Admiral Jay Lynn Johnson graduated from West Salem High School in 1964. He went on to attend the United States Naval Academy, where he graduated in 1968. Following his flight training, he became a Naval Aviator, flying fighter planes from the decks of aircraft carriers, and served two tours in Vietnam. During his first sea duty tour, he served aboard the USS Oriskany, and made two combat cruises flying the F8J Crusader. He later went on to fly the F14 Tomcat and the F18 Hornet. He commanded from all levels, from fighter squadron to numbered fleet, including commanding Carrier Air Wing One and its squadrons in a strike on Libya in 1986. He continued serving as a Commander until March 1996. At this time, he became the 28th Vice Chief of Naval Operations, and just five months later, in August 1996, he became the 26th Chief of Naval Operations and served in this role until July 2000.

During his time as Chief of Naval Operations, Admiral Johnson was known as a champion of reform. He improved the interdeployment training cycle, allowing sailors to spend more time inport with their families, and focused on improvements that included removing redundant inspections and raising morale among his sailors. While leading the Navy, he focused on operations in the littoral zones of the world, areas that were of strategic importance to the United States. Of this stance he said, "Seventy-five percent of Earth's population and a similar proportion of national capitals and major commercial centers lie in the littorals. These are the places where American influence and power have the greatest impact and are needed most often." He also focused heavily on maintaining the Navy's air superiority by replacing old equipment and developing better, smarter and more advanced ships, aircrafts and information systems. He was a strong supporter the F/A-18EF Super Hornet Program and a large contributor to its success. Shortly after his appointment, he worked to help formulate military policy to fight against the aggressive and persistent actions of Iraqi leader. Saddam Hussein. Parts of this response included Operation Desert Strike, Operation Provide Comfort. Operations Northern and Southern Watch and Operation Desert Fox. Throughout his tenure as Chief of Naval Operations, sailors participated in 45 missions around the world, including those for humanitarian efforts, as well as those in combat.

Admiral Johnson retired from his role as Chief of Naval Operations on July 21, 2000. His career did not stop here, however. Since his retirement, he has gone on to serve in various executive roles. He worked for Dominion Resources, Inc. as their CEO and President from 2002 until 2009. He then went on to serve as CEO of General Dynamics Corporation until his retirement in 2012. Admiral Johnson currently serves as a director for the following companies and organizations: The International Paper Company, USAA, the United States Naval Academy Foundation, Wynn Resorts and the Peregrine Fund.