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DELIVERING CONNECTIVITY ON MILITARY BASES

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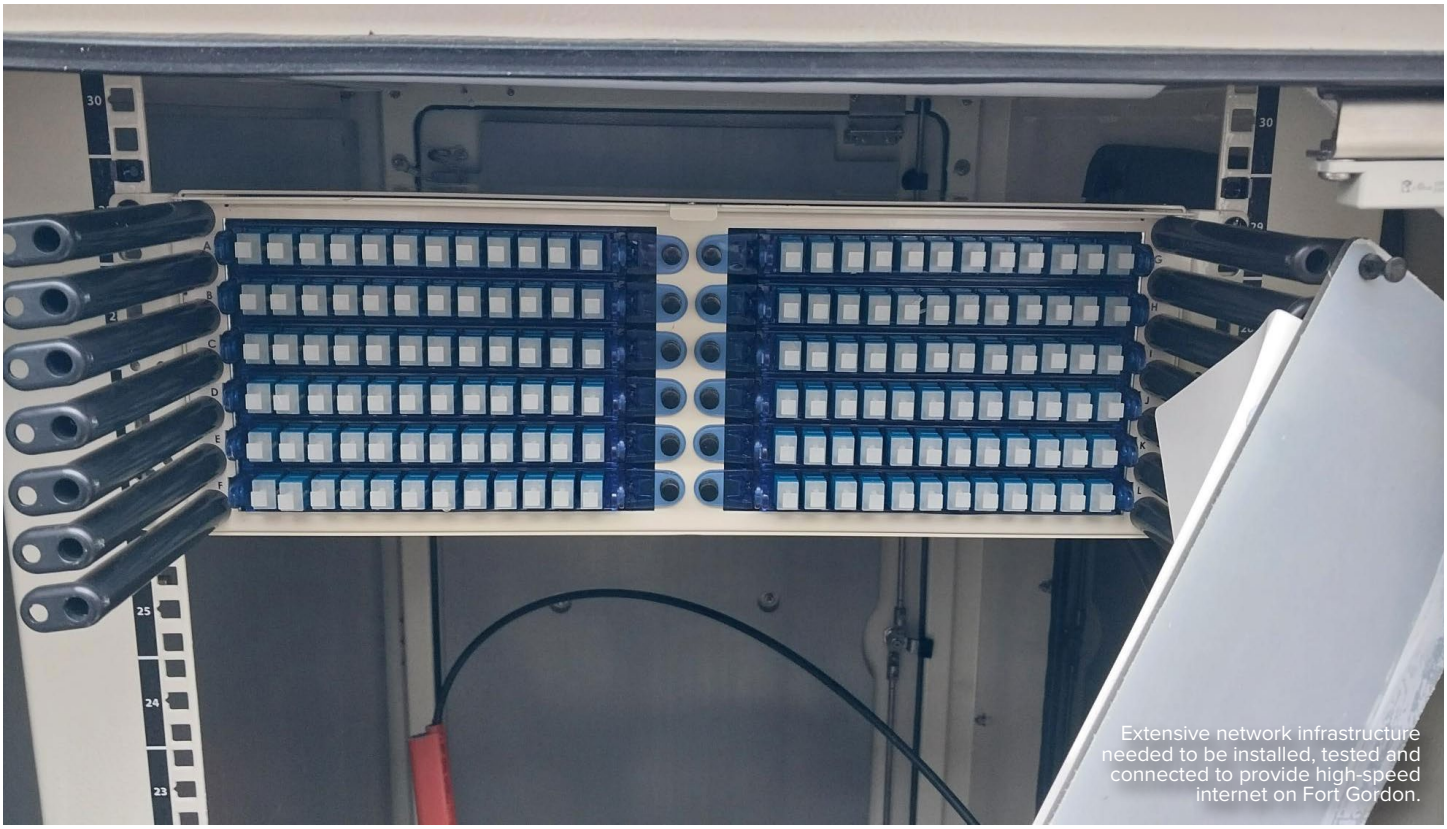

Extensive network infrastructure needed to be installed, tested and connected to provide high-speed internet on Fort Gordon.

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DELIVERING CONNECTIVITY ON MILITARY BASES

By: Matt McLaughlin

Network connectivity is critical to the mission readiness of U.S. military forces. The ability to connect service members around the globe to fellow war fighters, information assets and systems of all types is essential to modern military operations. Without these connections, the capabilities of U.S. forces for situational awareness, rapid decision-making and seamless communication are significantly degraded.

While the warfighting advantages of network connectivity are widely recognized, U.S. service members also need these connections in their personal lives. When they are at home on U.S. military bases around the world, they want to experience the same level of connectivity that their civilian counterparts enjoy, not only for personal use, but for employment and education. However, this connectivity is unavailable to many service members living on U.S. bases.

Fortunately, the Department of Defense and the military services have made strides in providing this connectivity to service members living on base. Bases are moving to deliver fiber connectivity to residents, offering far greater network capabilities than were available previously.

“Inside the fence line of our military installations, the community that lives there has been underserved for many, many years,” said Lou Zeisman, Military Liaison for Boldyn Networks and a U.S. Army veteran. “Our service members, regardless of branch, should have the best. It's not a request anymore to have this type of service. It's a requirement.”

Congress took a major step to address this need in the 2025 National Defense Authorization Act, which included funds for the military to provide high-speed wireless Internet access to troops living in unaccompanied barracks. The $895.2 billion will bring free connectivity to service members living on military bases.

The initiative is part of broader effort across DoD to enhance the quality of life within the active-duty services and improve retention rates among service members. In September 2024, then-Secretary of Defense Lloyd M. Austin published a memo titled “Taking Care of Our People” that detailed numerous initiatives aimed at to boosting the quality of life for service members

and their families.

“Early in my tenure as Secretary of Defense, I made taking care of our people a top priority. Doing right by our all-volunteer Joint Force and their families is a core readiness issue,” Austin stated in the memo. “Taking care of our people is fundamental to the Department’s ability to recruit and retain the most talented American patriots and to ensure that the military remains the most lethal fighting force on the planet — and it is simply the right thing to do.”

In the memo, Austin directed the services to initiate test programs to provide free wireless internet access at military barracks. It also spelled out other initiatives aimed at improving the quality of life for troops, such as healthcare flexible spending accounts, making moving easier for service members, expanding employment programs and professional development for military spouses and increasing access to quality childcare.

In detailing the Wi-Fi program, the memo states that service members require reliable internet connections to access mandatory training, telehealth services and family life counseling, as well as other support services through Military OneSource. It directs the Undersecretary of Defense for Acquisition and Sustainment to work with military agencies to track the progress of these Wi-F initiatives and share best practices.

“Some of our barracks are very well set up to be able to just very easily plug in a router. One of the things that we’re doing is focusing on remote and austere locations where access is more challenging. Whether that’s a physical transformation of the building or whether it’s some type of retrofit — all of those are things that we’re going to have to get after to be able to provide these services,” said Brendan Owens, the Assistant Secretary for Defense for Energy, Installations and Environment.

The Army achieved a significant step in this initiative in March 2025 when it completed the first phase of a major network connectivity infrastructure upgrade at Fort Gordon in Augusta, Ga. The project included the installation of approximately 18.5 miles of fiber cable throughout the base as part of Boldyn Networks’ Fiber to the Home (FTTH) service.

Boldyn partnered with the Army & Air Force Exchange Service (AAFES), Balfour Beatty Communities, and eCommunity Fiber on the project, which provides faster, more reliable internet service to 109,000 military personnel, families, civilians and contractors.

The fiber capability will be rolled out to seven neighborhoods on the base, with Lakeview Terrace, McNair Terrace, and Olive Terrace being the first. The project will provide Fiber to the Home to more than 1,000 households by the end of 2025. FTTH will also be deployed to homes in new communities on Fort Gordon that are scheduled to be built in 2026.

While the arrival of high-quality internet connectivity on bases won’t have a direct impact on warfighting capabilities, ultimately, it will improve the readiness of the U.S. military.

The Need for High-Speed Connectivity on Base

A variety of factors have contributed to the general lack of fast, reliable internet access on U.S. bases. At many sites, twisted pair cabling installed during the 1980s was the means by which internet access was delivered to on-base residents. In some places, cellular technologies delivered connectivity to users.

But as technology has advanced over the decades, users have come to expect more from their technological infrastructure. On U.S. military bases nowadays, new service members are all digital natives. They use a number of digital devices in their everyday lives — personal devices such as cell phones, computers, tablets and gaming consoles, as well as smart household items such as thermostats, refrigerators and even toasters. In fact, the average U.S. household employs 25 connected devices, and users expect the infrastructure where they live to support this lifestyle. However, connectivity at military bases is still catching up.

The COVID pandemic highlighted the need for faster, more reliable connectivity on base. Like the rest of society, service members were forced to connect virtually to engage in education, business and entertainment. However, the internet access on many bases was lacking.

“Now we have senior leaders that are growing up in the service that have always had a device in their hand, and they understand what the requirements are for day-to-day living,” Zeisman said. “Things have changed over the years, and it's not going away.”

Two key objectives of these connectivity projects are to improve the quality of life for service members on base and their families and to enhance the readiness of U.S. forces.

Increasing the speed and reliability of Internet access on base enhances quality of life by enabling service members and their families to do things they couldn’t with legacy connectivity — or to do those things faster and better. Video conferencing, telehealth appointments and online

learning all run more smoothly. Electronic business can allow military spouses to work online while remaining on base. Higher upload speeds enable cloud connectivity for devices such as cameras and smart doorbells.

While helping residents at the Fort Gordon PX sign up for the new internet service, Zeisman encountered a service member who was unaware that the new connectivity was available. The man was frustrated that his children had to go off-base to conduct research for school projects and that they would fight over the bandwidth needed to play video games, and he was planning to move to a residence outside the base. But when he learned that the fiber upgrade would provide the internet access his family needed, the service member decided to keep living on the grounds of Fort Gordon.

Installing fiber cabling can even provide coverage for poor cell service. Many bases have spots where cellular signals are weak or even unavailable, but robust fiber connectivity can allow these users to take advantage of Wi-Fi instead.

Providing high-quality internet access also boosts readiness in multiple ways. Most directly, improving connectivity for service members increases the level of communication with them, ensuring that they receive orders and other important information promptly and accurately. Further, improving the quality of life on base makes it more likely that service members will choose to live there, making them more accessible to leaders and colleagues.

“Military service members always have to be ready. It's a 24/7 type of job,” Zeisman said. “If you don't have this connectivity inside these homes, potentially you're going to be missing something. Having this connectivity in these military homes will increase the readiness of service members that are living there.”

Because Fort Gordon is a military facility, workers on the high-speed internet project needed approval to be on base, and in some cases needed security clearances.

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A Successful Connection at Fort Gordon

The Fiber to the Home (FTTH) installation at Fort Gordon supports personnel from the Army, Navy, Air Force and Marines, as well as other Defense Department users on base. Boldyn Networks is one of three partners who work with the Army & Air Force Exchange Service to deliver fiber connectivity to military bases.

While Boldyn deployed the fiber cabling that serves as the infrastructure to support internet access, it is not an internet service provider (ISP). Rather, ISPs such as Verizon or Comcast may use the FTTH cable to deliver access to customers. The phase of the project completed earlier in 2025 provided access to 1,081 homes. Another 75 homes will be added to this number when construction and renovations are complete in the Pine Tree Terrace neighborhood on Fort Gordon, which is expected by early 2027.

Completing the first phase of the project required clearing several hurdles. Boldyn worked closely with base leadership to make sure the installation work was coordinated with

other activities on base as much as possible. Making sure workers and equipment received the necessary approvals — and in some cases security clearances — to come onto the base was also an important step.

"Working inside the fence line is a challenge every single day," Zeisman said. "At Fort Gordon, we had a great relationship with the Command Sergeant Major, the leadership, the staff, the private housing partners. That's what makes a pretty tough project go smoothly."

The work was scheduled to avoid interfering with large training exercises or even training holidays. Digging up the base to install over 18 miles of cable is a massive undertaking, and strategic planning about when and how to install the fiber cable was critical to minimizing disruptions.

There were a number of stakeholders to coordinate with as well, including Providence Family Housing, the privatized housing partner on Fort Gordon. Boldyn also had to work with the base's Network Enterprise Center, which handles IT projects, as well as the Directorate of Public Works, which ensured that the necessary permits were involved and that work avoided other underground infrastructure.

The project even overcame a challenge from Mother Nature, when work was disrupted by Hurricane Helene in September 2024. The natural disaster required work on FTTH to be delayed for a few months while emergency response and utility workers used the base as part of the effort to help the Augusta area bounce back from the hurricane.

Ultimately, the project proceeded, and residents of Fort Gordon were able to enjoy their powerful, new internet connectivity.

"We're connected, whether it's our devices, our TV, connecting with family and friends across the world. So, getting updated to fiber to all the houses is going to be a tremendous uplift to the community. The community has been asking for this for some time now, so with AAFES and our private partners making this happen, bringing in team Boldyn — it's going to be awesome for the installation," said Sgt. Major Dan Durette of Fort Gordon.

The Future of On-Base High-Speed Networking

While the work at Fort Gordon continues with the buildout of new neighborhoods that will receive high-speed internet access, the effort to roll out fiber connectivity there will pay dividends for the Defense Department's broader initiative to increase access to Wi-Fi on base.

Leaders from bases across the DoD connect at points such as the Installation Management Command Headquarters in San Antonio. Once service members have experienced the high-quality connectivity at Fort Gordon, others across the military are likely to demand similar access. In fact, Boldyn is working to establish FTTH connections for on-base residents in Texas at Fort Bliss, and in Georgia at Fort Stewart and Fort Benning.

While the demand for high-speed internet access is growing, the delivery of this capability is likely to improve as contractors and base personnel learn from the experience. "On any deployment project, there's going to be continuous learning." Zeisman said. "When we run into obstacles and solve them, we use those lessons learned on the next base."

This will help Boldyn and other DoD partners to find ways to get the job done with a minimum of disruption to base residents and military operations. However, it's important to remember that every base and every installation is different, so project leaders will need to avoid a cookie cutter approach and make sure they find the best ways to address the unique challenges of each base.

In some cases, this may mean opting for different approaches in a base's connectivity initiatives. For example, fiber may not be the best option for some bases. In these cases, alternatives such as cell towers or even small cells may be the best way to deliver the connectivity service members need on base.

Still, fiber provides a robust infrastructure for many bases both now and in the future. Many ISPs offer high-speed internet connectivity up to 1 gigabit per second for both upload and download. However, fiber can handle as much as 10 gigabits, providing the bandwidth users may need well into the future. This will provide a foundation not only for residential internet access, but also for commercial activity such as businesses that may want to move on base — perhaps an internet café or a coffee shop.

Ultimately, the ability to provide service members with a higher quality of internet connectivity will help the military recruit and retain personnel, as well as provide them greater incentive to live on base. Boosting the quality of life for service members and their families enhances readiness and improves the overall strength of the military. DN

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