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## Industry Demand for IT and Cybersecurity

### Introduction

Cybercrime has cost the world over \$6 trillion annually since 2016. Hacking has disrupted political processes, social media accounts, financial institutions, schools, medical facilities, and more. These disruptions have set in motion a record number of job openings including Security Specialists, Incident Responders, Security Administrators, and Vulnerability Assessors with a salary range anywhere from \$60 to well over \$100 thousand annually.<sup>1</sup>

### Background Research

- According to the Bureau of Labor Statistics, the number of individuals employed within the cyber security sector is slated to grow by 31% between 2019 and 2029. That rate far exceeds the average for all occupations.<sup>2</sup>
- New Mexico currently has 3,028 job openings in cybersecurity.<sup>3</sup>
- The National Center for Education Statistics shows the number of new cybersecurity programs has increased by 33% while cybersecurity job postings have grown by 94% in the past six years.<sup>4</sup>
- Computer Science and IT were identified in seven of ten Career and Technical Education regions in New Mexico as a top priority as far as supporting students for high skill, living wage jobs in the state.<sup>5</sup>
- Governor of New Mexico Michelle Grisham has identified cybersecurity as one of the eight sectors in which NM can lead the nation based on support from national labs, world class research universities, the FBI center in Albuquerque, existing degree and training programs, and large regions of the state that fall into the extreme “safety zone” in terms of threats to operational disruption.<sup>6</sup>
- In a recent poll conducted by the NM Department of Workforce Solutions asking industry participants what their biggest skill needs will be in the next ten years, the top responses were cyber and software security, cloud computing and cloud architecture, network administrators, and overall career readiness and commitment.<sup>7</sup>

Based on this background research, there is a high demand for IT and cybersecurity professionals across all industries, not only in NM, but worldwide. It is the responsibility of educators and communities to support both secondary and postsecondary students with the educational pathways to prepare them for careers in this field.

*Education has always been a profit-enabler for individuals and the corporation. Education, both conception and delivery, must evolve quickly and radically to keep pace with digital transition. Education is a part of the digital equation. — Stephane Nappo*

## Applying the Research to Providing IT and Cybersecurity Pathways for High School Students

IT and cybersecurity pathway development is essential to stay ahead of the rapidly growing demand for individuals entering the workforce to demonstrate a high level of digital skills.

EEDW supports IT and cybersecurity programs by

1. Targeting ECHS's in NM to implement pathways to build students' digital skills, a required entry for *every job* in today's workforce;
2. Linking training and education to the workplace, as well as building student interest and understanding of the importance of these digital skills; and
3. Helping economic planners, employers, and educators align students' career pathways with well-prepared entry into high-demand careers.

The result is students will have the opportunity to explore careers in IT and cybersecurity while building digital skills that will prepare them for long-lasting career opportunities.

### Conclusion

IT and cybersecurity professionals are in high demand. These individuals have the option of specializing in many different areas including general information technology, ethical hacking, information defense, information assurance, defense engineers, risk managers, network protection, and more. Students in the cybersecurity pathway will be well positioned to take advantage of these opportunities.

### Endnote

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<sup>1</sup> Cyber Security Job Outlook - Is It a Good Career in 2021 (neit.edu)

<sup>2</sup> Ibid.

<sup>3</sup> <https://www.cyberseek.org/heatmap.html>

<sup>4</sup> National Center for Education Statistics, <https://nces.ed.gov/>

<sup>5</sup> New Mexico Public Education Department, <https://webnew.ped.state.nm.us/bureaus/college-career-readiness/>

<sup>6</sup> Ibid.

<sup>7</sup> New Mexico Department of Workforce Solutions, <https://www.dws.state.nm.us/en-us>