



Secure Provisioning of Cloud Services Based on SLA Management



ABOUT SPECS

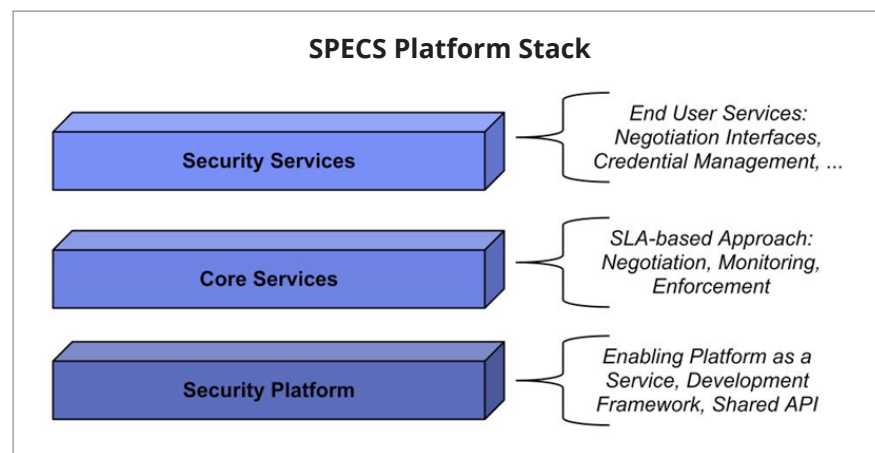
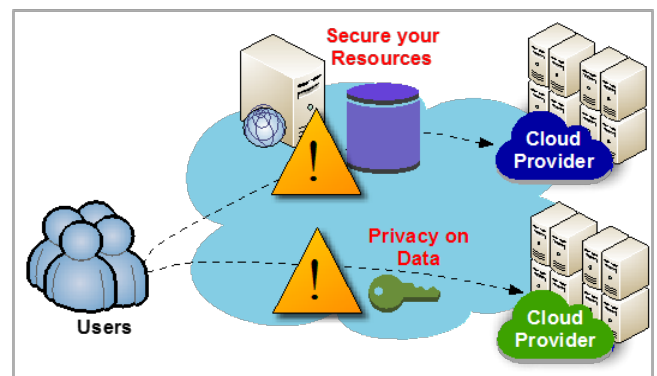
SPECS focuses on the development and implementation of an open-source framework that offers security-as-a-service relying on security parameters as specified in service level agreements (SLAs). SPECS also provides techniques to systematically manage their lifecycle.

The SPECS framework provides techniques and tools that:

- Enable a user-centric negotiation of security parameters in cloud SLA, and support the identification of services fulfilling a minimum required security level (QoSec, or quality of security).
- Monitor in real-time the fulfillment of SLAs agreed upon by one or more CSP and notification of incidents.
- Enforce the agreed-upon cloud SLA. The SPECS enforcement framework will “react and adapt” in real-time to fluctuations in the QoSec by advising/applying the correct countermeasures (e.g., triggering a two-factor authentication mechanism).

SPECS OBJECTIVES

1. Offer a solution for the SPECS' security-as-a-service approach, proposing a clear design for a platform-as-a-service dedicated to security services and to SLA life cycle management
2. Propose solution for helping end users to negotiate cloud SLA effectively with a set of CSP, by understanding the resulting trade-offs
3. Design and implement SLA monitoring solutions dedicated to continuously control the security offered by CSP and to help ensuring the granted QoSec.
4. Offer a clear design and an implementation of services dedicated to grant security features to cloud end users in order to fulfill an agreed-upon SLA and, keep a sustained QoSec.
5. Implement two relevant use cases to empirically validate the outcomes of the project.



Project Information

Grant Number: FP7-ICT-10-610795
Project Start: 1/11/2013
Project Type: STREP
Duration: 30M
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EU Contribution: 2.4 M
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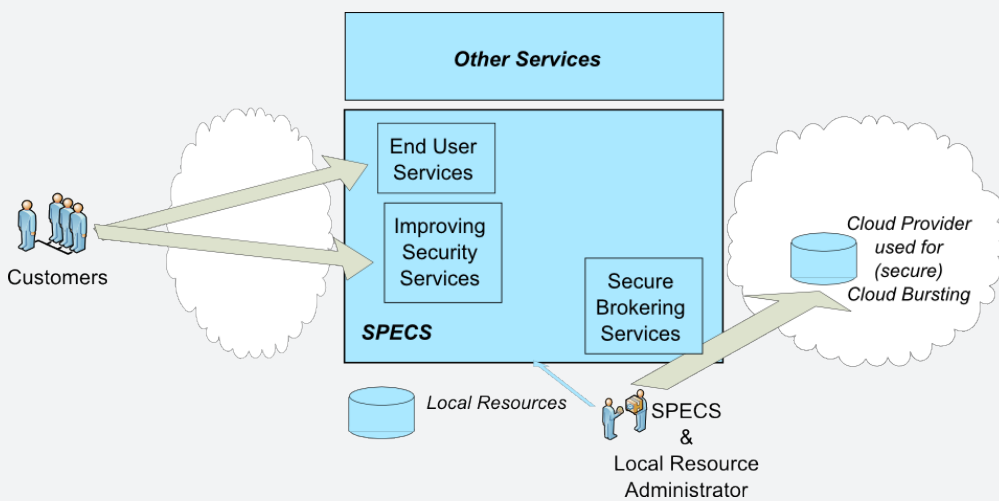
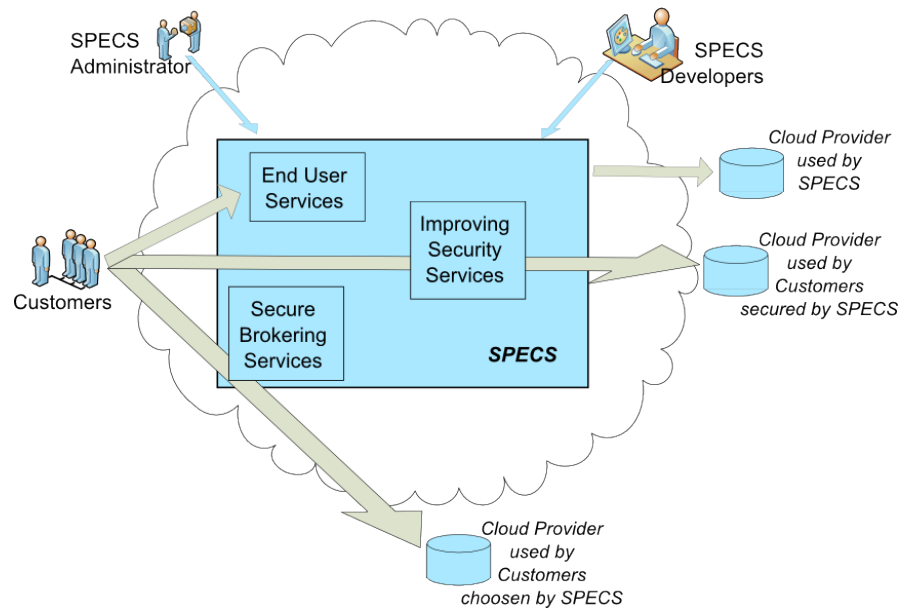
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USE CASES

SPECS Platform - buys resources from cloud providers to:

- Offer (security) services to end users;
- Broker resources from the cloud for end user.



SPECS Platform hosted by a CSP - has its own resources to:

- Add security to its services for end users;
- Secure cloud bursting.

SPECS Platform hosted by end users - they buy resources from the cloud to:

- Improve security on the target service.

