BETA
SIMULATION SOLUTIONS

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SPDRM
WORKFLOW MANAGER

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Q&A on SPDRM

1. What does the name SPDRM stand for?

SPDRM stands for Simulation Process, Data, and Resources Management.

2. What is this software for?

SPDRM provides a simple and intuitive way to capture, deploy, and manage CAE process workflows by integrating the resources, the tools, and the data associated with these. This software develops a secure and well organised environment, and supports the collaboration in terms of:

- Processes, by facilitating the standardization of CAE simulation procedures.
- Data, by ensuring that everyone uses the same data, and that data updates become timely available for all team members.
- Resources, by fully exploiting all the existing human/non-human resources, internal or external to the enterprise.

3. Who should use SPDRM? Is it only for CAE applications?

SPDRM should be used in teams and organizations in need of:

- an SDM system, for the management of simulation data, and/or
- workflow standardization and automation, and
- data traceability, i.e. the ability to track data through all states of their processing.

The usage of SPDRM is not limited to CAE applications. It can be used successfully for administrative tasks, document management, or any other applications where process capturing in combination with management of the related data is needed.

4. How SPDRM works?

The SPDRM software consists of two distinct programs:

- the SPDRM Server, and
- the SPDRM Client

The SPDRM client is the "front end" of SPDRM. The client offers the interface for the data, process and resources management.

The SPDRM server is the "back end" of SPDRM. The server responds to requests made by the clients by creating, querying and modifying database records.

The following image presents the SPDRM architecture which is based on a decentralized system, built on the concept of satellites.
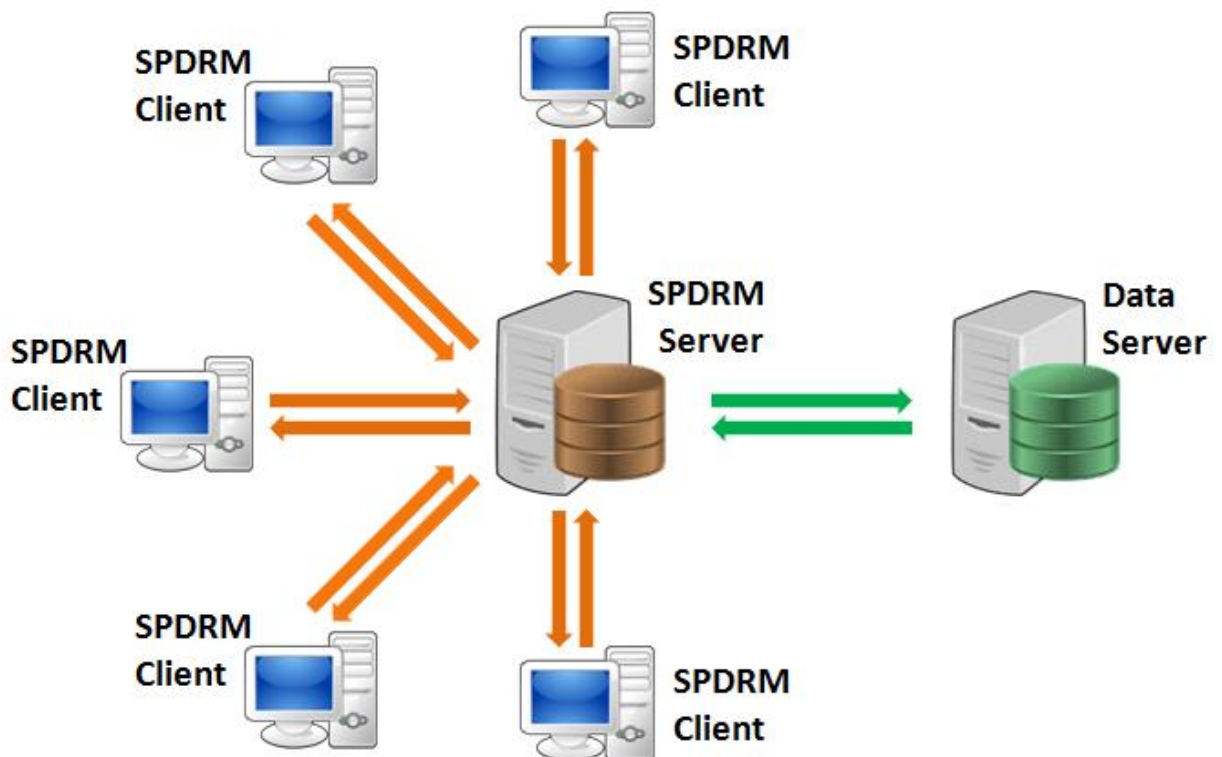
Being an Enterprise solution, the server and the clients are installed on different workstations that communicate over a computer network. The data handed by SPDRM do not necessarily need to reside on the SPDRM server. Usually, the data reside on a separate Data server.

The execution of processes (e.g. execution of scripts, launching of applications) takes place locally on the Client's workstation and as a result, the SPDRM server remains at a relatively low load, and is able to respond swiftly and keep total traffic on minimum level. This is achieved by limiting the communication sessions between the Clients and the server to the absolutely necessary.

5. What is the difference of SPDRM to other SDM systems?

First, the SPDRM data management functionality enables the management of data in the context of the workflows that produce and consume them.

It is a "light weight" software, with small size, that leaves a minimal "footprint" on the host systems. As such, SPDRM is easy to install and configure.

Additionally, SPDRM offers a tight integration with ANSA pre- and META post-processors, in both the areas of data and process management. ANSA offers out-of-the-box communication with the SPDRM server, making it suitable for use as an alternative client for data management.

6. What do you mean that SPDRM is scalable?

SPDRM does not necessarily need to be deployed on Enterprise level. It can be utilized in team, division, or department level.

Additionally, it is not necessary to use both the process and the data management functionality of SPDRM under a certain installation: SPDRM can be used for Data Management alone.

7. Which are the minimum system requirements and supported platforms?

(as of November 2014)

Server Hardware requirements	32bit	64bit
LINUX		
	Not supported	CPU: 4-core/8-thread intel i7 CPU (e.g. i7 960), Memory: 16GB, HDD: 1TB, Network: 1Gbit, Static IP
WINDOWS		
	Not supported	CPU: 4-core/8-thread intel i7 CPU (e.g. i7 960), Memory: 16GB, HDD: 1TB, Network: 1Gbit, Static IP

Server Software requirements	32bit	64bit
LINUX		
	Not supported	OS: CentOS (6.4 or later), Fedora (12 or later), SuSE (11 or later), Red Hat Enterprise Linux (6.5 or later) Database: MySQL community edition (5.5.8 or later), Oracle Database 11.2 Administrative privileges (create users/shares, change file privileges), Capability to share folders across the network (NFS/Samba), Configurable firewall
WINDOWS		
	Not supported	OS: Windows 7 (Professional, Enterprise, Ultimate), Windows Server (2008, 2012) Database: MySQL community edition (5.5.8 or later), Oracle Database 11.2 Administrative privileges (create users/shares, change file privileges), Capability to share folders across the network (NFS/Samba), Configurable firewall

Client	32bit	64bit

requirements		
LINUX		
	Not supported	OS: o CentOS (6.4 or later), Fedora (12 or later), SuSE (11 or later), Red Hat Enterprise Linux (6.5 or later) Memory: 4GB (memory requirements for applications that are used from within SPDRM are not included), Configurable firewall, Ability to connect to the SPDRM Server IP, Ability to connect to the SPDRM Server shares (i.e. vault and client directories)
WINDOWS		
	Not supported	OS: Windows (Vista, 7, 8), Memory: 4GB (memory requirements for applications that are used from within SPDRM are not included), Configurable firewall, Ability to connect to the SPDRM Server IP, Ability to connect to the SPDRM Server shares (i.e. vault and client directories)

8. Which are the prerequisites for installed software (before installing SPDRM)?

The following software should be up and running, prior to the SPDRM installation:

● MySQL or Oracle Database
● BETA License Manager (BETA_LM)

More details about the above mentioned steps can be found in the *SPDRM Installation Guide*.

9. Which databases are supported?

For the moment, MySQL and Oracle are fully certified and validated.

10. Which software can SPDRM drive in a process?

SPDRM can drive any software. Various applications can be registered in SPDRM and can be used in processes through application nodes. These

applications are not limited to those related to CAE simulations. Other software like document or spreadsheet editing, business intelligence, etc. may also be driven from a SPDRM process.

11. With which PDM systems may I combine SPDRM? Do I need to have a PDM system already deployed in order to deploy SPDRM?

SPDRM does not require the prior existence of a PDM system for its installation and use. Furthermore, SPDRM does not offer integrated interfaces to PDM systems. In case a SPDRM workflow must use as input a PDM data extraction, SPDRM may call ANSA in order to read the product structure and translate the CAD files. In this context, SPDRM may be combined with any PDM system such as TeamCenter, Enovia, etc.

12. What do I need to download?

The user should download the BETA License Manager (BETA_LM) and the SPDRM package through the official website of BETA CAE Systems. The BETA_LM is required only in case of new users that do not have this software installed already.

13. What does the installation package contain?

The installation package contains:

- Server and Client Installer
- Documentation:
    - Installation Guide
    - User's Guide
    - Jython Programming Interface
    - Release Notes
- Tutorials

14. Could I have more than one SPDRM server installation in the same enterprise?

Yes, more than one server installation may be required in cases of:

- one "production" and one "development" environment, which must be supported by two separate servers, or
- two or more data vaults, with different structure, to be used by different departments or corporate entities etc.

15. What background / knowledge / privileges do I need to have to set up SPDRM?

An IT background with knowledge on databases and network applications is recommended for the SPDRM set up. Additionally, root privileges for MySQL, Oracle and SPDRM Server are required.

16. What privileges do I need to have to run SPDRM?

For the launch of the SPDRM server, root privileges are required. For any data communication through the SPDRM client, the user must have access to the file paths declared as SPDRM vaults.

17. May I have an evaluation installation of SPDRM?

Yes. A fully functional evaluation licence is available for limited duration. An evaluation installation of SPDRM includes tutorials and default configuration, while support is provided by BETA CAE Systems.

Note: For the evaluation installation of SPDRM, it is possible to install the database, the SPDRM server and client on the same workstation.

18. Can SPDRM integrate resources "external" to the enterprise (e.g. suppliers of engineering services)?

Yes, as long as the external resource (supplier) meets the following conditions:

- has network access to the enterprise SPDRM server (e.g. through VPN),
- has remote access to the enterprise SPDRM client installation (or even a local installation of the SPDRM client),
- has a valid user account in SPDRM, and
- has network access to the file paths declared as SPDRM vaults.

19. Can I access the data stored in SPDRM directly through my pre-/post-processor or other software?

SPDRM provides a built-in tight integration with ANSA and META, allowing them to browse the content of the data vault directly through their DM Browsers. In this way, ANSA and META users can directly read and write data in the SPDRM vault by using the GUIs they are familiar with.

Additionally, SPDRM offers an API for communication of data with third party applications, which will enable them to have direct data I/O.

20. Can I define different data access levels for different user roles (e.g. administrators, managers, analysts, external suppliers)?

In SPDRM, the groups have different data access privileges according to the role of their members. The users that belong in more than one group, get different privileges based on their active role each time they log in SPDRM.

21. Can I extract my data and defined processes from SPDRM for further use or migration to another system in the future?

All SPDRM data can be extracted to a designated location in the file system with the aid of specific server functionality. The generated data package consists of all the files and their meta-data.

SPDRM processes can also be exported as *templates* in json format.

22. Are the data stored in SPDRM accessible only through the SPDRM client?

No. It is possible to configure SPDRM so that it exports selected data to a designated location in the file system and keeps that location in-sync with the data vault contents. This *exported file structure* is read-only, and enables users that are not registered resources of SPDRM to access the data directly through the file system browser.

23. Does SPDRM render ANSA Data Management obsolete? How about ANSA Task Manager?

No. SPDRM essentially extends the data management and task management capabilities offered by ANSA.

SPDRM can manage a great variety of data types, not limited to those handled by ANSA. Additionally, it offers fine-grained control over the data access, on user and user-group level.

Regarding process management, the workflows managed by SPDRM may involve several different applications and actors. An ANSA session that executes a pre-processing task in the Task Manager is a perfectly valid example of a single node of an SPDRM workflow.

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