Chapter 29
Design of Cyberspace Security Talents Training System Based on Knowledge Graph

Xi Chen
Guizhou Normal University, China

Fangming Ruan
Guizhou Normal University, China

Lvyang Zhang
Yiwu Industrial and Commercial College, China

Yang Zhao
JiLin University, China

ABSTRACT

Internet, big data, global society, economy, life, politics, military, and culture are deeply integrated and have developed into an era of overlapping cyberspace and real society. Cyberspace security has become the most complex, comprehensive, and severe non-traditional security challenge facing all countries in the world. However, the talents in the field of cyberspace security cannot meet the practical needs of the development of cyberspace security. This paper puts forward the training scheme of network security talents, discusses the relationship between knowledge atlas and network space security, gives the construction and distribution of network space full knowledge atlas, and then constructs an education big data architecture for cyberspace security based on knowledge graph around the use of knowledge.

1. INTRODUCTION

Today, the emergence, development and popularization of the Internet are changing the whole world. While bringing convenience to people, they also bring many hidden dangers. In recent years, data information has leaked, malicious attacks by hackers, the emergence of blackmail viruses, various network destruction incidents have occurred, and the network is full of traps and dangers. Network security has threatened people's security, social security, economic security and even It is national security. As a brand-new technical specialty, cybersecurity involves the lifeblood of the country and is related to the security and sovereignty of the country. Without national security, there is no national security.

The competition in cyberspace is, in the final analysis, talent competition. Under the impetus of global network technology, the development of the whole society is inseparable from the network. The development of all walks of life depends more and more on the security of cyberspace security talents, and the demand for network security talents has reached an unprecedented height (Weng, Ma, & Gu, 2016). Network security involves various fields, network security threats are frequent, and network security connotation is expanded. However, there are problems such as large number of network security talents, low professional and technical capabilities, and unreasonable structure. In terms of subject education, the cybersecurity subject curriculum is unreasonable, and it is not integrated with the actual social needs, and there is no correct guidance for the development of learners. The traditional talent training model can no longer meet the development needs of cultivating cyber security talents. The cyberspace security discipline has its own characteristics. It can't just cultivate network security talents through the simple theoretical knowledge of cybersecurity and the transfer of technical knowledge. And practice is not to train high-end talents for network security. The emergence of educational big data has provided a new powerful weapon for solving this problem. It uses educational big data to analyze and mine valuable information for cultivating cyber security talents, change the traditional talent training model, and establish a sound cybersecurity domain specific. Talent development plan.

In view of the shortage of network security personnel and the unreasonable training mode of network security personnel cannot meet the demand, this paper analyses the current situation and problems of network security personnel training, and puts forward a gradient training standard model of network security personnel, and designs a large data body of network space education based on knowledge graph. Department structure, strengthen the construction of cyberspace security specialty and discipline system, so that a steady stream of cybersecurity personnel into the field of cybersecurity.

2. GOLDEN STONE CYBERSPACE SECURITY TALENTS TRAINING

2.1. Preliminary Exploration of Cyberspace Security Talents Training System Based on Education Big Data

On May 29, 2012, the United Nations Global Pulse released the white paper "Big Data for Development: Opportunities and Challenges (Pules, 2012)." The report points out that the world has entered the era of "Big Data", which brings both opportunities and challenges. On April 17, 2016, China's first report on the development of big data in the field of education, the Blue Book on the Development of Big Data in China's Basic Education, was officially released. The report combed the progress of policies related to the global big data in education, interpreted the connotation and uniqueness of the big data

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