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US, allies and partners integrate for dynamic targeting kill-chain automation experiments

By Deb Henley

505th Command and Control Wing

The 805th Combat Training Squadron, also known as the Shadow Operations Center – Nellis, executed their annual Capstone event by experimenting with and developing tactics, techniques, and procedures for integrated two-way kill-chain automation between the operational and tactical command and control including battle management levels, to create competitive advantages for the United States and its allies and partners at Nellis Air Force Base, Nevada.

As the U.S. Air Force's lead Advanced Battle Management System Battle Lab, the ShOC-N (a.k.a. the Rhinos) experiments and assesses emerging concepts, applications, and technologies, as well as develops TTPs for the Multi-Domain Operations Center of the future. During the five-day Capstone event, the Battle Lab executed a constructive large-force employment, using data generated organically within the ShOC-N's modeling & simulation environment, to improve dynamic targeting kill-chain automation through software integration and associated TTP development.

"During the Capstone event in 2022, the ShOC-N proved it was possible to quantify, observe, and measure command and control; the idea of measuring C2 has been overlooked in the past because of the misconception that 'C2 is an art'. Human judgment will continue to play a critical role, but we're proving C2 decision making is far more science than art," said U.S. Air Force Col. Jonathan Zall, Department of the Air Force ABMS Cross Functional Team. "The Rhinos are taking the lead to correct the oversights of the past. They're developing and conducting crucial scientific C2 experiments."

Zall continued, discussing the 2023 Capstone event. "The ShOC is an incredibly professional class act, disciplined ensuring the data is credible, not just if they like the toys, but how



U.S. Air Force photos by Keith Kee

U.S., Coalition and Five Eye alliance partners experiment with Air Combat Command's Tactical Operations Center-enabled Control Reporting Center during the Shadow Operations Center – Nellis' Capstone event at Nellis Air Force Base, Nevada, Dec. 8, 2023. The 805th Combat Training Squadron experimented with and developed tactics, techniques, and procedures for integrated two-way kill-chain automation between the operational and tactical command and control including battle management levels, to create competitive advantages for the United States and its allies and partners.

the tools perform, and they are measuring those things. That is why I am genuinely impressed with the Rhinos, with everyone coming in and all the TDY support and everything that has been achieved."

This year's event featured independent but related experiments influenced by Indo-Pacific Command tactics that were identified and selected by the Command, Control, and Communications Battle Management, or C3BM, Operational Response Team, DAF, Air Combat Command, and Pacific Air Forces. Experiments included:

- 1. Dynamic Targeting Kill Chain Automation
- 2. Connect the Five Eyes, or FVEY, Battle Labs, also known as the Combined Federated Battle Laboratories Network, or CFBLNet, to the ShOC-N
- 3. Transformational Modeling for Battle Management, or TM-BM

4. Digital Battle Management Node, also known as Tactical Operations Center – Light, and Mobile Solutions

"The ShOC-N doubled the number of experiments this year and primarily focused on the scientific rigor needed for data collection and analysis in order to provide data-driven insights for new prototypes or processes," said U.S. Air Force Lt. Col. John Ohlund, 805th CTS/ShOC-N commander.

The Dynamic Targeting Kill Chain Automation experiments utilized tools focused on increasing the speed, scale and accuracy of the find, fix, track, target and engage, or F2T2E, process for PACAF's experiment while also supporting ACC's NEXUS integration efforts.

The ShOC-N modeled and replicated PACAF's current operational- to tactical-level systems and processes, allowing for the secure experimenta-

tion of two new dynamic targeting kill-chain automation technologies.

The ShOC-N hosted personnel from across the DAF, industry, and coalition partners for the experiment. Data collection and analytics measured speed, scale, and accuracy during the experiments.

The ABMS CFT's experiment objectives focused on procuring data through connecting FVEY Battle Labs/CFBLNet, TM-BM, and data capture and debrief tools.

Japan Self-Defense Forces, German and French Armed Forces, along with FVEY New Zealand Defence Forces, and United States Air Force Weapons School students participated in the TM-BM artificial intelligence-enabled technology experiment known as "Match Effectors," or the decision to appropriately pair effectors with targets while taking into consideration many factors. The experiment observed two groups of participants one using one operating system's software and a control group using a different operating system's software to compare the effect of human-machineteam decision speed, quality, and human confidence in HMT solutions.

The United Kingdom and Canada were the first coalition partners to integrate into the ABMS Battle Lab, allowing them to connect and participate in the TM-BM experiment. The ShOC-N is currently working with Australia and New Zealand to connect their Battle Labs. The two FVEY Battle Labs used the CFBLNet enclaves to establish a releasable, or REL, environment allowing the exchange of mission-related files, simulation data, and voice/chat/ data link messages, providing the initial validation for the United Kingdom and Canada to host future combined C2 experiments.

"This new capability provides our coalition partners access to the Battle Lab as if they're physically on the operations floor, allowing our partners

——See **EXPERIMENTS**, on Page 3

Complex problems, demanding schedule push F-35 pilots night and day at Red Flag

By Micah Garbarino

388th Fighter Wing Public Affairs

NELLIS AIR FORCE BASE, Nev. — *It's 1 a.m. They* are hunched over maps and charts and data points like college students over an impossible equation. Tomorrow is coming fast. Hours of planning, briefing, revising, clarifying. Sleep. Eat. Brief again. Finally, time to fly. In the air, despite the gameplan, it's "controlled chaos" again. This night is a win, but by how much? What went wrong? Time to reconstruct everything and debrief. Tomorrow is coming fast and another problem set awaits.

For pilots at Red Flag, the Air Force's premier combat exercise, cycles of mission planning, briefing and flying sorties roll by in 12-hour chunks. Three weeks go by in a blur for "night train" riders and "day-walkers." As demanding as it is, there is no other environment that yields lessons as valuable for both experienced and inexperienced pilots.

Red Flag, which started after the Vietnam War to provide pilots combat seasoning, has grown into an integrated ultra-modern fight, testing various units' capabilities in the air, space and cyber domains. A friendly "Blue" force takes on an enemy "Red" force in scenarios created by a host "White" cell, the 414th Combat Training Squadron.

Plan

Each morning and evening new scenarios are presented to the Blue Force, which stands up a "Mission Planning Cell" made up of functional team leaders. The entire picture is laid out by an intelligence team — from air and ground targets and threats to political and diplomatic implications. Generally, the F-35 pilots are tasked with the role of Suppression of Enemy Air Defenses. Let the problem solving begin.

"Red Flag comes up with some really creative scenarios that, combined with the skill and capabilities of the Red Force, push the limits of what our capabilities are," said Capt. Benn Hawkins, an F-35 pilot with the 421st Fighter Squadron. "It takes each of our teams getting creative, working together to come back with what we think the best tactical solution is, and it may not be perfect."

Over this 12-hour period, there are up to six different meetings or briefings that take place - some as an entire team, some just for individual role players — breaking down the upcoming three-hour mission in painstaking, minute-by-minute detail.

It can be tedious, but for younger pilots, this is an opportunity to learn how the entirety of the Blue and Red Forces are integrated, providing a macro view of the battlespace.

"We get good at being wingmen and doing what we're told, but at Red Flag you can see a lot of the 'why' and the bigger picture," said U.S. Air Force Capt. Kody Owens, an F-35 pilot in the 421st FS at Red Flag for the



A group of pilots, including F-35 pilots from the 388th Fighter Wing, Hill Air Force Base, Utah, walk to their jets prior to a mission at Red Flag 24-1 at Nellis Air Force Base, Nevada. The complex scenarios and round-the-clock schedule push pilots and maintainers as Red Flag presents an integrated ultra-modern fight.

first time. "Having awareness of the other platforms capabilities and how certain threats affect them and where we fit into that. You can start to grow and build your own palate of techniques."

Owens isn't the lone newbie in the 421st. This is the first Red Flag for nearly three-quarters of the squadron. They are getting used to the pace. After a 12-hour shift of mission planning it may be 6 p.m. or 6 a.m. Either way, it's time to rest. Might be tough.

"It's busy. You hear stories of how busy it is, but you don't really know until you're in it. It's definitely hard to keep healthy habits," Owens said. "But getting enough sleep, getting a 20-30 minute workout in and eating right really helps."

Execute

When their next shift starts it's "go time." Mission execution day kicks off with a mass brief — typically an hour where the mission commander presents the finalized plan for the entire force. Each team breaks and runs through their individual roles one last time.

The mission takes place in a roughly three-hour window. There may be more than 100 Blue and Red aircraft in each scenario, flying in airspace that bridges training ranges in California, Nevada and Utah.

"I've heard it called 'controlled chaos' and it really is," Owens said. "There are a lot of moving parts, and as a young wingman you're making sure you're staying safe and flying clean, learning how to make the right call on comms and then you can start applying tactics."

Over the course of the exercise, these scenarios build on each other, growing in complexity. Like war, success or failure today impacts success or failure tomorrow.

"It's constantly evolving, constantly presenting new problems," Hawkins said. "The systems and tactics they are employing against us are eye-opening. It's a very realistic picture.'

The day isn't over at Red Flag when pilots land. In fact, it's what comes next that many say is of most value. After each mission, both Blue and Red participants individually take their mission data and reconstruct it in preparation of a mass, joint debrief.

'It may take me 90 minutes, but I need to be able to speak intelligently on how me and my formation positively or negatively impacted the fight," Hawkins said. "We all have a real-time picture in our heads of how things went during the mission, but you don't really know if that's true until you do the reconstruction. It could have gone way better or way worse. Maybe you won, but you didn't win as hard as you thought you did."

Once the data is compiled, players join a mass debrief, working through the data and the mission timeline for hours. Asking tough questions, sometimes not having the right answers. It takes thick skin, but it leads to every participant learning and growing.

"The last hour of that is really where the money is made. Each team lead comes to the group with two or three points based on all the planning, prepping, training, executing, reconstructed data. 'These are the things I want us to take away from this mission that we can put in our playbooks for the next fight," Hawkins said.

"Iron sharpens iron" and "pressure makes diamonds" those clichés are true at Red Flag, Hawkins said. Maybe especially so for the first timers like Owens.

"It comes at the end of a long day, but (the debrief) is super energizing for me because it's such a new environment," Owens said. "I am listening a lot, learning a lot."

Another day down. Tomorrow is coming fast, and another problem set awaits.

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For all submissions, a name and phone number of a person to contact must be included in the event questions arise.

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Conquering the tyranny of distance

By Airman 1st Class Jordan McCoy

57th Wing Public Affairs

NELLIS AIR FORCE BASE, Nev. — Air Combat Command and Air Mobility Command worked together at Nellis Air Force Base, Nevada, to officially kick off Bamboo Eagle 24-1 and complete the disaggregated exercise that ran Jan. 26 to Feb. 2, 2024.

Bamboo Eagle began with participating units departing Nellis for training operations at separate locations throughout Southern California. The combined efforts of the 99th Logistics Readiness Squadron and 515th Air Mobility Element contributed to a successful deployment of forces.

"As we look forward into the Pacific area of responsibility, we realize that logistics and maneuvering speed need to be almost instant," said U.S. Air Force Senior Master Sgt. Michael Etterley-Crown, 99th LRS Readiness Flight superintendent. "We didn't have the time to plan as we had traditionally, creating a new problem set. During Bamboo Eagle, key players came together to refine sustainment and mobility processes."

Nellis is a central hub for the forward-deployed units, providing daily supply runs as well as offering the capability to transport maintenance readiness teams. AMC provided the manpower needed to help execute support functions across multiple locations by employing specialized teams of Air Mobility Squadrons while the 99th LRS handled preplanning and support for command-and-control operations.

The 99th LRS and the 515th AME provide logistic support to all disaggregated participants by organizing



U.S. Air Force photos by Airman 1st Class Jordan McCoy

Airmen assigned to the 515th Air Mobility Squadron prepare to board a C-130J Super Hercules at Nellis Air Force Base, Nevada, before its departure to Naval Air Station North Island, California, Jan. 25, 2024. Air Mobility Command provided the manpower needed to help execute support functions across multiple locations by employing specialized teams of Air Mobility Squadrons while LRS handled preplanning and support for command-and-control operations.

the transport of vehicles, air mobility teams, MRTs, and other supplies as part of their reception, staging, onward movement, and integration goals.

"This exercise showcases the first deployment of newest Agile Force Employment capability, the Air Mobility Element," said U.S. Air Force Maj. Bryce Grier, the 731st Air Mobility Squadron director of operations. "The AME is comprised of the smaller force package subsets

called Air Mobility Teams. The Airmen assigned to AMTs are multi-capable, primarily consisting of aerial port and aircraft maintenance, with an additional AME leadership force element, command post controllers, and a robust communications network."

Bamboo Eagle aims to train Airmen to handle the strain of fast-paced operations and prepare them to operate in an austere environment.

EXPERIMENTS, from Page 1 ——

to fully participate in CJADC2 [Combined Joint All-Domain Command and Control] and ABMS exercises and experiments," said Jeffery Compoc, 805th CTS/ShOC-N chief technical officer.

During the final ABMS CFT experiment, the simultaneous effectiveness of four data capture and debrief tools that support C2 were assessed. The experiment compared the type of data collected, quality of measurements, and display between the four applications.

"Watching the TM-BM and dynamic targeting experiments was like holding a prism into the light to reveal distinct decision categories, like the prism reveals the distinct colors of the rainbow," said Zall. "We [ABMS CFT] eventually wanted to get to experiments where we combined different decisions, but there were concerns the more decisions we put together that each little decision might be lost in the chaos, but now we know that we can do these combined decision experiments because the Rhinos just did it and they've been doing it all week. Since the Rhinos are so methodical with collecting data, we can use it like it was our own experiment. All we have to do is apply the model and pull the insights from the data."

Throughout the Capstone event, the TOC-L, now known as the TOCenabled Control Reporting Center, or CRC, team executed tactical C2 primarily from the TOC kit in a tent outside the ShOC-N. The TOC family of systems provides a tailorable Battle Management C2 center that scales up or down based on the Component Commander's needs. The TOC kit is a mobile ground based tactical BMC2 capability used to conduct BM functions within a CRC or Air Support Operations Center. The ShOC's dynamic targeting and M&S cells sent data to the TOC enabled CRC for use within the common operational picture display and target prosecution. The experiment analyzed the operational speed of data exchange utilizing experimental software and traditional crews executing the target process.

The ShOC-N deployed Wi-Fi on the combat operations floor for the first time, allowing mobile solutions for C2 warriors. The Rhinos, in partnership with the C3BM ORT office utilized ORT's Mobile Solution tablets employing Commercial Solutions for Classified, or CfSC, infrastructure during the Capstone event.

allowed operators to move freely on the operations floor and maintain communications and situational awareness of the operations, while the ShOC-N analyzed battle-management data, instrumentation network metrics, and experimentation on the influence for the kill-chain execution," said Compoc.

"The partnership between the C3BM Operational Response Team's Mobile Solutions/CfSC prototype and the 2023 ShOC-N Capstone event provided battle management operators with a hands-on experience of what mobile C2 could look like in an ACE CONOP [Agile Combat Employment concept of operations] environment," said Capt. Shane Toner, DAF C3BM ORT program manager. "C3BM collected user feedback of the operator experience while replicating the battle management functions of operator workstations on the ShOC-N operations floor that will influence CSfC capability and End User Device form factors for the future DAF Battle Network."

Toner continued, the use of CSfC End User Devices can reshape thinking around operations floor physical layouts, the ability to collaborate and generate teaming environments, and

"The mobile solutions experiment the DAF's ability to conduct mobile C2 in a wireless fashion. ShOC-N Capstone provided a key venue for the development of C3BM ORT's plans for the Mobile Solutions prototype and the team looks forward to supporting the ShOC-N in 2024.

> "What we are seeing here [at the ShOC-N] is 90% ingenuity and grit and 10% resourcing, so one of my messages back to my bosses and anyone who will listen is, now just imagine what these folks could do with more resources? And you can trust them to be good stewards of resourcing because they have already proved it," said Zall.

> The ShOC-N's mission is to provide an environment for the DAF to make rapid acquisition decisions, provide data-driven requirements, and distribute warfighter feedback to the industry to drive information advantage and decision superiority against current DOD pacing challenges.

> "The ShOC team is excited for 2024 and the continued experimentation with the Secretary of the Air Force's Operational Imperative team for ABMS and CJADC2. Our goal is more experiments, potentially smaller and more frequent, and culminating in an annual Capstone," said Ohlund.

Air Force Historical Foundation names 432nd Wing 2023 Doolittle Award winner

By 432nd Wing

Public Affairs Staff

CREECH AIR FORCE BASE, Nev. — The 432nd Wing/432nd Air Expeditionary Wing at Creech Air Force Base, Nevada, received the Air Force Historical Foundation's 2023, James H. "Jimmy" Doolittle Award, Jan. 23, 2024.

The award is earned by a U.S. Air Force or U.S. Space Force organization for displaying bravery, determination, discipline, esprit de corps, and superior management of joint operations while accomplishing its mission under extremely difficult and hazardous conditions in multiple conflicts

This is the only wing to have won twice, and the award was previously won by the wing in 2017.

"None of this would have been possible without our Airmen and their families," said U.S. Air Force Col. Nicholas Pederson, 432nd Wing commander. "I am supremely impressed with the personnel in this wing and their performance this last year. They rose to challenges in and out of combat operations and increased their capabilities with training while flying 24/7/365 combat in four combatant commands."

From January to December 2023, the wing generated more than 8,579 sorties which comprised of 222,000 intelligence, surveillance and reconnaissance hours and advanced the use of satellite launch and recovery, effectively aligning operations with Air Force Force Generation and Agile Combat Employment.

While the wing received the award in 2017 because of



U.S. Air Force photo by Airman 1st Class Victoria Nuzzi

The 432nd Wing/432nd Air Expeditionary Wing, headquartered at Creech Air Force Base, Nevada, has been awarded the Air Force Historical Foundation's 2023 James H. "Jimmy" Doolittle Award. The wing won for its bravery, determination, discipline, esprit de corps, and superior management of joint operations while accomplishing its mission under tough and hazardous conditions in multiple conflicts.

significant combat actions in the Central Command area of operations, the wing, its Airmen, and the mission capabilities of the aircraft have expanded exponentially since, now flying in European Command, Africa Command, and Indo Pacific Command in addition to CENTCOM.

"Everywhere Colonel Pederson and I go, we meet absolute professionals regardless of AFSC," said U.S. Air Force Chief Master Sgt. Cory Shipp, 432nd Wing Command

Chief. "It's an honor to be a part of the Wing's leadership team and see all the phenomenal things our Airmen do. They're a phenomenal team."

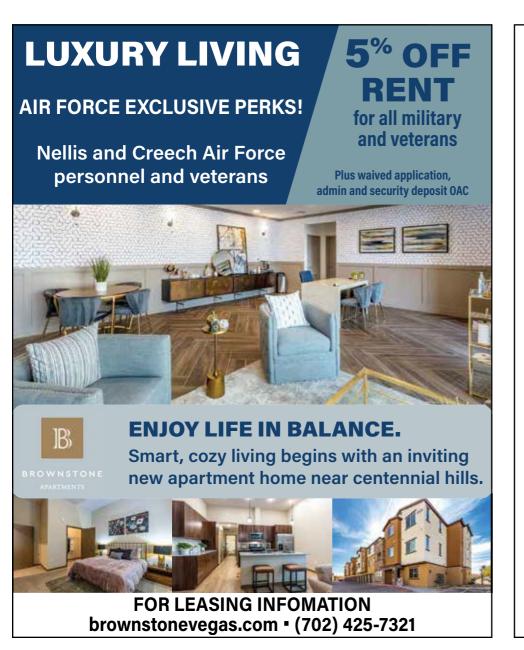
Hunters now operate MQ-9s in four combatant commands around the globe, 24 hours a day, with operations expanding in Indo-Pacific Command as the most recent addition.

"We are shaping the future," Pederson said. "We are not being shaped by the future. We are flying missions against all five threats in the National Defense Strategy, and we are tasked with more than just defeating enemies. We are actively deterring them through our presence and our persistent reconnaissance which informs our Joint partners in preparation for a potential high-end fight with peer adversaries."

This year's award also recognized the wing's efforts to integrate with joint and Total Force partners, through exercises with the U.S. Marine Corps and Air National Guard. These exercises tested and validated the footprint for forward operating and contingency sites and upgraded satellite communication capabilities. They also proved Hunters can operate in austere conditions with enhanced joint interoperability and combat readiness anytime, anywhere.

"The aircraft are technological marvels, but it's the professional Airmen we have, regardless of AFSC, who allow us to execute our mission and enable our future." Pederson said.

The 432nd Wing and 432nd Air Expeditionary Wing is comprised of more than 4,000 Airmen across five groups and 20 squadrons located at four bases, operating more than 30 MQ-9 Reaper and RQ-170 Sentinel aircraft around the globe, 24 hours a day, seven days a week, 365 days a year.



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Hill Airmen bring F-35A's vital capabilities to Red Flag's modern fight

By Micah Garbarino

388th Fighter Wing Public Affairs

NELLIS AIR FORCE BASE, Nev. – "If I'm in the military, I'd rather be in the air than on the ground. If I'm in the air, I'd rather be in an F-35 than anything else."

— Unattributed

For several weeks in January and February, Airmen from the 421st Fighter Squadron and 421st Fighter Generation Squadron were launching and flying the nation's most capable multi-role fighter in the Air Force's premier combat exercise.

Hundreds of pilots, maintainers, and support personnel from the 388th Fighter Wing have deployed to Nellis Air Force Base, Nevada, for Red Flag 24-1 with more than a dozen F-35A Lightning IIs from Hill Air Force Base, Utah.

Red Flag, which started after the Vietnam War to provide pilots combat seasoning, has grown into an integrated ultra-modern fight, testing various units' capabilities in the air, space and cyber domains. A friendly "Blue" force takes on an enemy "Red" force in scenarios created by a host "White" cell, the 414th Combat Training Squadron.



Night and day, participants on the

ops side are huddling together, mission-

planning solutions to defeat the complex

problem sets presented by the exercise

planners, and then flying to defeat them.

Each scenario could see more than a

hundred Red and Blue participants fight-

ing in linked airspace across California,

for us to integrate the F-35 with other

platforms and allied nations and fight

"Red Flag is a valuable opportunity

Nevada and Utah.

U.S. Air Force photo by 1st Lt. Nathan Poblete

can replicate," said U.S. Air Force Lt. Col. Nathan Heguy, 421st FS commander.

A maintainer from

the 421st Fighter

Generation Squadron

marshals an F-35A

prior a mission during

Red Flag 24-1 at

Nellis Air Force Base,

Nevada, Jan. 17, 2024.

Red Flag delivers

distinctive training for

the F-35A, focusing

on enhancing airman

readiness for high-

end warfighting and

strategic competition.

As a multi-role stealth fighter, the F-35A's primary job in many of these missions is Offensive Counter Air. This could mean escorting and protecting stealth bombers or other fighters by detecting and picking off enemy aircraft before they attack. Or, tracking down and eliminating surface-to-air threats with a combination of technology and tactics that are unique to the F-35. The Nevada Test and Training Range, in particular, replicates surface threats "better than

anywhere else in the world."

In this environment, where target objectives are protected by radar and surface-to-air missile networks woven together in lethal aerial shields, legacy aircraft cannot survive. The F-35's stealth, advanced sensors, electronic attack and communications capabilities make it ideal for quarterbacking the modern fight.

"So far, we have had success taking these threats out and surviving, which is notable when you combine them with the very robust air-to-air threats here," said Heguy. "But, not every day is a win. Some days are harder than others, and if we're not struggling in training, we're not training hard enough."

The F-35 has not only been holding its own in the air, but it's been holding up on the ground as well, thanks to the maintainers in the 421st FGS.

"The jets have been performing extremely well. We haven't lost a single sortie due to a maintenance issue," said U.S. Air Force Maj. Bryan Butler, 421st FGS commander. "That's a testament to our Airmen. Their ability to learn from this experience while executing the mission at the same time.

in very realistic, challenging scenarios Combat Training Squadron. against the most advanced threats they replicates surface threats "better than mission at the same time. CONTINUETOA Air Force personnel bring a hard-earned skillset to the workforce. Leadership, discipline, teamwork, problem-solving. These qualities are an asset to a wide variety of trades working with dozens of different EMCOR companies. Post-military career? The sky's the limit. **EMCOR** Vhere good work is

3rd Air Expeditionary Wing operates in first

By Tech. Sgt. Curt Beach

673rd Air Base Wing Public Affairs

NELLIS AIR FORCE BASE, Nev.

— The first-ever iteration of Bamboo Eagle, a U.S. Air Force Warfare Center-led exercise, kicked off in earnest at Nellis Air Force Base, Nevada, and various locations across the southwestern United States and parts of the Pacific Jan. 26, 2024.

The exercise is the first of its kind from the U.S. Air Force Warfare Center, which conducts warfighter-centric live and virtual operational test and evaluation, tactics development, and advanced training to optimize Air Force capabilities and prepare Airmen for joint, all-domain combat operations.

"This is our opportunity to see our 3rd Air Expeditionary Wing command-and-control force element, a C2 team made of members from the 3rd Wing and 673rd Air Base Wing, in a combat representative training environment," said U.S. Air Force Col. Kevin Jamieson, commander of the 3rd AEW. "We'll be practicing the hub-and-spoke concept along with agile combat employment to sustain

operations across four spokes for the duration of Bamboo Eagle. The team has already done phenomenal work in getting us prepared to start this exercise, and now it's time to see what we can do."

As the host wing for four different spokes — also known as forward operating stations — the 3rd AEW acts as the mission command center, planning, directing and coordinating the four fighter units and one airlift unit at the operational level.

The four spokes, all different locations closer to the airspace designated for the exercise, established operational capabilities for secure communications, ground refueling, air mobility teams, and aircraft security measures leading up to the official start of the exercise as a facet of the Agile Combat Employment concept.

These small, lithe teams are learning how to quickly and efficiently set up these spokes to ensure they are operationally capable.

U.S. Air Force Lt. Col Terry Fregly, 525th Expeditionary Fighter Squadron commander, led the squadron through Red Flag 24-1 operations at Nellis Air Force Base, which also serves as the hub for BE 24-1, and is now leading the 525th EFS operations at Naval Air Station North Island, California, which serves as one of the spokes for BE 24-1.

Fregly said BE 24-1 is crucial because it exercises concepts of distributed control, mission planning, and operations, which enable multiple fighter squadrons dispersed among various installations to complete missions on their own, at the direction of a geographically separated Wing Operations Center.

Distributed control allows subordinate commanders to respond to changes in the operational environment and exploit emergent opportunities. This concept does not dilute the authority of the commander; rather, it proliferates that authority across a command.

"This is a new skillset for the U.S. Air Force and the joint force as a whole," Fregly said. "The things we're learning here are how to execute the agile combat employment mission set and how to take the lessons learned here and apply them in operations at home station, so we can train the way we fight."

Fregly said executing distributed mission planning, execution, and debrief drive an opportunity to learn from one mission, or vulnerability period, to the next, while executing these concepts across multiple fighter squadrons and various types of aircraft, simultaneously, for 24 hours a day, over an extended period of time.

Success in future conflict depends on how well U.S. forces combine with the broad range of allied and partner capabilities and expertise to secure common interests and promote shared values. Working closely with sister services to align and synchronize efforts improves joint interoperability and increases timely data-sharing while unifying command and control across all warfighting domains.

"Working with allies and partners is incredibly important," Fregly said. "We can't execute any operation across the globe without seamless integration with our allies, joint partners and government agencies. Getting to integrate, train and learn together strengthens our relationships now and will be vital to success for when we have to execute like this for real."



An F-22 Raptor assi 25, 2024. Approxim a U.S. Air Force Wa



Two F-22 Raptors assigned to the 525th Expeditionary Fighter Squadron, Joint Base Elmendorf-Richardson, Alaska, prepare for takeoff in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024.





U.S. Air Force Airman First Class Jacob Upton, an assistant dedicated crew chief with the 525th Expeditionary Fighter Generation Squadron, Joint Base Elmendorf-Richardson, Alaska, inspects an F-22 Raptor prior to flight in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024.



U.S. Air Force Airmen assigned to the 525th Expeditionary Fighter Generation Squadron, Joint Base Elmendorf-Richardson, Alaska, prepare an F-22 Raptor from the 525th Expeditionary Fighter Squadron for takeoff in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024.

ST-EVER ITERATION OF EXERCISE BAMBOO EAGLE



J.S. Air Force photos by Tech. Sgt. Curt Beach

assigned to the 525th Expeditionary Fighter Squadron, Joint Base Elmendorf-Richardson, Alaska, takes off in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. eximately 3,000 U.S. service members across four branches are expected to fly, maintain and support more than 150 aircraft from 24 units in more than 10 locations during Bamboo Eagle, was also been accounted by the standard of the service executed during what would typically be the third week of Red Flag 24-1.



LEFT: U.S. Air Force Airman First Class Kawan Thornton, a crew chief with the 525th Expeditionary Fighter Generation Squadron, Joint Base Elmendorf-Richardson, Alaska, marshals an F-22 Raptor assigned to the 525th Expeditionary Fighter Squadron in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024. During Bamboo Eagle, warfighters will implemented all-domain combat-power generation from disaggregated basing locations throughout the western part of the U.S., while incorporating scenarios in distributed command and control, agile logistics, and tactical air-toair refueling. Airmen also tackled agile combat employment, and the larger challenges of persistent logistics, by adapting techniques most often associated with special operations forces but on a much larger scale.





U.S. Air Force 1st Lt. Jake Heydinger, a pilot with the 525th Expeditionary Fighter Squadron, Joint Base Elmendorf-Richardson, Alaska, prepares for flight in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024.

LEFT: U.S. Air Force Staff Sgt. Aubrey Crenshaw, a crew chief with the 525th Expeditionary Fighter Generation Squadron, Joint Base Elmendorf-Richardson, Alaska, marshals an F-22 Raptor piloted by U.S. Air Force 1st Lt. Jake Heydinger, 525th Expeditionary Fighter Squadron, in support of Exercise Bamboo Eagle 24-1 at Nellis Air Force Base, Nevada, Jan. 25, 2024.

Retired officers, enlisted members can rejoin active duty to offset personnel shortfalls

by SECRETARY OF THE AIR FORCE

Public Affairs

ARLINGTON, Va. — The Secretary of the Air Force has reimplemented the Voluntary Retired Return to Active Duty Program in an effort to leverage the talents of our highly trained and experienced officer and enlisted military retirees to help minimize the service's critical manning shortages. The application window opened Feb. 8, 2024.

Applications must be submitted by Jan. 31, 2026, and the program allows up to 1,000 retired officer or enlisted personnel to active duty at any given time. Additionally, under this VRRAD program, the period of active duty service is limited to no more than 48 months. Personnel will only fill vacant active duty authorizations. Retired applicants selected for Extended Active Duty can expect to return to active duty anywhere from 4 to 6 months from their date of application.

"The VRRAD program is a strategic enabler to embrace experienced talent, tapping into a valuable resource of retired members to fill critical roles to close the gap against our peer competitors," said Lt. Gen. Caroline Miller, the Deputy Chief of Staff for Manpower, Personnel and Services.



Courtesy graphic

Retired officer applicants are limited to Line of the Air Force commissioned officers retired in the grade of captain through lieutenant colonel. Officers who volunteer to return to active duty under the VRRAD program will primarily fill vacant rated staff, active flying staff, Officer Training School, Squadron Officer School, and Jeanne M. Holm Center academic staff. While all members that meet eligibility may apply, we are targeting the following Air Force special duty codes:

11X – Pilot

12X - Combat Systems

13B – Air Battle Manager

13H – Aerospace Physiologist

13M – Airfield Operations 13N – Nuclear and Missile Operations

14X – Information Operations/Intelligence

15X - Operations Analysis and Weather

16X – Operations Support

17X – Cyber Operations

18X - Remotely Piloted Aircraft

19Z – Special Warfare

21X - Logistics

31P - Security Forces

32E - Civil Engineering

35P – Public Affairs

38F – Force Support Officer

61X - Scientific/Research

62X –Developmental Engineering

63X - Acquisition

64P - Contracting

65X – Finance

71S - Special Investigation

Retired enlisted applicants are limited to members retired in the grade of staff sergeant through senior master sergeant. While all members that meet eligibility may apply, the following AFSCs are being targeted:

1C171 – Air Traffic Control

2G071 - Logistics Plans

2T377 – Fleet Management & Analysis

3F071-Personnel

3P071 – Security Forces

4A271 – Biomedical Equipment

4E071 – Public Health

4N071 – Aerospace Medical Service

4R071 – Diagnostic Imaging

 $7S071-Special\ Investigations$

8R000/8R200 – Recruiter(s)

Information about the Voluntary Retired Return to Active Duty Program, to include detailed official program guidance, eligibility criteria and application requirements, can be found at https://www.retirees.af.mil/Library/Return-to-Active-Duty/.

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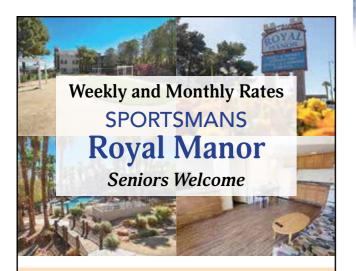
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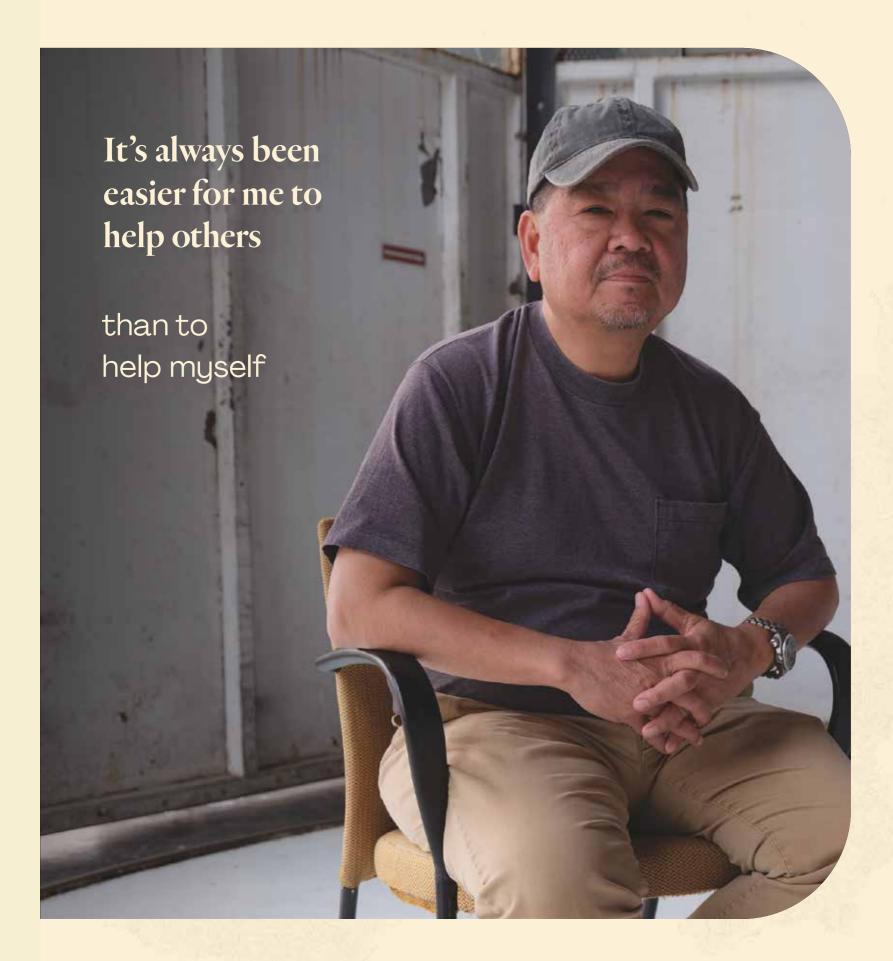
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- **Transportation** Who has military financing for vehicle purchase or leasing?
- Worship Where are the local churches, synagogues, etc?
- **Specialized medical and dental care** What providers are available in the community to supplement on-base services?
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