

Cyber-Physical Security

Client Case Study

Burtel

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Opportunity

In 2017, a West Coast public teaching hospital complex with over 600 beds was having recurrent attempted and successful security breaches in the main hospital building and at nearby medical offices. Because of this vulnerability, there was an imminent threat of cyber attack that would affect the hospital infrastructure as well as the result in the theft of PHI and other sensitive information. The organization increased its visual security efforts by posting additional signage and perimeter cameras. Despite these efforts, threats and breaches to their physical and data security continued. The organization brought in Burtelson to assess ongoing vulnerabilities, make the physical infrastructure more secure and ultimately protect and secure organization assets and patient PHI.

Solution

When the Burtelson red team conducted its initial security assessment, it became immediately clear that current security strategies were insufficient. The buildings had numerous security vulnerabilities as a result of internal and third-party security weaknesses. Additionally, security technology was dated and was easily manipulated and breached.

By simulating cyber-physical attacks, we were able to demonstrate to the organization how weak their security measures were, even after their perceived increase in security controls. We did this by, for example: exploiting numerous blind spots in security cameras, using social engineering attacks to get third-party contractors to give us access to secured areas, exploiting weaknesses in electronic access controls to allow us entry into other restricted areas as well as terminals with access to EHR.

Results

By testing and exploiting major security vulnerabilities, we were able to identify security weaknesses that would have provided a treasure trove of information and access to an attacker. We used a combination of technology and strategy to identify and exploit the vulnerabilities, and then worked with the organization to patch them. By working with the client to modify and improve their policies and procedures as they relate to third-party contractors, implement new security awareness training and improve cyber-physical security controls and technologies, we were able to resolve over 70% of the organization's vulnerabilities. This enabled the organization to reduce insurance premiums, as well as reputational and monetary costs that would be incurred due to a massive data breach.

About Burtelson

As a leader in healthcare cyber-physical security, Burtelson is affecting change for an entire industry – one that impacts the quality of life for millions of people.



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