Overlap between OS reports and WTC Actions

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Introduction

- Improve the utilization of information gathered by Operations Support
- Develop a mechanism to "hold workflows(sites) in trouble" based on OS observations

→ Waste less resources on workflows that are bound to fail

- More Details on the strategy can be found in the OS Droid google-doc.

- How many workflows reported by OS eventually end up as problem cases to be dealt with by the Workflow Traffic Controller?

Analyzed Data:

- Active List (link)
  - Data gathered by Jen from March 15th to May 2nd.
  - Workflows with failure rate > 20%
  - Contains the following information:
    - Workflow name
    - Primary exit code
    - Secondary exit code
    - Keyword from error message
    - Suggested Action
- Passive List (link)
  - Workflows that have been handled by WTC in the last 50 days (May 3rd), provided by Paola.
  - Exit code information taken from SQLite database, provided by Dan.
  - Contains the following information:
    - Workflow Name
    - Exit code (two most often cases)
    - Action
    - Reason

A few words on the Analysis Strategy:

- **Class OSTree:** Convert Tables into Root TTrees

→ Preliminary results can already be seen with TBrowser

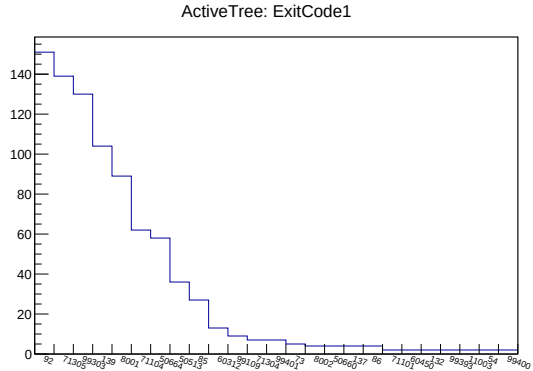
- Exit codes are treated as strings, not integers

- **Class OSOverlap:** Sorts Trees into different sub-trees
- Possibility to apply Filters (e.g. "only ActionOS= hold workflow")
- New trees: OnBothActive, OnBothPassive, OnlyActive, OnlyPassive, SortedOut (when Filters are applied)

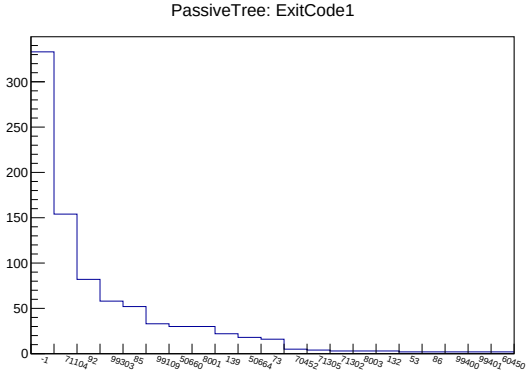
- **Class OSPlotter:** Creates 1D and 2D histogramms from the tree-branches.

Exit Code Distribution (Entries < 2 removed):

- Active List:
- 875 Entries
- 345 Different workflows

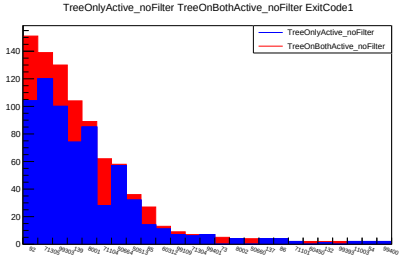


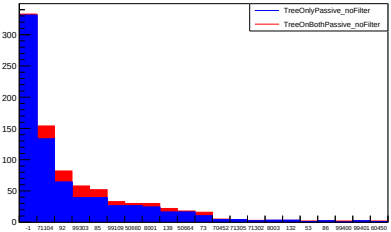
- Passive List:
- 862 Entries

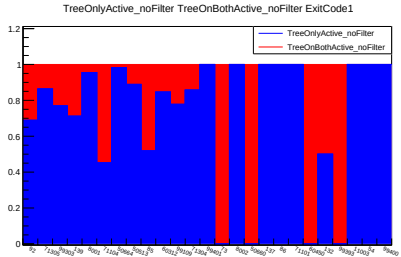


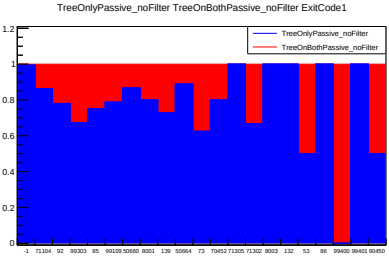
→ Several workflows are reported with both, workflow and site issues. → Requiring active an passive to have same exit codes brings no improvement

Overlap without Filters (updated): 112 Workflows

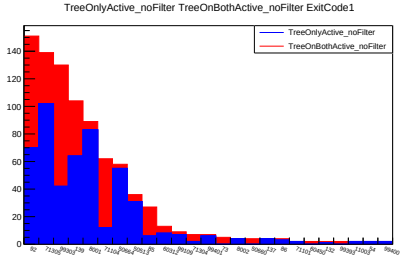


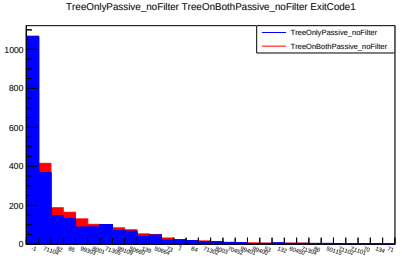


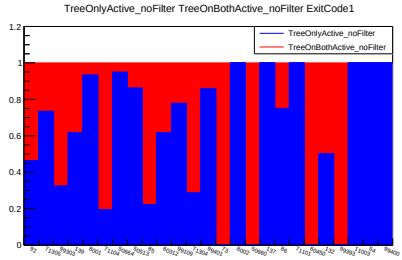


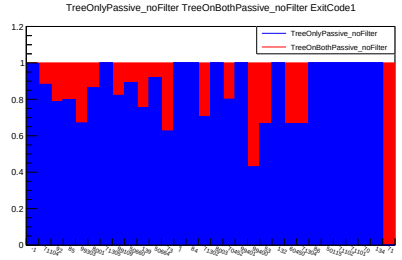


Overlap without Filters (updated): 143 Workflows



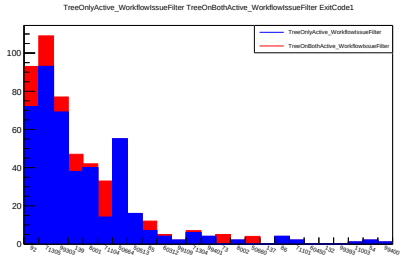


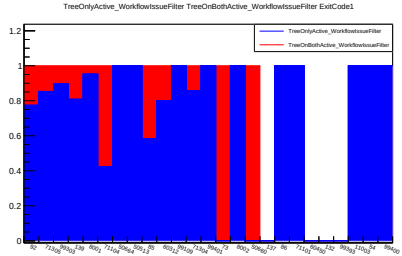




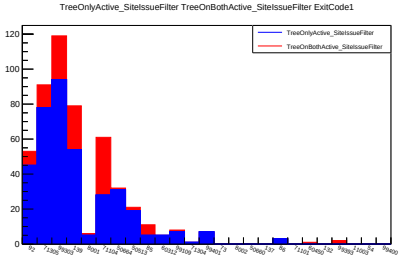
Active List: Workflow Issues /Site Issues Only

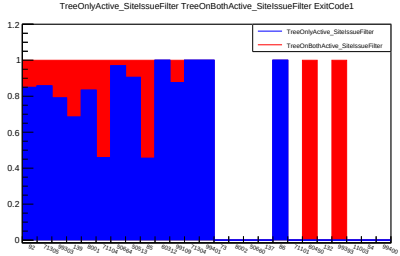
ActionOS = "hold workflow":





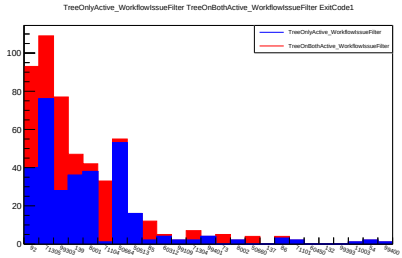
ActionOS = "hold site: "

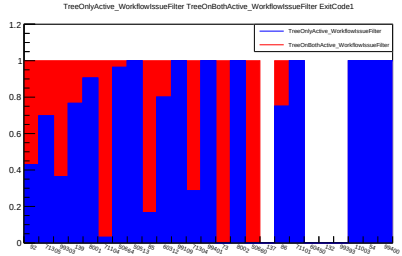




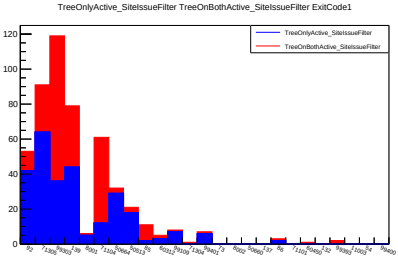
Active List: Workflow Issues /Site Issues Only (updated)

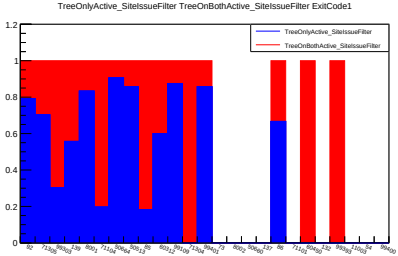
ActionOS = "hold workflow":





ActionOS = "hold site: "





ActionOS = "hold workflow":

- 100% Overlap:
  - 73: Missing secondary input file
  - 50660: Memory issues
- > 70% Overlap:
  - 71104: Submit failed
  - 85: Local file read error
  - 71304: Wall Clock
- > 50% Overlap:
  - 92 Remote file read

ActionOS = "hold site: "

- 100% Overlap:
  - 60450: Merge issues
  - 99393: StageOut issues
- > 70% Overlap:
  - 99303: Singularity
  - 71104: Submit failed
  - 71304: Wall Clock
- > 50% Overlap: