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BETA CAE Systems announces the release of SPDRM v1.6.0

About this Release

BETA CAE Systems announces the release of SPDRM v1.6.0.

SPDRM v1.6.0 is now available, with numerous important enhancements in both the back-end and in the SPDRM client.

The new version paves the way for more efficient simulation process data resources management. In addition to the introduction of the support of Python (3.8.1) as an alternative to the Jython scripting language, several developments have taken place to enrich the direct interfacing of SPDRM with all BETA suite software products.
Now, the build-in lifecycle management introduced functionality will control the evolution of your DM objects, while among the other new developments, the redesign of the file transfer mechanism will greatly improve the performance of file transfers.

The most important enhancements and fixes are listed below.

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Release highlights

Notably, Python (3.8.1) is now supported as an alternative to the Jython scripting language. For the time being, the SPDRM Client should be configured to use either Python or Jython script engine (Jython is still the default option). The new Python interpreter is implemented as a standalone application called bsgr and is made available as a new executable in the SPDRM installation directory. Those functions of the Script API that launch a GUI for the selection of data from DM are now implemented with the aid of KOMVOS (v22.0.0 or later) .

Under this version, several developments have taken place in the area of direct interfacing of all the products of the BETA Suite with SPDRM. A new implementation of the Process Execution module of SPDRM enables the execution of processes through ANSA, META or KOMVOS without the need for an SPDRM no-GUI client. With this new development, the core part of the Process Execution module of SPDRM has been transferred to a lightweight application called PEX (Process Executor) that can run both as a standalone application and embedded to the standard SPDRM Client. With this new infrastructure, SPDRM Script Actions can be executed directly

through the DM Browser of ANSA/META or through KOMVOS. Similarly, SPDRM Processes can be instantiated through the spdrm.process script module available in ansa, meta, sdm Python modules. In both cases, execution and all required communication with the SPDRM server will be handled by PEX.

Still in the area of direct interfacing of BETA Suite products with SPDRM, new categories of data items are supported, enabling the use of core ANSA and KOMVOS functionality with the use of SPDRM as a data management back-end. More specifically, two new categories of items are now supported, the Default Items, that host Modular Environment Profiles, Optimization Studies and ML Predictors and the Feature Items, which are used for the management of geometric features through ANSA (Fasteners, Stamps, etc.). On top of that, the hierarchy of Library Items is now stored in SPDRM, which enables correct export of their contents and hierarchy file, through ANSA/META or KOMVOS.

Furthermore, v1.6.0 comes with build-in lifecycle management functionality for all CAE data. A set of rules that govern the evolution a DM object can be specified for all the available data types. These rules are enforced upon connection to an SPDRM server which has lifecycle management activated. Among others, through the lifecycle rules it is possible to control:

- Accepted transitions of property/attribute values
- Conflict resolution policy and versioning scheme
- Maturity of DM object based on the maturity of its references and contents

Focusing on the multi-site SPDRM solution, the following optimizations took place on the file transfer module, providing increased efficiency and better performance in a single-server multi-site architecture (vault replication).

- Redesign of the file transfer mechanism by packaging many files that are pending transfer, and sending them as a package. Packaging of many files reduces the need for many file transfer commands (e.g. rsync) and leads to significant performance improvement of file transfer, especially in cases with DM objects containing many small files. A transferred package includes all the files requested by all users at the same in the same direction through any user action (e.g. all files requested through any action for transfer from the main site to the remote site A).
- Transfer of small files (<1MB) which do not participate in packaging takes place through HTTPS instead of rsync/scp.

In addition, the integration with the latest rsync version 3.2.3 has been tested and certified for SPDRM. This version supports zstd compression algorithm and xxhass hashing algorithm, which brings an important performance improvement on file transfers between sites.

Finally, this version offers the following additional optimizations, especially for file transfers between sites with network connection with high RTT (Round-Trip Time) > = 250 ms and high packet loss:

- Support of rsync command with partial file update and file resume on network error.
- Fine-tuning network configuration settings for transferring big files.

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

Documentation Updates

New Documents

The REST API documentation is now available and it can be accessed through the SPDRM Client (Help > Documentation Index).

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_v1.6.0**" and are dated as of **July 22, 2021**. This is an UPDATED DISTRIBUTION. These files should replace any pre-releases or other SPDRM_v1.6.0 distrbution 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.