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Lt. Col. John Harbour and Capt. Timothy Gaumer take off in a KC-135 Stratotanker from Al Udeid AB, Qatar, Nov. 29, 2016. In the fight against ISIS, tankers extend the reach of USAF aircraft.



# MOBILITY MACHINATIONS

**T**he Air Force's air mobility fleet is meeting a huge and unrelenting need for fuel and airlift capability that is not expected to let up. Answering this demand signal is forcing Air Mobility Command (AMC) to think differently about how it plans, maintains its fleet, and even practices and exercises.

"There's an insatiable appetite for air mobility," Gen. Carlton D. Everhart II, AMC commander, told *Air Force Magazine*. "If you want to do an operation, you have to set the table before you can do it. Who sets the table? Air Mobility Command."

When the hammer came down in 2013 under budget cuts called for by

sequestration, AMC was forced to cut its main training exercise and competition: the Air Mobility Rodeo. This left the command without its premiere training event and competition, one that all of its mission sets could take part in. But it gave AMC a chance to completely rethink its exercise, and what it came up with is a reinvention of the concept. The first iteration of the rodeo's replacement is now set to happen this summer and is called Mobility Guardian.

Scheduled for July at JB Lewis-McChord, Wash., the massive exercise will include thousands of airmen and hundreds of aircraft—both US and international.

AMC plans to practice all its missions, including not just air refueling and airlift, but airfield seizure and setup, aeromedical evacuation, ground support, port operations, nuclear bomber support, parachute drops, and more, Everhart said. Twenty-three nations have been invited to either participate or watch, and international aircraft will take part, including C-17s, C-130s, A-400Ms, and tankers from allies. Those countries that can't afford to bring their own aircraft will be able to observe "the way we do things," Everhart said.

Air Mobility Command has for years supported other Air Force commands' major exercises, such as Red Flag and



A B-52 refuels from a KC-135 during Operation Inherent Resolve on Feb. 15. In 2016, KC-10s and KC-135s completed the vast majority of the coalition's aircraft refuelings.

## AMC is working hard to keep USAF's airlift and tanker capabilities healthy.

Green Flag, and those of other combatant commands, for example Foe Eagle and Cope North in the Pacific. For the first time, AMC will be the supported command and the focal point, with other commands and services coming in to help mobility crews train. More than 1,000 paratroopers are expected to jump and set up an airfield at the Yakima Training Center, with Army Multiple Launch Rocket Systems loaded on AMC aircraft to “shoot and scoot” in the training, Everhart said.

“Washington state becomes a power projection platform,” he said.

AMC has gotten good at what it does: taking off from the East Coast, stopping at a major hub in Europe, and

then flying “down the boulevard” to mission locations in the Middle East. But the command has not been able to completely practice all its capabilities, from setting the table for future operations to carrying out its missions to cleaning everything up at the end.

“We don't practice that. This exercise allows us to [be the joint force air component commander] and run a theater of operations,” Everhart said at the symposium. “This exercises a lot of pieces of the puzzle.”

This is not to say that today's US Central Command-centric operations are routine, and the pace of activity has been staggering. An AMC aircraft takes off once every 2.8 minutes for

a mission around the globe. While air strikes against ISIS get headlines, AMC jets are flying what commanders call a “tanker war” over Iraq and Syria.

In 2016, the Air Force's aging KC-10 Extenders and KC-135 Stratotankers flew the vast majority of the coalition's 13,064 tanker sorties, with 80,912 aircraft refuelings. The massive air war against ISIS has been a huge mobility operation. Almost 45 percent of sorties in the mission have been flown by USAF tankers.

In Everhart's experience, his fleet will be tasked about every two weeks to add another mission to its plate—such as humanitarian relief or other contingency operations.

SrA. Jordan Castellan/USAF



“When you call, we’re the first ones into the fight,” Everhart said at the AFA’s Air Warfare Symposium in Orlando, Fla., in early March. “And in joint coalition warfare, we’re the last ones out.”

Since 2010, the number of Total Force tankers has dropped from some 500 to 455 and from 112 C-5 Galaxies to 52. Two C-17 squadrons have closed: the 17th Airlift Squadron, JB Charleston, S.C., in 2015 and the 10th Airlift Squadron, JB Lewis-McChord, Wash., last year. While the operations tempo has dropped, from 1,200 daily sorties in 2010 to 600 today, the force structure changes have made the command’s job difficult.

“We’ve made a lot of adjustments. We’re just as busy as we were back then in the 2010 time frame,” Everhart said. “Just because of the budget constraints we had.”

To move forward, the command is taking large-scale steps to address the

health of its people, the AMC deployment process, and its fleet itself.

### SHIFTING THE FLEET

The bulk of the command’s airlift missions has come on the wings of its workhorse C-17 Globemaster III, the Air Force’s “new” airlifter that is out of production, with the oldest pushing 25 years old. The command needs to think about how to extend the life of this fleet and is about ready to “slap the table,” Everhart said, and go forward on the new plan, the Mobility Air Forces Enterprise Fleet Management concept.

In early 2017, the command notified its units, Air Education and Training Command, Congress, and other stakeholders about its intent to move C-17s across units in a strategic manner to keep the fleet healthy and flying longer. For example, AMC is identifying units that, for one reason or another, are flying more than others and will rotate C-17s so aircraft that have been flying intensively

**SSgt. Nicholas Otos marshals a C-17 Globemaster III into a spot on the flight line for inspection and servicing at Kadana AB, Japan, in September 2014. The air war against ISIS generates headlines, but AMC is busy worldwide.**

will be able to fly less in another unit. Similarly, a unit that flies in the Pacific often may face problems with corrosion that could limit the life of the aircraft, so the command will systematically shift such assets to areas where they will face less humidity and salt air.

The command is “trying to make it fair and impartial” and look at long-term savings by keeping its fleet mission capable.

“It’s not instant gratification,” Everhart said. “The big data will come in over time.”

The first base seeing the impact of this concept will be Altus AFB, Okla., the home of training for the C-17. The aircraft that reach the top five percent of the fleet’s flight hours will be rotated out of Altus, with less-used aircraft

# “WASHINGTON STATE BECOMES A POWER PROJECTION PLATFORM.”

AMC COMMANDER GEN. CARLTON EVERHART



Airmen from Travis AFB, Calif., race to their aircraft at JB Lewis-McChord, Wash., during Air Mobility Rodeo 2011. AMC's biennial readiness competition was canceled because of sequestration and other pressures in 2013 and 2015. Its replacement, Mobility Guardian, will commence this summer.

coming in. This model will later be applied elsewhere. The high-usage Altus aircraft will be switched out as they come out of depot maintenance and are fresh for their next mission, Everhart said.

“Aircraft swapouts are not new,” AMC spokesman Col. Christopher P. Karns said. “What makes this newsworthy is that the current plan involves the total Air Reserve Component and offers a Total Force solution.”

AMC expects that 15 to 18 of the Total Force's 222 C-17s will reach the end of their service life—42,750 equivalent flight hours—by 2040. But by managing its fleet, the command expects it could extend service life by an additional 10 to 20 years.

“The ultimate goal is to give me flexibility,” Everhart said. “Now I can build in a timetable [for the fleet's retirement]. There's still going to be a drop off the cliff, but this allows us to manage it.”

The command is also working within the confines laid out in the Fiscal 2016 National Defense Authorization Act that seeks to protect the Air National Guard by stipulating that an aircraft

move “does not degrade the capability” of the Guard.

“This practice will actually ensure the collective capacity of the entire fleet remains strong and promises benefits to all,” Karns said. “Fleet management aims to maximize service life, capacity, and done effectively, enables recapitalization space.”

The C-17 is just the start; the command is planning similar moves for its C-130, KC-10, KC-135, and even future KC-46 aircraft.

“The objective for the entire AMC fleet is to mitigate the effects of aging and aircraft wear-and-tear and to take measures to extend the service life of AMC platforms and maintain the health of the fleet,” Karns said.

## BIG DATA FOR DEPLOYMENTS

Fleet maintenance isn't the only area where Air Mobility Command wants to change how it operates. The command is now using emerging software and a Silicon Valley-esque approach to how it plans future operations and deployments.

It is working alongside industry and the military's new startup—the Defense

Innovation Unit Experimental—to use big data. AMC will study how it has been flying tanker operations to try to use predictive modeling to plan what its future commitments will be, Everhart said.

By using software that analyzes air tasking orders for operations—looking at how many flights are flown and how much fuel is being used in refueling operations—the command hopes to predict a more precise number of aircraft and aircrews.

“We have 455 tankers, but the world needs 479,” Everhart said. “Every combatant commander wants to touch those tankers.”

For example, the command might not need to deploy 100 tankers for some operations and instead, based on the predictive modeling and the way the sorties have been flown before, the same job could get done with just 30 tankers.

“That's a shock to the system,” Everhart said.

The idea is to both effectively use the tankers the command already has and to work better with the Air National Guard and Air Force Reserve. The command depends on citizen airmen heavily for its deployed operations, and if it can more accurately forecast what will be needed in the future, those reservists can in turn better plan their schedules for their employer.

While the idea came out of the need for tankers in US Central Command, AMC will drive the same models into its Tanker Airlift Control Center and all of its air and space operations centers to predict future deployments, home-base training, and other operations inside the country.

“It allows us to have more reachback and more deliberate planning for each of our precious assets,” Everhart said. This will become increasingly important over time as AMC's fleet is expected to further shrink and age, even as it continues to be tasked extraordinarily heavily. ✪