EOM DIMon 3.1 Installation Instructions for Windows

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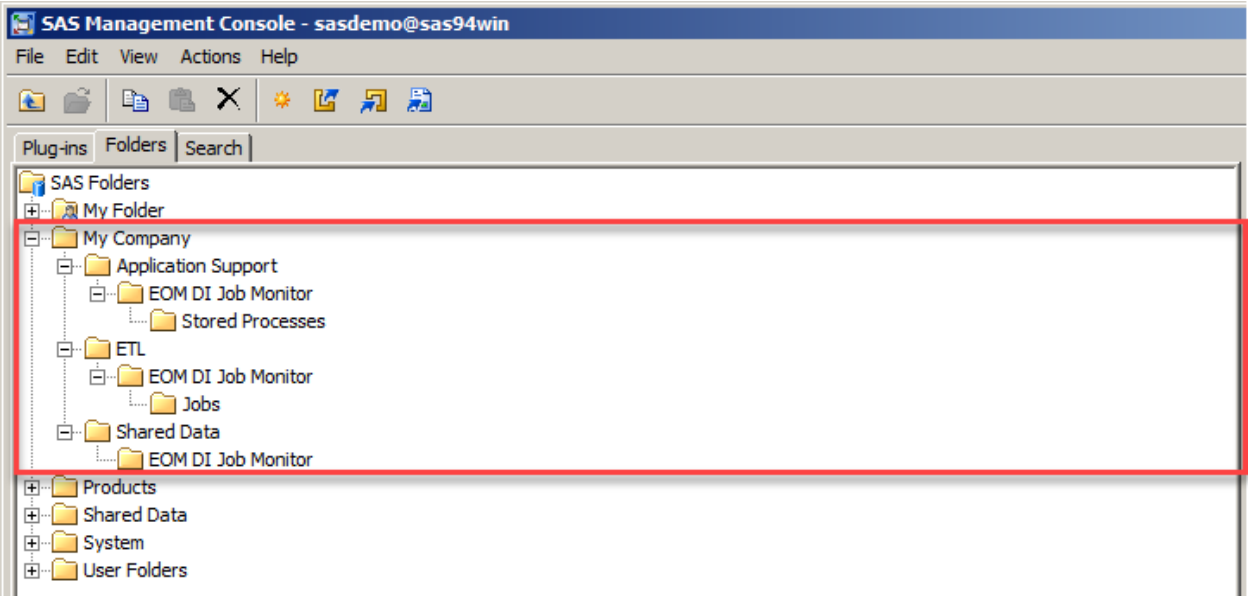
Proposed metadata folder structure:

It is common practice to have separate SAS metadata folders for ETL programs, SAS Reports/SAS Stored Processes, and data. This document assumes installation in the SAS Metadata folder *My Company* shown here:



DIMon Batch Component Installation Instructions

<table>
<tr><th>Nr</th><th>Instruction</th></tr>
<tr><td>1</td><td>Use SAS Management Console to create a SAS/SHARE or DBMS library with libref DIMON assigned to your SAS DI Application Server to store the DIMon tables. Your batch user needs UPDATE access to the tables in this library. Your SAS General Server User (e.g., sassrv) needs READ access to the tables in this library.

Notes:
- If you use a different libref than "DIMON" for your DIMon tables, add the following line to file "<sasappsrvcontextdir>\BatchServer\autoexec_usermods.sas":

<code>libname dimon (<your libref>);</code>

- For MySQL you need the following system variable in my.cnf:

<code>sql_mode='ANSI_QUOTES' # allow " as an identifier quote character (next to backtick)</code>

- If you experience slow performance when using the Postgres data store, please follow instructions for optimization at http://support.sas.com/kb/52/585.html

- When using the BASE SAS engine, add the FILELOCKWAIT option to the libname statement to prevent data set locking issues.</td></tr>
<tr><td>2</td><td>Create the required tables using the appropriate script for your database provided in installation package folder "SASBatch\SQL":

<table>
<tr><th>Engine</th><th>Script</th></tr>
<tr><td>SAS/SHARE</td><td>dimon_create_tables_sas.sas</td></tr>
<tr><td>Postgres</td><td>dimon_create_tables_postgres.sql</td></tr>
<tr><td>MySQL</td><td>dimon_create_tables_mysql.sql</td></tr>
<tr><td>MS SQL Server</td><td>dimon_create_tables_sqlserver.sql</td></tr>
<tr><td>Oracle</td><td>dimon_create_tables_oracle.sql</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Register the tables that were created in step 2 in SAS metadata folder "/My Company/Shared Data/EOM DI Job Monitor".

Deselect the following options when registering the tables:

- Enable case-sensitive DBMS object names
- Enable special characters within table or column object name</td></tr>
<tr><td>4</td><td>Import SAS metadata package "SASBatch\SASPackages\dimon-batch.spk" from the installation package to SAS metadata folder "/My Company/ETL/EOM DI Job Monitor/Jobs". Map the tables to the tables you registered in step 3.</td></tr>
</table>

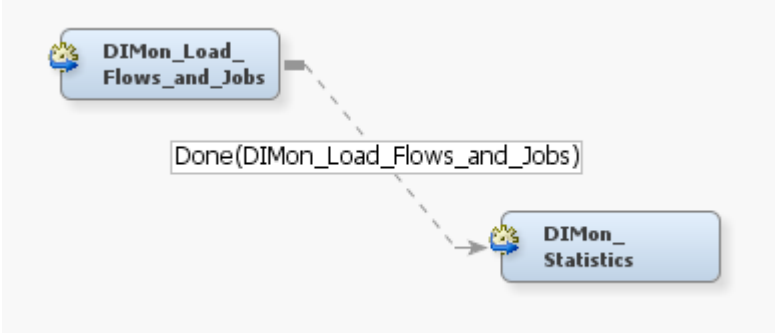
5	Copy all files in installation package folder "SASBatch\SASSteps" to folder "<sasappsrvcontextdir>\SASEnvironment\SASCode\Steps" on your SAS DI Application Server.

6	Create directory "<sasappsrvcontextdir>\SASEnvironment\SASCode\dimon" on your SAS DI Application Server.
	Copy all files in installation package folder "SASBatch\SASCode" to this directory.
	
	If you store the DIMon tables in Postgres and access them through SAS/ACCESS to ODBC, you may run into the issue described at http://support.sas.com/kb/51/085.html. To fix, replace the SQL update statement in dimon_job_finish.sas with the following code:
	
	`proc sql noprint;`
	`connect to odbc(dsn=<your dsn> authdomain="your DIMon AuthDomain");`
	`execute (`
	`/* Insert Post-Job Statistics */`
	`update dimon_job_runs`
	`set job_status_id = ( select job_status_id`
	`from dimon_job_status`
	`where job_status_code = 'COMPLETED'`
	`)`
	`, job_end_dts = current_timestamp`
	`, job_rc = &job_rc`
	`, update_user = %str(%')&sysuserid%str(%')`
	`, update_dts = now()`
	`where job_run_id = &job_run_id`
	`) by odbc;`
	`disconnect from odbc;`
	`quit;`

7	Copy all files from installation package folder "SASBatch\BatchServer\Windows" to "<sasappsrvcontextdir>\BatchServer" on your SAS DI Application Server. By default, your DI jobs will be submitted with a customized -log option, possibly ignoring options you may have set yourself. Please read **Error! Reference source not found.** to see if t his affects your installation and how to change it if you wish. To facilitate debugging you can set `DIMONDEBUG=YES` in dimon_usermods.sh, which creates the file /tmp/dimon-debug-$(USER).txt containing a list of environment variables.
8	Make a backup copy of file "<sasappsrvcontextdir>\BatchServer\sasbatch.bat" on your SAS DI Application Server.
9	Edit <sasappsrvcontextdir>\BatchServer\sasbatch.bat on your SAS DI Application Server: Right before the line: `"%SAS_COMMAND%" %CMD_OPTIONS% %*%`

	insert the following lines:
	
	`REM EOM DI Monitor - prolog -- begin`
	`set DIMON_CMDLINEARGS=%*`
	`call %APPSERVER_ROOT%\BatchServer\dimon_pre.bat`
	`REM EOM DI Monitor - prolog – end`
	
	Right after the line:
	
	`"%SAS_COMMAND%" %CMD_OPTIONS% %*%:`
	
	insert the following lines:
	
	`REM EOM DI Monitor - epilog -- begin`
	`set DIMON_JOBRC=%ERRORLEVEL%`
	`call %APPSERVER_ROOT%\BatchServer\dimon_post.bat`
	`EXIT /b %DIMON_JOBRC%`
	`REM EOM DI Monitor - epilog -- end`
	
	Replace the line:
	
	`"%SAS_COMMAND%" %CMD_OPTIONS% %*%`
	
	with
	
	`"%SAS_COMMAND%" %CMD_OPTIONS% %DIMON_CMDLINEARGS%`

10	Add the following line to file "<sasappsrvcontextdir>\BatchServer\autoexec_usermods.sas": `options fullstimer;`
11	Using SAS DI Studio, run DI Studio job "/My Company/ETL/EOM DI Job Monitor/Jobs/DIMon_Load_Flows_and_Jobs" that you imported in step 4, on your SAS DI Application Server. You can ignore the warning that there are transformations that may be out of order in the job.
12	Deploy the SAS DI Studio jobs imported in step 4 for scheduling on your SAS DI Application Server. Use the SAS Management Console Schedule Manager plug-in to create a flow with the following deployed jobs: 1. DIMon_Load_Flows_and_Jobs 2. DIMon_Statistics



Schedule the flow to run daily, as the first step in your nightly batch.

-- END OF INSTRUCTIONS DIMON BATCH COMPONENT

DIMon Web Application Installation Instructions

<table>
<tr><th>Nr</th><th>Instruction</th></tr>
<tr><td>1</td><td>Import SAS metadata package "Webapp\SASPackages\dimon-webapp.spk" into SAS metadata folder "/My Company/Application Support/EOM DI Job Monitor/Stored Processes". Assign the Stored Processes to run on your SAS Web Application Server (if you have that).</td></tr>
<tr><td>2</td><td>Copy the content of folder "Webapp\WebServer" to directory "<SASConfigDir>\Web\WebServer\htdocs\" on your SAS Web Server.</td></tr>
<tr><td>3</td><td>Copy the content of folder "Webapp\SASMacro" to directory "<sasappsrvcontextdir>\SASEnvironment\SASMacro" on your SAS Web Application Server.</td></tr>
<tr><td>4</td><td>On your SAS Web Application, on the OS, review de settings in file "<sasappsrvcontextdir>/SASEnvironment/SASMacro/dimon_init.sas" Server.
Do NOT modify this file. Any additions or changes should be made in "<sasappsrvcontextdir>/SASEnvironment/SASMacro/dimon_usermods.sas":
These are the default settings:

<table>
<tr><th>Setting</th><th>Description</th><th>Default value</th></tr>
<tr><td>libname</td><td>Optional alternative allocation of dimon library</td><td>none</td></tr>
<tr><td>sproot</td><td>Folder where dimon-webapp.spk was imported to</td><td>/My Company/Application Support/EOM DI Job Monitor/Stored Processes</td></tr>
<tr><td>webroot</td><td>Relative URL path to where the webapps components were copied to in step 2</td><td>/eom/dimon</td></tr>
<tr><td>urlspa</td><td>URL to the SAS Stored Process Web Application</td><td>/SASStoredProcess/do</td></tr>
<tr><td>_odsstyle</td><td>SAS ODS Style for webapp</td><td>dimon</td></tr>
<tr><td>viewlog_maxfilesize</td><td>For SAS log files beyond this filesize, you are prompted to download. This is an IE setting, for Chrome and Firefox this value is doubled</td><td>2097152</td></tr>
<tr><td>gantt_width</td><td>Width of the gantt charts in pixels</td><td>150</td></tr>
<tr><td>trend_days</td><td>Default numer of days to show elapsed time trend for</td><td>90</td></tr>
<tr><td>Flow completion mode</td><td>When is a flow marked as completed?

1. when #jobs_completed = #jobs_in_flow (default)
2. when #jobs_completed < #jobs_in_flow and nothing has been running for &flow_completion_mode_2_idle_time. seconds
3. when file <flow-id> exists in the &lsf_flow_finished_dir. Subflows use mode 1
4. when file <flow-id> exists in the &lsf_flow_finished_dir. Subflows use mode 2
5. when file <flow-id> does not exist in the &lsf_flow_active_dir. Subflows use mode 1
6. when file <flow-id> does not exist in the &lsf_flow_active_dir. Subflows use mode 2</td><td>1</td></tr>
</table>
</td></tr>
</table>

flow_scheduled_dts_match_seconds	The maximum time between scheduled start and actual start of a flow to be matched	60

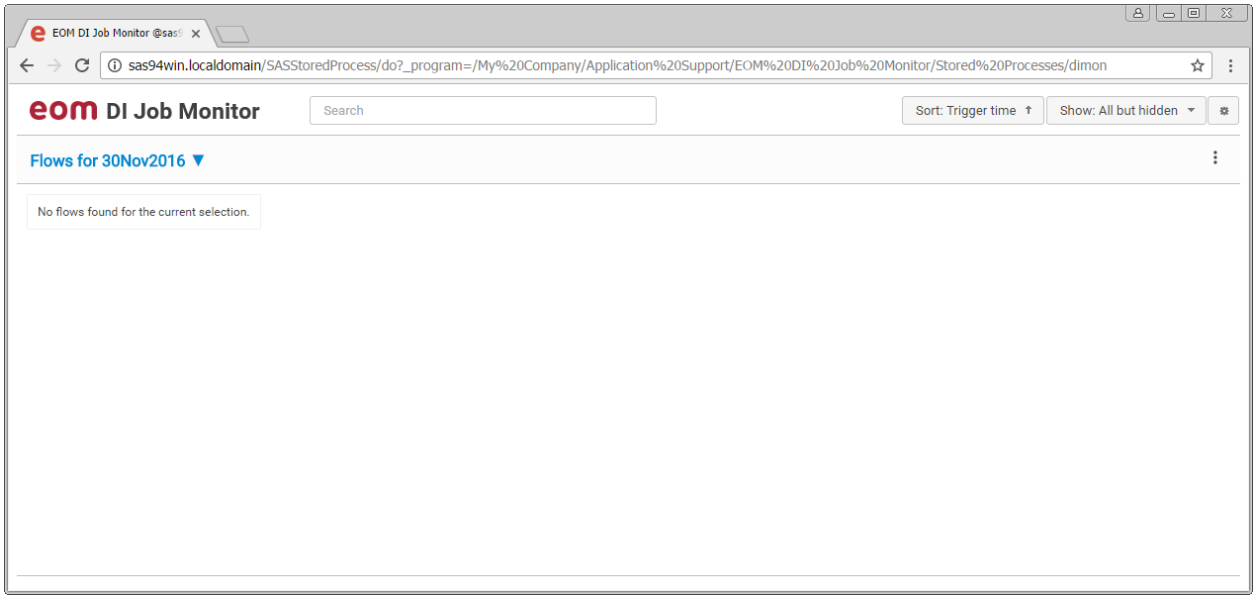
If you use a different libref than "DIMON" for your DIMon tables, assign it in this macro, for example:

```
libname dimon (dimonsas);
```

5 If you chose a different metadata location in Step 1 than the default ("/My Company/Application Support/EOM DI Job Monitor/Stored Processes"), update file eom/dimon/index.html that was copied in step 2 to reflect that in the sections marked yellow below:

```
<!DOCTYPE HTML>
<html lang="en-US">
    <head>
        <meta charset="UTF-8">
        <meta http-equiv="refresh" content=
        "1;/SASStoredProcess/do?_program=/My+Company/Application+Support/EOM+DI+Job+Monitor/Stored+Processes/dimon">
        <script type="text/javascript">
            var parms = window.location.search.substr(1);
            window.location.href =
            "/SASStoredProcess/do?_program=/My+Company/Application+Support/EOM+DI+Job+Monitor/Stored+Processes/dimon"
                                + ( parms == "" ? '' : '&' + parms);
        </script>
        <title>Page Redirection</title>
    </head>
    <body>
        <!-- Note: don't tell people to 'click' the link, just tell them that it is a link. -->
        If you are not redirected automatically, follow this <a href=
        '/SASStoredProcess/do?_program=/My+Company/Application+Support/EOM+DI+Job+Monitor/Stored+Processes/dimon'>link to the EOM DI
        Monitor</a>
    </body>
</html>
```

6 Start the EOM DI Job Monitor web application by navigating your browser to http://your-sasweb-server/eom/dimon/ . If you don't have any flows scheduled yet you should see the following:



-- END OF INSTRUCTIONS DIMON WEB APPLICATION COMPONENT