

# Release Notes

## Version 5.0

6/03/2017

- New plugin: Mine Process Performance builds cumulative flow diagrams, time series and detailed stage-based performance statistics from an event log.
- New plugin: Staged Miner discovers a stage-based model from an event log, by automatically detecting milestones to separate the log into sub-logs, one per stage.
- New plugin: Visualize Log shows the direct-follows graph of an even log, where activity and edge filters can be applied.
- New version of Measure plugin now shows structural complexity metrics when a model is selected, as well as log statistics when a log is selected.
- New version of ProDrift plugin now characterizes a drift discovered in terms of behavioral relations, and prompts these to the use as English statements.
- New version of Compare plugin visualizes model2log differences as changes overlaid on the BPMN model.
- New version of BPMN Miner plugin now supports infrequent behavior filtering of the event log.
- BIMP process simulation plugin now accessible directly from Analyze menu (as well as from the Apromore Editor).
- OSGi Portal plugins can now have icons to show in the menus.
- We moved to ZK 8.0.2 and Apache Tomcat 7.0.61 on Eclipse Virgo 3.6.4 (previous versions won't work).
- New Apromore branding ("Advanced Process Analytics Platform") and logo.
- Two distributions: "one-click" is a single file to unzip somewhere and run Apromore from localhost, and "full-fledged" is the fully customizable version.
- Various bug fixes.

## Version 4.0

1/09/2016

- Native support for logs. Logs are now first-class citizens as process models. They can be imported and exported in XES and MXML, and be used as input to plugins, e.g. discovering a BPMN from a log.
- Apromore fully supports PQL (process query language) to query the repository based on process behavior. This includes a major reduction of the size of the PQL applet.
- New plugin Compare allows the following comperisons based on process behavior: model2model, model2log (conformance checking), log2log (variants mining).
- ProDrift 2.0 released: gradual drift and event-stream based drift detection now supported.
- BPMN Miner 2.0 released: a-posteriori structuring is now integrated into BPMN Miner.
- OSGi architecture has been restructured to support 3 types of OSGi plugins: portal, logic and editor. A large number of existing components have now become OSGi plugins.
- Menu items have been rearranged according to the phases of the BPM lifecycle (discovery, analysis, redesign, implementation, monitoring).
- We moved to MySQL 5.7 (previous versions won't work).
- Various bug fixes.

## Version 3.4

3/03/2016

- From the editor, one can now measure a variety of process model complexity metrics (size, CFC, structuredness...).
- GED matrix can now be computed on a selection of folders and is multi-threading.
- iBPStruct has been released: structuring process models with BPStruct now works again and the quality and extent of structuring has been improved.
- Installation of Apromore has been substantially simplified (reduced footprint - Apromore can now run from a USB stick).
- Various bug fixes.

## Version 3.3

## 29/06/2015

- Apromore is now capable of identifying concept drift in logs using the ProDrift plugin.
- New models can now be automatically discovered using process mining through the Automated discovery plugin based on BPMN Miner.
- Bug-fixing in the model merging function: now merged models obtained from the merging of more than 2 models are configurable.

## Version 3.2

### 25/03/2015

- Log files of process model execution traces in the XES and MXML formats can be animated on top of a BPMN model using the editor's "Animate logs..." (play) toolbar item.
- Process models with variants (e.g. merged models or configurable models in general) can show selected variants highlighted using the editor's "Make selection..." (rainbow) toolbar item. Highlighting can be performed either on explicit groups of variants, or by frequency.
- Configurable process models can be converted between the EPML and BPMN formats without having configurability information stripped. This is because now CPF supports configuration elements natively. Configurability information can still only be displayed and edited as BPMN, however.
- The "Design/Define questionnaire:model mapping" menu item launches the C-Mapper applet for a selected model. This can be used to author .cmap files which define how the answers to a questionnaire in the QML format should configure the variation points of a configurable model. The .cmap files can subsequently be used by the pre-existing Quaestio applet to perform the configuration. With the addition of the C-Mapper to Apromore, a Questionnaire Designer is the only missing part of an entirely web-based toolchain to create and configure process models by questionnaire.
- Improved handling of BPMN data modeling (Apromore no longer discards BPMN I/O specification elements, and only connects data associations to item-aware elements, rather than directly to flow elements).
- Bug-fixing in the model merging function: now merged models are configurable.
- Performance of clone detection has been improved.
- Apromore can now be built, and Applets can run, under both JDK 7 and 8.
- Several libraries have been converted into OSGi.

## Version 3.1

### 16/07/2014

- New and improved management of users, this will speed up performance on server side and reduce registration time (in the future user groups will be available we are already working on it).
- Configurable Process Models. Under Home/BPMN/Airpots we have a set of configurable processes.
  - If you select one of them and click on Design/Questionnaire-Driven Configuration you will be able to configure the process based on your requirements. You can also create new configurable process models by clicking on Design/Define model: questionnaire mapping. What you need is a questionnaire and a process model with configurable gateways. A gateway can be turn configurable selecting it and tipping on "configurable" in the right panel). At the moment you can only reuse existing questionnaires or loading them from your local machine. Soon you will be able to create a new questionnaire directly on Apromore (we are already working on it).
- Apromore knows you. On the top left corner you will receive a welcome with your name every time you login.

## Version 3.0

### 15/04/2014

- Tolerate and fix various EPML errors during import.

- Support for EPML Data Objects and Relations.
- Changed C-BPMN gateway variants.
- Support for reset nets in PNML.
- Conversion from BPMN tasks with interrupting events to reset nets in PNML.
- Tasks can now be converted to simple transitions or to start transition - place - end transition in PNML.
- Bug fixes to the database for persisting PNMLs.

## 10/02/2014

- Added support for editing PNML models.

## 7/02/2014

- Added support for editing PNML models.
- Added some extra plugins to change annotation shape sizes for when we edit a model not in it's native format.
- Fixed the import of PNML models.
- New Versioning and Branching support in the Portal and Manager.
- The Manager now has a scheduler support, currently only programatically.
- The Manager now supports metric calculations via plugins (first plugin for model size).
- Added the ability to run the Similarity Search from a folder level not the whole repo.
- Quaestio has been added to Apromore.
- Support for configurable C-BPMN models in the Editor.
- Added Print / Export to PDF to the Editor.
- Lots of Bug Fixes to the Portal.
- Lots of Bug Fixes to the Editor.

## Known Issues:

- Plugins for converting annotations from/to PNML absent. Auto-layout for PNML absent.
- Saving a marked PNML place produces the number of tokens on the marked place. Extra attributes besides tokens aren't saved.
- Even though we have a screen to setup security for users the information isn't used consistently. The viewing of models uses the info but not the rights to edit or delete.
- The filtering in Clone detection doesn't work correctly (decimals not shown, needs ZK 7).
- The code for clustering clones needs lots of refactoring and the HAC algorithm isn't working.
- GED Matrix construction only works against the whole repo not against folders, and so thus the clones clustering that depends upon it.
- To create a new scheduled task you have write code. UI to create tasks on the fly needs to be implemented.
- Portal and Manager security needs improvement. The Portal and Manager need to be integrated together so full authentication and authorisation can be supported.
- Editor has some issues importing and exporting some elements of some languages, e.g. Positions and Objects in EPCs.
- BPStruct support has some issues, either the json we send is incorrect or BPStruct has an error.
- Similarity search doesn't use nor shows in the results merge models, i.e. models that don't have native format.
- Double-clicking on a merge models won't edit it because of lack of native format.
- Documentation on a process model can be edited but is not shown - needs UI.

## Version 2.1

### 23/09/2013

- Lots of portal bug fixes.
- Editor changes, don't show the old header and make the display a little larger.
- Added a WebDav service to apromore to store files, will be used for Questio, Native formats and another other file needed for apromore.
- Simon has added a fair bit of work for Questio.
- Running ZK 6.5.3 CE version now as we didn't use any EE features. yet.

### 25/07/2013

- OSGI-ified the rest of the Apromore project (Portal, Manager-Client and supporting projects).

- Bundled the ZK libraries into a new location, they have to be uploaded into your local repo before a build will work now.
- The start for Spring WS security between the Manager and its built client. This is very difficult and could be removed in the future.
- Upgraded the ZK libraries to the last version 5 release, 5.0.12.

## 14/06/2013

- Converted the simple graph implementation to use the Canonical Process Format for the GED Matrix Calculations.
- moved the simple graph implementation into a more and stripped code to be clean and fast try and help debug any issues.
- added the AML to BPMN Annotation pre processor.
- Updated the CFP Importer to not worry about format and handle loading whole folders at a time.
- Fixed the Clustering visualisation to disable and enable buttons correctly and stopped exact clones from showing in the d3 graph.
- Minor bug fixed with the XPDL canoniser to handle the changes (from a while ago) to the CPF and ANF formats.

## 04/06/2013

- Updated The call to Signavio to not auto select everything.
- Fixed the BPMN in Signavio so we can now save a modified model.

## 03/06/2013

- For some languages there are source to target language annotation processors that make sure the nodes are the correct shape and line up correctly.
- Create default annotations for Merged models that don't have a source language.
- Removed Routing / Gateway names from being displayed in signavio.
- Clustering can now have the GED Matrix generated by selecting a button in the clustering screen.
- Fixed clustering so that the create clustering and show clustering now show the correct information.
- various UI fixes.

## 26/04/2013

- Fixed lots of bugs with the construction of BPMN models.
- Integrated a new version of the Version Control.
- Made the native format of the model part of the data for each version. We will always save a native format even if the model is incomplete can not be processed by the RPST.
- introduced load time weaving for Eclipse Link, this greatly increased the performance of queries.
- New algorithm for the Similarity Search.
- Clustering GED Matrix Calculation is now a lot faster.
- various UI Fixes.

## 02/04/2012

- Logs of bug fixes within the UI and manager.
- Both Save and Save As now work for the editor.
- Further work on the OSGi framework to make Aprimore more compliant to the standard.
- Performance fix for the UI. now the UI only requests the details for the models that are displayed, not all of the repository.
- Cleaned up the UI menus to not show the menu items that haven't been implemented.
- Some fixes to the canonisers for various BPM Modelling languages.

## 10/03/2012

- Osgi has been implemented but there still a long way left to go. Currently only the plugins are osgi bundles but soon the manager/portal will be bundles as well.
- Updated the CPF format to contain more information. useful to changing from executable YAWL to BPMN.
- Now have XPD, BPMN, YAWL, ARIS, PNML and EPML canonisers.
- Lots of bug fixes and speed improvements to version control and clustering.
- Fixed a bug with Similarity Search not giving the same results after each run.
- Basic security settings and UI improvements.

## 25/07/2012

- Lots of work done to include (Chathura's) Version Control and Clustering into Apromore.
- Lots of updates to the build in maven, now allows for Maven 3, jdk7 and tomcat 7 for running.
- Slowly adding more tests to the test suite to try and pick up errors more quickly.

## Version 0.2 (AKA 1.0)

### 23/11/2010

- Annotations: for each process version available annotations are displayed.
- GUI for editing process enhanced: user can not make incompatible choices.
- Users can choose to edit annotation only. Oryx will disable features so users cannot modify any part of the process structure
- Similarity search: still ongoing work on Reina's algo integration
- Merge: same.

### 1/12/2010

- Similarity search issues fixed
- Merge: ongoing work

### 27/1/2011

- Short message located at the bottom of the main window is re-initialised at each action
- Similarity search keeps going even in case of faulty process versions
- For similarity search and merging, greedy algorithm is the default choice.

### 31/1/2011

- Search for similar processes: query process displayed
- Scores for returned process versions still to be fixed

### 12/02/2011

- Merge works
- Similarity search results: scores are displayed

### 02/03/2011

- Results from similarity search are displayed according to their score

### 12/04/2011

- Skeleton for initialising epml process fixed
- SimpleSearch? component accessible by anonymous users (public)

### 7/06/2011

- Fixes to [issue 127](#)

### 19/07/2011

- Ordering functions on process information is fixed.

### 25/07/2001

- Now users are given the choice to search (similarity) process latest versions only or all versions

## 28/07/2011

- ~~Issue 124~~ fixed.
- ~~Issue 124~~ fixed.

## 01/08/2011

- Display error message in popup window when similarity search fails

## 15/04/2012

- First major release in a while. Added PNML canoniser for the Woped integration. Also, major structural and architectural changes to the code base have been completed.
- Quite a few jUnit test have been included to help ensure the functionality of the application is correct. (A lot more is needed).

## Version 0.1

### 23/07/2010

- Release notes accessible from Apromore portal.
- GUI import/export/edit improved

### 21/07/2010

- User is given the choice of using annotations or not when exporting or editing a process model.
- When editing process model meta data users can choose owner
- Ranking can be null (not necessarily 0 or 1, ..)

### 30/7/2010

- When saving modifications with Oryx, users are given the choice to override the current version (only if the current version is a leaf of the derivation tree) or to derive a new version from the current one (the new name must be different from all existing version names for the same process).

### 4/8/2010

- Unselect button behavior is fixed.

### 10/8/2010

- cpf\_0.4 and anf\_0.2 new releases are integrated.
- Process model Id is now a double whose decimal representation is concat(processId, versionName-no".", timestamp).
- processId remove from table,
- Documentation fixed: clic on it to display the full content.

### 11/8/2010

- Ranking number replaced with fancy stars. Still needs to add interactions so users can rank process versions (currently possible via edit meta data feature).
- Feature "create model" enhanced: users are no longer requested to give a version name in the create model dialog. The only one process version resulting by "create process" is the one named in Oryx.