

SIMULIA Scenario Definition (SCE)

Scenario Definition (SCE) is a critical component of our Simulation Lifecycle Management solution enabling you to maximize the value of your simulation Intellectual Property (IP).

User Interface

SCE can be accessed via:

- A standard Web-based thin client browser application such as Microsoft Internet Explorer.
- ENOVIA-3DLive, which provides 3D, visual navigation over SCE simulation entities.

Simulation Entities

Simulation Process – The top-level entity is a Simulation Process. This entity collects or references all of the data and controls all of the activities associated with building and executing a simulation process.

Simulation Templates – Enable organizations to capture and deploy their best-practice simulation methodologies to a wide user base of analysts and designers to perform accepted and approved simulations with confidence and repeatability.

Simulation Category – Simulation data can be logically grouped and collected or referenced beneath Processes or Activities in folder-like entities named Categories. There are six default Categories: Product, Specifications, Internal Data, Validated Data, Context, and Results.

Simulation Activity – Most simulation processes consist of one or more activities. Often these activities are enabled by a simulation application such as Abaqus/CAE for pre-processing, or Abaqus/Standard for solving. Any number of Simulation Activities can be configured within a simulation process. These activities can collect or reference their own data in Categories and can integrate other simulation applications into SCE via Connectors.

Connector – The Connector framework allows a diverse set of applications to be deployed and executed from within the SCE environment. Connectors are currently available for Abaqus, CATIA, and select third-party simulation applications such as Nastran, HyperMesh, AcuSolve, and STAR-CD. Connectors can be downloaded from the SCE Web site or easily configured at your site.

Hosts – Hosts are used to capture the information related to an execution host. This information includes the type of operating system, the scratch directory location, and the list of applications which can be run on the host.

Applications – Applications are used to describe the characteristics of applications found on execution hosts. This information includes the execution path, the application version, and the specific execution directory that might be needed.

Simulation Attribute Groups – A Process or Activity can be associated with an Attribute Group in order to create and assign a set of searchable, type-specific attributes.

Simulation Jobs – These job entities control and record detailed information about all instances of the execution of a Process or Activity.

Export/Import Rules – Pre-configured rules governing the specification of data that should be exported from SCE prior to executing a Simulation Job and imported into SCE upon completion of a Simulation Job can be established and maintained for quick reuse in the Export/Import Rules.

Document – Document management principles are enabled to manage versioned and/or non-versioned data files within simulation entities.

Parameters – A block of local, shared parameters are provided to manage updateable variables that capture the physical or performance characteristics of the product being simulated, or variables needed in order to process and execute the Process and its Activities.

SLM Operations

The PLM operations listed below are available for most of the Simulation Entities:

Lifecycle – An SCE entity can be assigned a Lifecycle to govern the behavior of the object over the course of its useful life. Promotion or demotion of the entity through its lifecycle states can invoke a review cycle or determine entity behaviors such as access control policies.

Access Control – User privileges can be assigned for accessing, creating, editing, or altering an entity and the stage of the entity's lifecycle in which these privileges apply.

History – Provides a fully traceable and auditable record of all transactions related to an entity.

Impact Graph – Displays whether an entity is current or out of date, depending on changes to the status of upstream input and the resulting effect on the downstream output of the entity.

Other standard PLM operations – such as revise, copy, delete, and transfer ownership—are also available for most SLM entities.

Job Execution Framework

A Simulation Process or Simulation Activity can be launched and executed from SCE. A framework is provided to allow these jobs to be run on a local host or be distributed to a compute cluster and optionally utilize Distributed Resource Management (DRM) software.

Using the SIMULIA Execution Engine coupled with SCE provides easier enterprise-wide deployment, automatic choice of execution host based on the notions of affinities, and better integration with DRM software.

Capabilities are also provided to minimize the network flow of the large files often associated with simulation.



Application Programming Interface

Enables organizations to create custom user interfaces and vertical applications that access SLM data and execute key SLM capabilities, which is especially useful for automating mature, standardized simulation methodologies in a reliable and repeatable manner.

Pricing and Licensing

SCE is priced and licensed on a Named User basis. Named User licenses are available in annual or perpetual form with optional maintenance terms.

Hardware and Software Compatibility

For hardware and software compatibility information, please visit www.simulia.com/products/sce.

Documentation

Full online documentation and help is provided for SCE.

Product Support

SCE is supported in the same high-quality manner as all other SIMULIA products. The SIMULIA Online Support System is also available to provide answers to frequently asked questions and initiate support requests.

For more information on SCE, visit www.simulia.com/products/sce.

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