Red Flag – Nellis (RF-N) is the Air Force's premiere air-to-air combat training exercise, and participants include both United States and allied nations' combat air forces. The exercise provides aircrews the experience of multiple, intensive air combat sorties in the safety of a training environment. RF-N is a single domain (air) supported, multi-domain enabled readiness training exercise designed to focus CAF aircrew on today's opponents. Due to the strengths of the range and adversaries Nellis has to provide, RF-N predominantly focuses on strike operations and SEAD training. It is planned and coordinated at Nellis Air Force Base, Nevada, and conducted on the vast bombing and gunnery ranges of the Nevada Test and Training Range (NTTR). It is one of a series of advanced training programs administered by the United States Air Force Warfare Center and Nellis Air Force Base.

RED FLAG was established in 1975 as the brainchild of Col Richard “Moody” Suter and one of the initiatives directed by General Robert J. Dixon, then commander of Tactical Air Command, to better prepare our forces for combat. Lessons from Vietnam showed that if pilots survived their first 10 combat missions, their probability of survival for remaining missions increased substantially. Red Flag was designed to expose “Blue 4” pilots to their first 10 “combat missions” here at Nellis, allowing them to be more confident and effective in actual combat. This same principle continues to guide Red Flag today, with the goal of preparing Air Force, Joint, and Coalition pilots, aircrew and operators to fight against a peer-level adversary in any combat environment.

Tasked to plan and control this training, the 414th Combat Training Squadron's mission is to maximize the combat readiness, capability and survivability of participating units by providing realistic, multi-domain supported aerial combat training in a combined air, ground, space and electronic threat environment while providing opportunity for a free exchange of ideas between forces.

Aircraft and personnel deploy to Nellis for RED FLAG under the Air Expeditionary Force concept and make up the exercise's "Blue" forces. By working together, these Blue forces are able to utilize their diverse capabilities to execute specific missions, such as air interdiction, combat search and rescue, close air support, dynamic targeting and defensive counter air. These forces use various tactics to attack NTTR targets such as mock airfields, vehicle convoys, tanks, parked aircraft, bunkered defensive positions and missile sites. These targets are defended by a variety of simulated "Red" force ground and air threats to give participant aircrews the most realistic training possible, short of actual combat.

The Red force threats are aligned under the 57th Adversary Tactics Group, which controls seven squadrons of USAF Aggressors, including fighter, space, information operations and air defense units. The Aggressors are specially trained to replicate the tactics and techniques of potential adversaries and provide a scalable threat presentation to Blue forces which aids in achieving the desired learning outcomes for each mission.

RED FLAG exercises involve a variety of attack, fighter and bomber aircraft (F-15E, F-35, F-16, F/A-18, A-10C, B-1B, B-2A, B-52H, FGR4, MQ-9, etc.), reconnaissance aircraft (RQ-4B, RC-135, U-2S), electronic warfare aircraft (EC-130H, EA-18G and F-16CM), air superiority aircraft (F-22A, F-15C, etc.), Search and Rescue aircraft (HH-60G, HC-130J, CH-47), aerial refueling aircraft (KC-130, KC-135R, KC-10A, etc), multi-domain Command and Control platforms (E-3, E-8C, E-2C, E-7, R1, etc), as well as ground based Command and Control, Space and Cyber Forces.

All four U.S. military services, their Guard/Reserve components and the air forces of other countries participate in each RED FLAG exercise. Since 1975, 29 countries have joined the U.S. in these exercises and several other countries have participated as observers. RED FLAG has provided training for more than 511,743 military personnel, including more than 158,470 aircrew members flying more than 414,262 sorties and logging more than 763,093 hours of flying time.