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A Network Security self-service platform (NSSP) of IHEP

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Network security has been progressively coming to the attention of the high energy physics (HEP) community. More and more HEP users and system administrators keep worrying about the security of their hosts. In order to help users getting rid of their host vulnerability, we developed and deployed a network security self-service platform (NSSP) in Institute of High Energy Physics (IHEP), China.

This NSSP system can present straightforward result of quantized fuzzy evaluation of host security risk. The result is obtained by analytic hierarchy process and cloud model theory. We improved the multi-level index system of the analytic process by dynamic weight method, which increased the adaptability and objectivity of the index system. Moreover, the assessment follows the national classification standard on information security protection.

The system utilizes a distributed architecture based on the message queue. Its efficiency is optimized by the buffer and multi-thread technology. The system is scalable because we can bring in a new function model by adding new plug-in. Benefiting from the B/S architecture, end users can easily carry out self-evaluation from Web client.

This platform has been deployed at IHEP since April 2014. During the past two years of production, hundreds of users enhanced their host security with the help of this platform. And we are continue developing new features for this platform.

Length of presentation (minutes, max. 20)

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