



the IT architects

Simulator Development Consolidation: Library of Models (LoM)

SESP 2012: Simulation and
EGSE facilities for Space
programmes
ESTEC - Noordwijk

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25th - 27th September 2012

- Part of Simulation Development Environment Consolidation : SimSDE
- GFC8 Project
- Designed to work alongside UMF2

“The LoM library/server based repository aims to make it easier to get an overview of existing simulator models and to ease sharing of new models”

The key features of the LoM include

- Fostering of a shared / distributed simulation development
- State-of-the-art centralised server-based repository approach
- Web based portal combined with library to allow different access models
- Modular deployment approach (via UMF solutions/projects concept)
- Full binary deployment of released components or sets of released components
- Dependency management between UMF solutions/projects
- License and user management

Repository Managers are standard in modern software development.

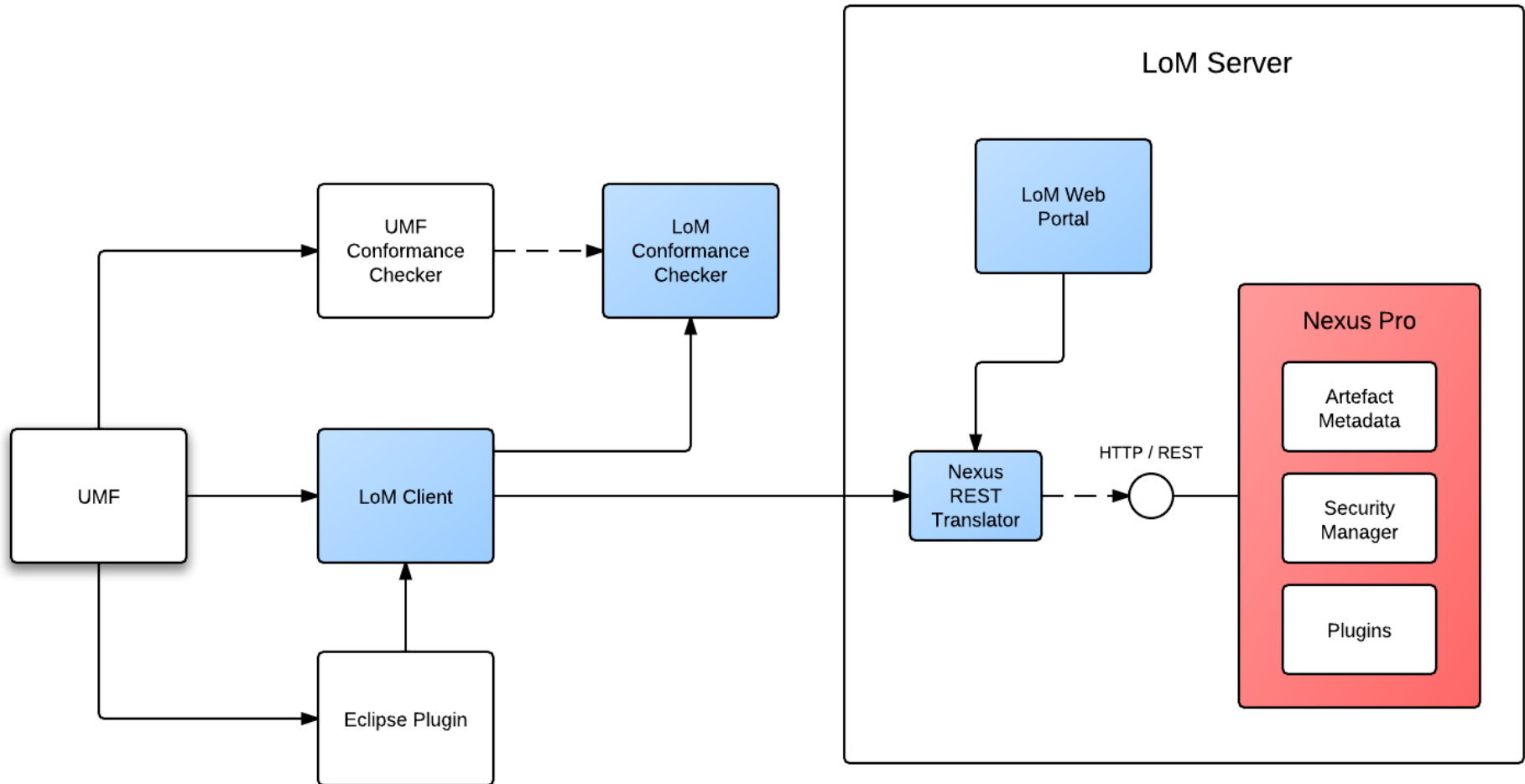
They

- Provide an organisation with control over what artefacts are available to both the development and operations teams.
- Facilitate the access to all types of artefacts (sources, binaries, documentation, etc.), enabling greater collaboration between development teams and wider distribution/reuse of software/components.
- Allow the definition of different repositories to distribute artefact types as required.

We decided to base the LoM server on standard repository manager software in order to.

- Reduce the cost of development.
- Provide a rich feature set that will grow as the features of repository managers grow.
- To facilitate access from different types of client

We chose Sonatype Nexus as it is the most widely used product, but the LoM can be easily migrated to other managers



Firefox

Artifact List

Welcome paul (sign out) **lom-portal v1.0**
Change Password

Company: The Server Labs
Licenses: [Generic]

Generic Reusable Mission Administration

Generic

Advanced search

Show: Solution Project All

| Name | Ver. | Type | Projects | Dependencies | Supercedes | Source | Binaries | Changed | Uploaded |
|--------------------------|------|----------|--|------------------|---------------------|--|--|----------------|----------------|
| esa.genm | 5.0 | solution | esa.genm:esa.genm.simpack.common esa.genm:esa.genm.services.gcons:5.0 esa.genm:esa.genm.services.simon:5.0 esa.genm:esa.genm.sense:5.0 esa.genm:esa.genm.simpack.scosmib esa.genm:esa.genm.simpack.tdbed:5.0 | | esa.genm:1.9 | esa.genm-5.0-source.zip (9,189 KB) | esa.genm-5.0-windows-x86.zip (43 KB) | 06/22/12 13:03 | 06/22/12 13:03 |
| esa.refa | 2.0 | solution | esa.refa:esa.refa.rcs:2.0 esa.refa:esa.refa.tcs:2.0 esa.refa:esa.refa.aocs:2.0 esa.refa:esa.refa.dataLinks:2.0 esa.refa:esa.refa.dhs:2.0 esa.refa:esa.refa.electronics:2.0 | esa:esa.genm:5.0 | esa.refa:1.9 | esa.refa-2.0-source.zip (2,157 KB) | esa.refa-2.0-windows-x86.zip (5 KB) | 06/22/12 13:08 | 06/22/12 13:08 |
| esa.refasim | 2.0 | solution | esa.refasim:esa.refasim.tcs:2.0 esa.refasim:esa.refasim.eps:2.0 esa.refasim:esa.refasim.rcs:2.0 esa.refasim:esa.refasim.ground:2.0 esa.refasim:esa.refasim.utilities:2.0 esa.refasim:esa.refasim.emulator:2.0 | esa:esa.refa:2.0 | esa:esa.refasim:1.9 | esa.refasim-2.0-source.zip (2,800 KB) | esa.refasim-2.0-windows-x86.zip (4 KB) | 06/22/12 13:40 | 06/22/12 13:40 |
| esa.genm.common | 5.0 | project | | | | esa.genm.common-5.0-source.zip (1,003 KB) | | 09/04/12 11:18 | 09/04/12 11:18 |
| esa.genm.generic | 5.0 | project | | | | esa.genm.generic-5.0-source.zip (836 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.pem | 5.0 | project | | | | esa.genm.pem-5.0-source.zip (708 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.sense | 5.0 | project | | | | esa.genm.sense-5.0-source.zip (441 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.services.common | 5.0 | project | | | | esa.genm.services.common-5.0-source.zip (187 KB) | | 06/22/12 13:05 | 06/22/12 13:05 |
| esa.genm.services.gcons | 5.0 | project | | | | esa.genm.services.gcons-5.0-source.zip (405 KB) | | 06/22/12 13:05 | 06/22/12 13:05 |
| esa.genm.services.gcross | 5.0 | project | | | | esa.genm.services.gcross-5.0-source.zip (124 KB) | | 09/04/12 10:48 | 09/04/12 10:48 |

1 2 3 4 5 Next

Deploy Artifact

ec2-46-137-168-85.eu-west-1.compute.amazonaws.com:8080/LoMPortal/artifact/resolve?uniqueId=esa.genm:esa.genm.services.simon:5.0

Firefox

Artifact List

Welcome paul (sign out) **lom-portal v1.0**
Change Password

Company: The Server Labs
Licenses: [Generic]

Generic Reusable Mission Administration

Generic

Advanced search

Show: Solution Project All

| Name | Ver. | Type | Projects | Dependencies | Supercedes | Source | Binaries | Changed | Uploaded |
|--------------------------|------|----------|--|------------------|---------------------|--|--|----------------|----------------|
| esa.genm | 5.0 | solution | <ul style="list-style-type: none"> esa.genm:esa.genm.simpack.common esa.genm:esa.genm.services.gcons:5 esa.genm:esa.genm.services.simon:5 esa.genm:esa.genm.sense:5.0 esa.genm:esa.genm.simpack.scosmib esa.genm:esa.genm.simpack.tdbed:5.0 | | esa.genm:1.9 | esa.genm-5.0-source.zip (9,189 KB) | esa.genm-5.0-windows-x86.zip (43 KB) | 06/22/12 13:03 | 06/22/12 13:03 |
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| esa.genm.common | 5.0 | project | | | | esa.genm.common-5.0-source.zip (1,003 KB) | | 09/04/12 11:18 | 09/04/12 11:18 |
| esa.genm.generic | 5.0 | project | | | | esa.genm.generic-5.0-source.zip (836 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.pem | 5.0 | project | | | | esa.genm.pem-5.0-source.zip (708 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.sense | 5.0 | project | | | | esa.genm.sense-5.0-source.zip (441 KB) | | 06/22/12 13:04 | 06/22/12 13:04 |
| esa.genm.services.common | 5.0 | project | | | | esa.genm.services.common-5.0-source.zip (187 KB) | | 06/22/12 13:05 | 06/22/12 13:05 |
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| esa.genm.services.gcross | 5.0 | project | | | | esa.genm.services.gcross-5.0-source.zip (124 KB) | | 09/04/12 10:48 | 09/04/12 10:48 |

1 2 3 4 5 Next

Deploy Artifact

ec2-46-137-168-85.eu-west-1.compute.amazonaws.com:8080/LoMPortal/artifact/resolve?uniqueId=esa.genm:esa.genm.services.simon:5.0

Firefox

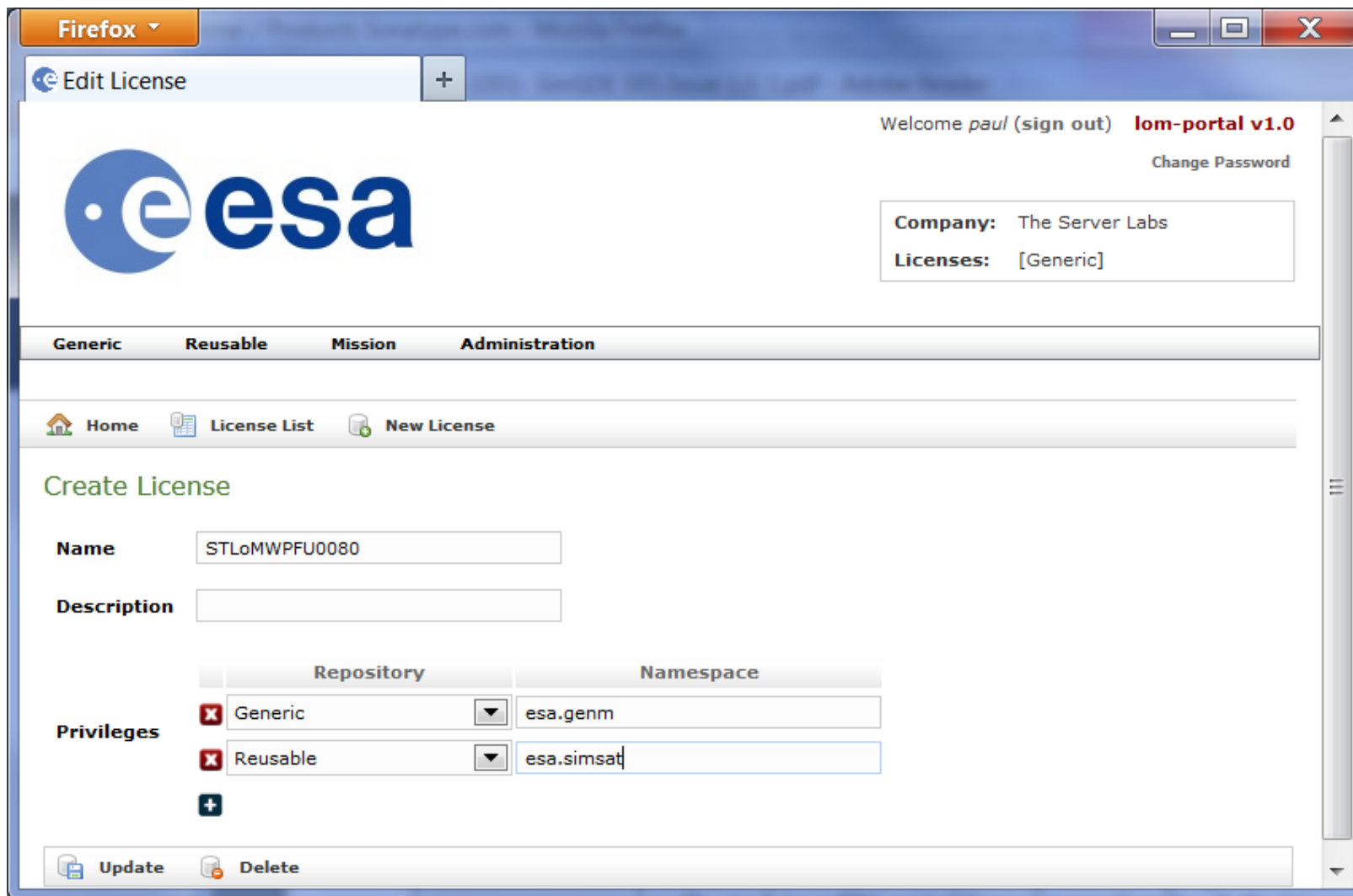
Show Artifact

Home Artifact List

Show Artifact

| | |
|----------------------------|--|
| Namespace | esa |
| Name | esa.refa |
| Long Name | esa.refa |
| Model Type | refa |
| Artifact Type | solution |
| Version | 2.0 |
| Description | Reference Architecture |
| Status | development |
| SimEnvBaseline | |
| DevPlatformBaseline | |
| SmpStandardVersion | |
| Dependencies | - esa:esa.genm:5.0 |
| Supercedes | - esa:refa:1.9 |
| Source | esa.refa-2.0-source.zip (2,157 KB) |
| Binaries | - esa.refa-2.0-windows-x86.zip (5 KB) |
| Tags | |
| Repository | Generic |
| Projects | - esa.refa:esa.refa.rcs:2.0 - esa.refa:esa.refa.tcs:2.0 - esa.refa:esa.refa.aocs:2.0 - esa.refa:esa.refa.datalinks:2.0 - esa.refa:esa.refa.dhs:2.0 - esa.refa:esa.refa.electronics:2.0 - esa.refa:esa.refa.rfcs:2.0 - esa.refa:esa.refa.eps:2.0 - esa.refa:esa.refa.ground:2.0 |

ec2-46-137-168-85.eu-west-1.compute.amazonaws.com:8080/LoMPortal/file/resolve/19



The screenshot shows a web browser window titled 'Edit License' in Firefox. The page header includes the 'esa' logo, a welcome message 'Welcome paul (sign out)', the version 'lom-portal v1.0', and a 'Change Password' link. A user profile box shows 'Company: The Server Labs' and 'Licenses: [Generic]'. A navigation bar contains 'Generic', 'Reusable', 'Mission', and 'Administration'. Below this is a secondary navigation bar with 'Home', 'License List', and 'New License'. The main content area is titled 'Create License' and contains a form with the following fields:

- Name:** STLoMWPFU0080
- Description:** (empty text area)
- Privileges:** A table with columns 'Repository' and 'Namespace'.

| | Repository | Namespace |
|-------------------------------------|------------|------------|
| <input checked="" type="checkbox"/> | Generic | esa.genm |
| <input checked="" type="checkbox"/> | Reusable | esa.simsat |
| <input type="checkbox"/> | | |

At the bottom of the form are 'Update' and 'Delete' buttons.

```
<?xml version="1.0"?>
- <project xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://maven.apache.org/POM/4.0.0">
  <modelVersion>4.0.0</modelVersion>
  - <parent>
    <groupId>esa.umf</groupId>
    <artifactId>umf-parent</artifactId>
    <version>1.0</version>
  </parent>
  <groupId>esa</groupId>
  <artifactId>esa.refa</artifactId>
  <version>2.0</version>
  <name>${project.artifactId}</name>
  <packaging>pom</packaging>
+ <properties>
+ <modules>
- <dependencies>
  - <dependency>
    <groupId>esa</groupId>
    <artifactId>esa.genm</artifactId>
    <version>5.0</version>
    <type>pom</type>
  </dependency>
</dependencies>
+ <build>
</project>
```

- The integration with UMF is via the LoM Client which is made available within UMF via an Eclipse Plugin

Any questions?



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