



January 27, 2022

BETA CAE Systems announces the release of SPDRM v1.7.0

About this Release

BETA CAE Systems announces the release of SPDRM v1.7.0.

SPDRM v1.7.0 is now available, with numerous important enhancements in both the back-end and in the SPDRM client.

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Release highlights

Notably, this version introduces the DM Tree Focus. A new way of DM Tree filtering, as an alternative to the DM Tree filters. The "DM Tree Focus" tool is activated by clicking on the button in the top left corner of the "Data Manager". Through the "DM Tree Focus" dialog that pops-up, the users can select data branches of interest that will be isolated in the Structure, Library Items, and Files of the Data Tree. In addition, DM Tree Filters functionality is enhanced, as it is now possible to complement the pre-configured filtering attributes with filters based on the Owner, the DM Creation, and the DM Modification Dates.

Several back-end developments took place in this version to support Data Management and Process and Script Execution in KOMVOS version 22.1.0 and later. More specifically, in KOMVOS it is now possible to:

- Browse, instantiate/execute, and import/export SPDRM process templates in the Process Library pane.
- Monitor progress of all processes in the Process Instance List.
- Display the workflow diagram and perform node execution actions (Execute, Cancel, Finish, Reset) through the Process Diagram View tab.
- Monitor real time progress through the Running/Selected Process Output tab.
- Display metadata of selected process in the Details pane.
- Access to more SPDRM data views (Issues, Overwrites, Updates, Job Status) in the Info tabs.
- Execute SPDRM Generic and DM Item-specific Script Actions.
- Access directly the list of jobs submitted to the HPC through SPDRM in the My Jobs tab of the Home workspace or through the

Tools > Submitted Jobs window.

Focusing on the multi-site SPDRM solution, this version introduces an optimized mechanism for the file transfers between sites that are triggered in case of remote export/download of a Subsystem's hierarchy with a large number of contained parts (more than 10,000 parts). The new implementation downloads the related parts in batches, minimizing the number and size of file transfers between the sites, leading to a radical performance improvement for remote site users when working on a single-server multi-site architecture (vault replication).

This version comes with an extended library of REST services in the areas of Process and Data Management. New functionalities include:

- Process Templates handling: It is now possible to list, instantiate/execute, import/export and delete process templates.
- Progress Monitoring.
- Getting metadata of processes.
- Getting access to the additional attributes of DM items.
- Extensions in the endpoint for downloading SPDRM files: Now Entities, RLIs and plain files are also supported (in addition to the DM Items supported previously).

Additionally, this version includes enriched documentation for the REST API, including a more extensive list of functions, examples, as well as analytical information regarding the date format that can be used when performing date-based queries.

Related to the support of the Modular Run Management methodology of ANSA, from now on, and for ANSA version 22.1.0 and later, SPDRM supports the storage of adapted base modules. Adapted base modules are transformed and renumbered includes of Subsystems and Library Items that are reused among Simulation Models and Loadcases that use them with the same adapting attributes (i.e. with the same transformation or target id ranges).

Having in mind that deploying SPDRM application server on a single node suffers from potential problems that could lead to loss of application availability, SPDRM offers support of two new configurations, which ensure High Availability (HA) of the SPDRM application server (deployed on WildFly 14):

- Fail-over: A primary/secondary fail-over configuration that provides redundancy. This configuration ensures uninterrupted access of client applications to the SPDRM application server, even on the occurrence of node failures. The redundancy scheme consists of two servers. One will act as the primary server and the other, the secondary server, will be in standby mode. As soon as the primary server fails/stops, the secondary resumes the role of the primary, and vice versa.
- Load Balancing: A cluster configuration that provides redundancy and scalability by distributing read and write load across multiple SPDRM application server nodes. This configuration allows client applications to get timely responses from the SPDRM application server, even in the presence of high volumes of requests. Load-balancing architecture consists of a cluster of N application servers behind a load balancer, which is used as a front-end and is responsible to direct client requests to one node of the cluster for processing.

Still in the area of available system configurations, SPDRM introduces the SPDRM-STREAMER ecosystem that can notify third party tools on Database changes. This mechanism is implemented using cutting edge technologies such as Kafka and Debezium that add no overhead on SPDRM server or database. The SPDRM-STREAMER is an ETL (Extract, Transform and Load) process for extracting SPDRM data, transform them to recognizable events and load them to third party analytics tools. Specifically, a third party tool can subscribe via Server-Sent Events (SSE) to the new SPDRM-STREAMER service to consume real time changes on DM Objects (Creation, Update and Delete) along with their properties and attributes.

Last but not least, during the last months, a lot of effort was put on dockerizing SPDRM to facilitate the automation of internal Quality Assurance operations. Based on this experience, we are now ready to deliver and support dockerized SPDRM environments. Dockerizing SPDRM offers easier installation and maintenance of the application server and database server, which are required to deploy an SPDRM environment. With Docker, one can build any SPDRM architecture comprising the required system components in dedicated containers that communicate with each other via APIs.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Documentation Updates

Updated Documents

Updated installation guide, scripting API guide and user's guide.

Supported Platforms and System Requirements

The server software of SPDRM is currently available on Linux and MS Windows 64bits.

The client software of SPDRM is running under 64bit flavours of Linux and MS Windows.

The software requires a different license key to the rest of the products of BETA CAE Systems. This license key should be incorporated into the same license file, if such is already installed, and requires beta_lm, the proprietary license manager of BETA CAE Systems.

For details, refer to the [System Requirements document](#).

Download

Where to download from

Customers who are served directly by BETA CAE Systems, or its subsidiaries, may download the new software and documentation from their account on our server. They can access their account through the "sign in" link at our [web site](#).

Contact us if you miss your account details. The Downloads menu items give you access to the public downloads.

Customers who are served by a local business agent should contact the [local support channel](#) for software distribution details.

What to download

All files required for the installation of this version reside in the folder named: "**SPDRM_v1.7.0**" and are dated as of **January 27, 2022**.

These files should replace any pre-releases or other files downloaded prior to that date.

The distribution of this version of SPDRM is packaged in one, single, unified installation file that invokes the respective installer and guides the procedure for the installation of the required components (i.e. SPDRM server and client).

For the installation of the software on each platform type, download from the respective folders, the .tar.gz file for Linux or the .zip file for Windows.

Earlier software releases are also available in the sub-directory called "Previous_Versions" or in a folder named after the product and version number.