INGENIERÍA INFORMÁTICA DEL SOFTWARE, UNIVERSIDAD DE OVIEDO

Trabajo de Fin de Grado



EGIDA: Sistemas para el despliegue automatizado de configuraciones de seguridad con detección temprana de errores

Autor: Sergio Arroni Del Riego Supervisor: Antonio Payá González

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Abstract

Automated deployment of security controls is a very important part of deploying a defense-in-depth strategy to secure machine infrastructures. This paper describes a prototype of a technique to perform automated deployment of validated and international security controls in a more controlled way using a DSL. This way, according to the target machine configuration or characteristics, this controlled deployment is less prone to negatively impact legitimate running services, and better capture system administrator expert knowledge, being able to share automated security scripts that obtain better hardening results. The initial results of this technique are promising enough to apply them on educational environment and develop them further to be applied on real infrastructures requiring this kind of security automation.

Resumen

El despliegue automatizado de controles de seguridad es una parte muy importante del despliegue de una estrategia de defensa en profundidad para securizar la infraestructura de las máquinas. Este artículo describe el prototipo de una técnica para realizar un despliegue automatizado de controles de seguridad validados e internacionales de forma más controlada utilizando un lenguaje de dominio específico. De esta forma, según la configuración o las características de la máquina objetivo, este despliegue controlado es menos propenso a impactar negativamente en los servicios legítimos en ejecución y permite captar mejor el conocimiento experto del administrador del sistema, pudiendo compartir scripts de seguridad automatizados que obtengan mejores resultados de hardening. Los resultados iniciales de esta técnica son lo suficientemente prometedores como para aplicarlos en un entorno educativo y seguir desarrollándolos para aplicarlos en infraestructuras reales que requieran este tipo de automatización de la seguridad.

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En primer lugar, quisiera agradecer a

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