ready and off we go!"

Crews never know exactly where they may end up when launched, but given the aircraft type they're assigned they have a good idea.

"The distances we travel are typically within an hour and a half from



Louisville because that's the time frame for when the scheduled aircraft would launch from other sort facilities for Louisville, between 10:00 p.m. and 11:30 p.m. for the Midwest launches", 27-year UPS veteran Mussler notes. "Given that time limitation, you know there are five or six destinations you could be headed to."

Since 2001, NORAD has launched fighters to respond to more than 5,000 possible air threats around the US, averaging just over 350 scrambles per year. In 2014, UPS scrambled 275 hot spares, recovering 1.5 million packages for about \$32 million in revenue and a 90 percent effective on-time delivery rate.

"We have timelines we have to hit", Steve Merchant emphasizes. "We know when a package has to be at a certain place. That's what this whole program is designed to support."

As Bernard and Mussler cheerfully tell us: next time you're salivating for that gotta-have cell phone you ordered from a major online retailer yesterday, think of the UPS hot spare crews on alert while you sleep -ready to scramble!



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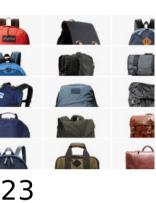
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Here they are: the 15 best day hikes, as told by you, our readers. All of the words and images below are straight from your submissions.

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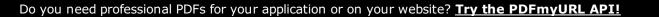
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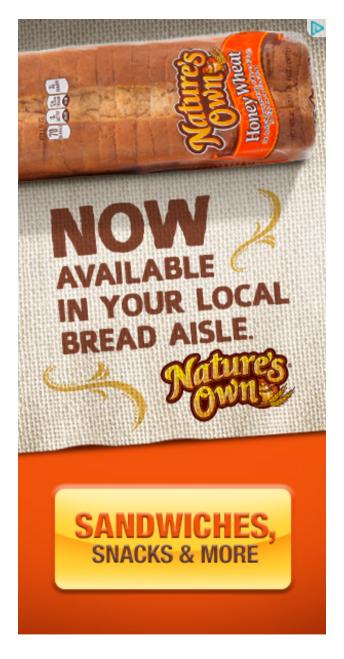


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