## Configuration

* These instructions show how to configure a new S-Match for later use with CHAIn. Currently the configuration sets up the new version to be used with SPSM. From there it is simple to also use the new version with CHAIn (see below under *Running CHAIn with new version*).
* Requirements: Working CHAIn installation
* *Download newest S-Match version from:* [*http://sourceforge.net/projects/s-match/files/*](http://sourceforge.net/projects/s-match/files/)
* Copy new S-Match version in /spsm/ folder
* Copy prolog-spsm.sh and all-spsm.sh from s-match-yyyymmdd(old)/bin/ to s-match-yyyymmdd(new)/bin/
* Change permission to allow executing files as a program for:
  + s-match-yyyymmdd(new)/all-spsm.sh
  + s-match-yyyymmdd(new)/prolog-spsm.sh
  + s-match-yyyymmdd(new)/match-manager.sh
* Create s-match-spsm.properties file in s-match-yyyymmdd(new)/conf:
  + (delete current s-match-spsm.properties file)
  + copy s-match.properties, rename it to s-match.properties and replace the TreeMatcher

|  |
| --- |
| Find these lines: |
| TreeMatcher=it.unitn.disi.smatch.matchers.structure.tree.spsm.SPSMTreeMatcher  TreeMatcher.SPSMTreeMatcher.mappingFactory=Global.MappingFactory  TreeMatcher.SPSMTreeMatcher.nodeMatcher=it.unitn.disi.smatch.matchers.structure.node.DefaultNodeMatcher  TreeMatcher.SPSMTreeMatcher.nodeMatcher.DefaultNodeMatcher.SATSolver=it.unitn.disi.smatch.deciders.CachingSolver  TreeMatcher.SPSMTreeMatcher.nodeMatcher.DefaultNodeMatcher.SATSolver.CachingSolver.SATSolver=it.unitn.disi.smatch.deciders.MiniSAT  TreeMatcher.SPSMTreeMatcher.spsmFilter=it.unitn.disi.smatch.filters.SPSMMappingFilter  TreeMatcher.SPSMTreeMatcher.spsmFilter.SPSMMappingFilter.mappingFactory=Global.MappingFactory |
| And replace them with: |
| TreeMatcher=it.unitn.disi.smatch.matchers.structure.tree.spsm.SPSMTreeMatcher  TreeMatcher.SPSMTreeMatcher.mappingFactory=Global.MappingFactory  TreeMatcher.SPSMTreeMatcher.nodeMatcher=it.unitn.disi.smatch.matchers.structure.node.DefaultNodeMatcher  TreeMatcher.SPSMTreeMatcher.nodeMatcher.DefaultNodeMatcher.SATSolver=it.unitn.disi.smatch.deciders.CachingSolver  TreeMatcher.SPSMTreeMatcher.nodeMatcher.DefaultNodeMatcher.SATSolver.CachingSolver.SATSolver=it.unitn.disi.smatch.deciders.MiniSAT  TreeMatcher.SPSMTreeMatcher.spsmFilter=it.unitn.disi.smatch.filters.SPSMMappingFilter  TreeMatcher.SPSMTreeMatcher.spsmFilter.SPSMMappingFilter.mappingFactory=Global.MappingFactory |

* Create s-match-spsm-prolog.properties file in s-match-yyyymmdd(new)/conf:
  + copy s-match-spsm.properties and rename it to s-match-spsm-prolog.properties
  + Change PlainMappingRenderer in MappingRenderer=it.unitn.disi.smatch.renderers.mapping.**PlainMappingRenderer** to **PrologMappingRenderer**
* Copy PrologMappingRenderer.java from s-match-yyyymmdd(old)/src/it/unitn/disi/smatch/renderers/mapping to s-match-yyyymmdd(new)/src/it/unitn/disi/smatch/renderers/mapping
* Rebuild java project:
  + go to folder s-match-yyyymmdd(new)
  + issue command ant jar
* Create prolog-spsm-yyyy.sh (for separately executing and testing the new S-Match version):
  + go to /spsm/ folder
  + copy prolog-spsm.sh and rename it to prolog-spsm-yyyy.sh
  + Change export S\_MATCH\_HOME to $DAISY\_HOME\_LOCAL/spsm/s-match-**20yymmdd** (basically folder in which new S-Match version is residing)
  + Change
    - ./prolog-spsm.sh $SPSM\_HOME/spsm-match-data/source.txt $SPSM\_HOME/spsm-match-data/target.txt $SPSM\_HOME/spsm-match-data/result.txt > /dev/null
    - to ./prolog-spsm.sh $SPSM\_HOME/spsm-match-data/source.txt $SPSM\_HOME/spsm-match-data/target.txt $SPSM\_HOME/spsm-match-data/result**-yyyy**.txt > /dev/null

## First run

* Run both prolog-spsm.sh and prolog-spsm-yyyy.sh
* Go to folder /spsm-match-data/
* Compare result.txt and result-yyyy.txt
* The files should show the same results
* If the results are not the same, then it is necessary to investigate whether this is caused by an incorrect configuration of properties in s-match-yyyymmdd(new)/conf or by updates made to the S-Match core or SPSM, respectively (the former needs to be fixed, while the latter two might justify obtaining a different result)

## Starting points for investigating potential differences between old and new S-Match versions

* Use other existing property files in match-yyyymmdd(old)/bin/ to s-match-yyyymmdd(new)/bin/prolog-spsm.sh
  + Change s-match-spsm-prolog.properties to compare results and determine where the difference does not originate from
  + Change ./match-manager.sh online $1.xml $2.xml $3 -config=../conf/**s-match-spsm-prolog.properties** -property=ContextLoader=it.unitn.disi.smatch.loaders.context.SimpleXMLContextLoader
  + to s-match.properties to only run the query with S-Match (without PrologMappingRenderer and without tree-edit-distance mapper)
  + to s-match-spsm.properties to run the query with SPSM and S-Match (without PrologMappingRenderer, but with tree-edit-distance mapper
* Run all-cw.sh and all-spsm.sh in s-match-yyyymmdd(old)/bin/ and s-match-yyyymmdd(new)/bin/ and compare results
* Consult release notes, if available
* Compare files of new and old S-Match versions, e.g. through
  + diff -qr s-match-yyyymmdd(new) s-match-yyyymmdd(old) | sort
  + by installing meld: apt-get install meld

## *Running CHAIn with new version*

* The easiest way to run CHAIn with the new version is to edit /spsm/prolog-spsm.sh
  + *Change export S\_MATCH\_HOME=$DAISY\_HOME\_LOCAL/spsm/s-match-yyyymmdd(old)*
  + *to export S\_MATCH\_HOME=$DAISY\_HOME\_LOCAL/spsm/****s-match-yyyymmdd(new)***
* Instead of changing spsm/prolog-spsm.sh it might be prudent to create a copy of /queryRespond/translation.sh that uses the new version
* Ideally translation.sh would be best set up to receive an argument indicating which S-Match version to use