MUlti-Cloud Secure Applications

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MUSA Framework

**MUSA Risk Analysis & Decision Support Tool**
- Identify Risks & required Security Controls.
- Select CSPs
- CSP categorization

**MUSA SLA Generator**
- QoS & QoSec
- Component SLA templates
- Composite app SLA

**MUSA Modeller**
- Application architecture modelling
- MUSA security agents

**MUSA Distributed Deployer**
- Component SLA templates
- Composite app SLA

**MUSA Security Assurance Platform (SaaS)**
- Monitoring, enforcement and notification services

**MUSA Modeller**
- A
- B
- C
- D

**Application architecture modelling**

**MUSA SecDevOps DASHBOARD**

**DevOps team**

**Agile DevOps**
MUSA Dashboard - SecDevOps
MUSA Modeller
MUSA Risk Analysis & Cloud Service Selection
MUSA SLA Generator
MUSA Deployer

Implementation plan

```
{
    "sla_id": "DEP-1484290185199",
    "creation_time": 1484290185199,
    "csp": { };
    "iaas": { };
    "provider": "OpenStack",
    "zone": "RegionOne",
    "user": "ubuntu",
    "network": "33a20d87-71a0-4880-9436-43b025a8b18d"
},
"pools": { };
"pool_seq_num": 0,
"vm": { };
"vm_seq_num": 0,
"appliance": "RegionOne/0af0505e1a9b-4a0a-85f8-d6486be018dd",
"hardware": "RegionOne/b81c9f30-2f80-48c2-95c4-cd6c843a77de",
"components": { };
"slos": [ ];
"measurements": [ ],
"annotations": [ ]
```
MUSA Security Assurance Platform (MUSA SecAP) - SaaS
Tools in the MUSA Framework
MUSA tools are **all open source**.

First prototypes available to test!  
[www.musa-project.eu](http://www.musa-project.eu)

- **MUSA Modeller**
- **MUSA Risk Analysis & Decision Support Tool**
- **MUSA SLA Generator**
- **MUSA Deployer**
- **MUSA Security Assurance Platform (SaaS)**
- **Application Developers**
- **Business Managers**
- **System Operators**
- **Service Administrators**
- **DevOps Team**
- **MUSA SecDevOps DASHBOARD**
MUSA success stories

Flight Scheduling
- Scheduling prototype application by Lufthansa Systems
- Data localisation, data retention and deletion, data integrity, confidentiality, access control, etc.

Smart Mobility
- Energy efficient and sustainable multi-modal transit of Tampere citizens when commuting from home to work and vice versa
- Based on services exposed in *Intelligent Transport Systems and Services (ITS) platform* ([http://wiki.itsfactory.fi](http://wiki.itsfactory.fi))
- Confidentiality and privacy of citizens’ personal data and location
MUlti-cloud Secure Applications

Thank you!

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