



Título: SCUDO: Secure CloUd storage service for Detecting viOlations of security properties in a data sharing environment

Data: 25/09/2018 Horário: 08:00h Local: Sala Seminários – Bloco 942A (GREat)

Resumo:

A cloud storage service implements security mechanisms to protect users' data. Moreover, due to the loss of control over the cloud infrastructure, it is essential to provide security mechanisms, increasing the trust and transparency in cloud services. Usually, auditing and monitoring mechanisms are used to detect violations of security properties. Due to the customers' needs, the secure data sharing is an essential security issue highlighted in the literature. However, an analysis of the literature reveals flaws in existing solutions that do not identify all attacks. Then, a secure storage service for cloud computing is proposed in this work to address these issues, combining security mechanisms for providing access control and violation detection. The proposed solution includes auditing and monitoring mechanisms to detect and prove violations of security properties. The proposal evaluation is performed based on the prototype deployed in a cloud infrastructure and the modeling using Colored Petri Nets (CPNs). As results, the provider cannot deny a violation, and attacks are detected in real-time, except collusion attacks, which are identified, in our proposal, in the auditing phase. The proposed storage service improves the detection of violations and offers security guarantees over the data stored in the cloud.

Defesa de Tese: Carlos André Batista de Carvalho

Escrito por Secretaria MDCC

Seg, 24 de Setembro de 2018 00:00

Banca:

- Prof.^a Dr.^a Rossana Maria de Castro Andrade (MDCC/ UFC) - Orientadora
- Prof. Dr. Miguel Franklin de Castro (MDCC/ UFC) - Coorientador
- Prof. Dr. José Neuman de Souza (MDCC/ UFC)
- Prof. Dr. Danielo Gonçalves Gomes (UFC)
- Prof. Dr. Nazim Agoulmine (UEVE, França)
- Prof. Dr. Elias Procópio Duarte Junior (UFPR)