

# Speeding Up Learning with Wi-Fi 6 Installation and Optimization **at the Deal School**



## CLIENT BACKGROUND

Deal School is an elementary school in Monmouth County, New Jersey, run by the Board of Education (DBE). They provide primary education to students from kindergarten to grade 8. This client has been with Protected Harbor for over five years.

Initially, DBE's Wi-Fi system was performing sufficiently, but they required a software upgrade with better internet range and reliability for their operations. They also had a new building under construction at the time beside their original one which needed to be setup with wired and wireless internet.

Over the years, Protected Harbor has worked with various schools, so we know the exact solutions needed to improve network infrastructure.

## CHALLENGES

Protected Harbor's team initiated contact with the Deal Board of Education to know about their requirements and needs. We found the following challenges in upgrading the Wi-Fi system for DBE's new and main buildings:

- |                              |  |
|------------------------------|--|
| <b>For the Main Building</b> | <ul style="list-style-type: none"><li>• Software and equipment upgrade was needed for wireless connection Better internet coverage and reliability</li><li>• Wider network speed for users</li></ul>   |
| <b>For the New Building</b>  | <ul style="list-style-type: none"><li>• installation of new Wi-Fi 6 system</li><li>• Fiber connection to connect with the main building Testing and tuning for optimized internet experience</li></ul> |

## WI-FI UPGRADE IN THE MAIN BUILDING

Our team ran a performance check which showed their previous Wi-Fi system was up to par. The only real issue was their software was getting outdated. The firmware was aging without any new updates or security patches. Our team went on to upgrade their internet from Wi-Fi 4 to Wi-Fi 6 in order to improve their internet bandwidth, range, and reliability. They have many users on their internet downloading essential documents and learning materials so this made for a faster and more seamless internet usage experience.

Additionally, we added more access points than we had previously planned for the building to enhance their internet coverage. We ensured their users had optimal internet speed in every part of the school allowing them to roam freely without worrying about their signals dropping.

## INTERNET INSTALLATION FOR THE NEW BUILDING

DBE had another building under construction at the time; which means we had to install an internet connection for the new site. One of our partners, Gain Communications, a telecom services provider, helped us set up the cables for their new Wi-Fi 6 internet connection allowing to prepare the access point installations.

Next, we added a fiber connection with higher bandwidth to connect the new building with the main building. This has a massive impact on internet speed as more people can use the internet without facing any noticeable drops while browsing or downloading files. We also installed redundant connections, which we have only done for our larger-scale clients as well as our data centers. This helps to minimize any downtime as the redundant connections last longer.

The tuning and testing for access points was the most challenging aspect of this process. We installed the new Wi-Fi 6 system in two days, but the testing phase was longer as we had to ensure they had optimal internet coverage in the new building. Protected Harbor's team went on to visit their site once a week until the network infrastructure was completely optimized

## ACHIEVEMENTS & RESULTS

The Deal Board of Education has seamless internet coverage at their premises for managing their operations. They do not have to waste their time and money looking for other MSPs (Manages Service Provider's) as we take care of their Wi-Fi system. Since we have installed their Wi-Fi 6 system, we have not received any complaints from them regarding any internet speed drops or poor connectivity. The team at Protected Harbor achieved:

- We upgraded DBE from their Wi-Fi 4 System to the latest Wi-Fi 6 System
- DBE experienced a 6x increase in wireless connection speed (from 450 mb/s per client to 2.69 gb/s) We provided a firmware upgrade with strong backend encryption
- DBE now experiences flawless internet range & reliability for both buildings