

A behavior-aware SLA-based
framework for guaranteeing the
security conformance of cloud
service

**Xiaochen LIU, Chunhe XIA, Tianbo WANG,
Li ZHONG, Xiaojian LI**

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Problems & Ideas

- Problems of verifying security conformance at the bottom of the cloud
 - How to describe the bottom layer of cloud service behavior
 - How to describe the security SLA term
- Ideas: A novel approach to verifying security conformance
 - A new modeling method which can illustrate the service behavior expressiveness in cloud computing behavior models
 - A specific modeling language to describe the SLA including security policy
 - A transparent approach using UPPAAL to conduct the conformance checking of cloud service behavior

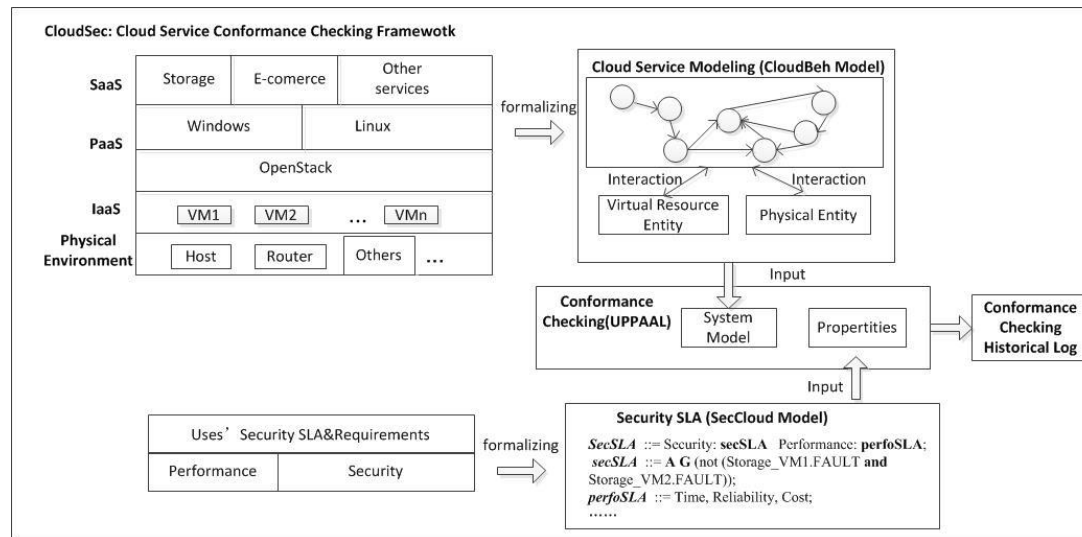


Figure. The Framework of Approach

Main Contributions

- We bridge the gaps between CSP and users to understand how their data are dealt with in cloud. Our approach is more effectiveness when the scale of cloud scenario increases especially in complex cloud environment, which can maintain high accuracy in cloud conformance checking than other approach.

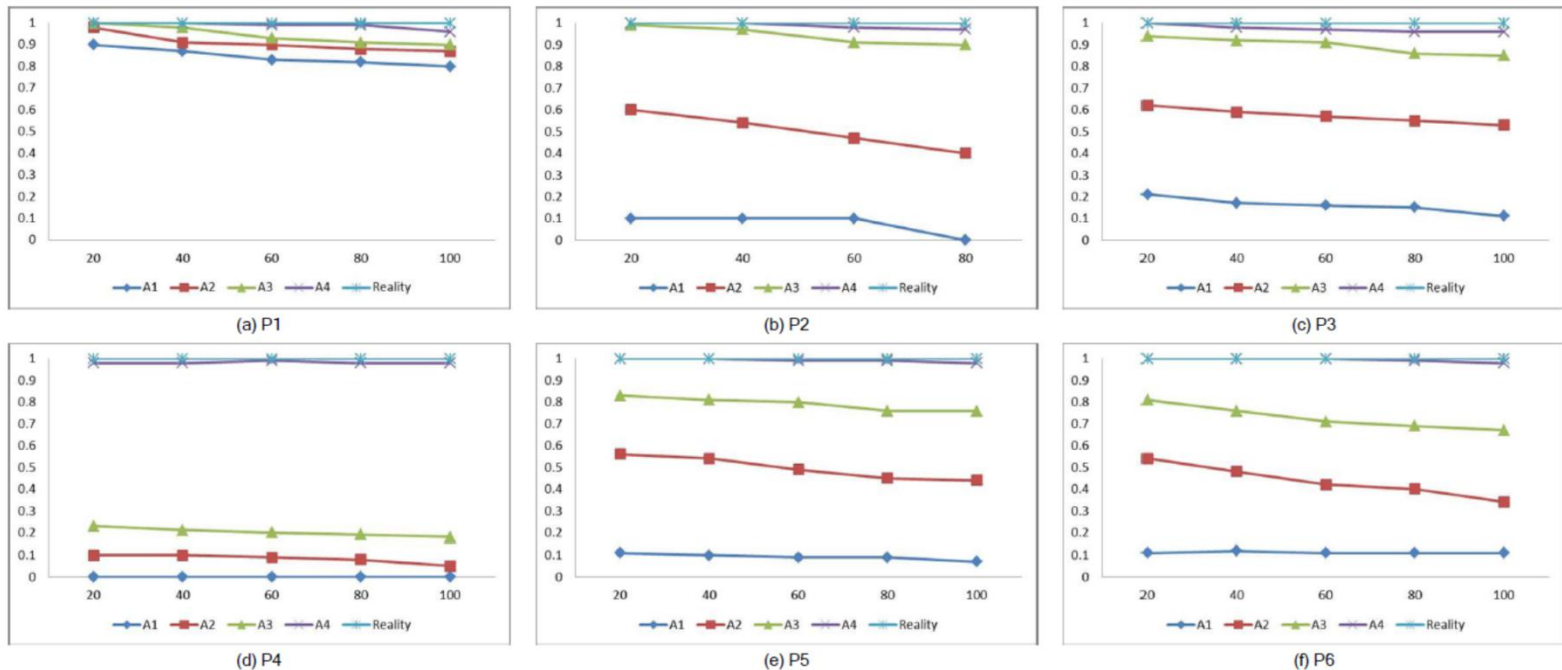


Figure. The Execution Results of Different Approach for Various Security Properties