

Automation in Aquilon to be 0.000001% more efficient



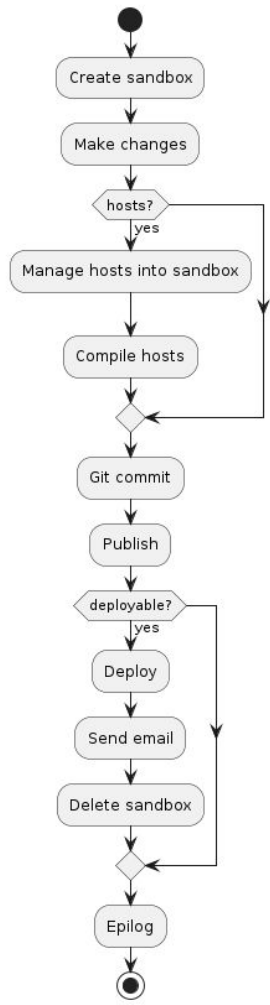
@ stfc.ac.uk

One (of many) use case

```
$ cat ral-tier1/features/cvmfs/egi-checkin/etc/pam_oauth2_device/users.json
{
  "2dee939532f16e482748b6c25f6ebbf2cac57abd28ca98bee06a114393d14a89@egi.eu": [
    "intertwinsgm",
    "unpackedsgm"
  ],
  "a4e7130df3fb16992ee66f02f7a31c70583aa0dc9b63916ed03235fec10bf7d9@egi.eu": [
    "intertwinsgm",
    "unpackedsgm"
  ],
  "9fa6b76121ba5fd9df4ff9f3ad968ebe1a0156dba9b9027b0673147b7f7331a9@egi.eu": [
    "gridppsgm",
    "testsgm"
  ],
  "bb70a414551b133a0e36ab5a13e82fa677756dbc48dad5008ef176919e8fc72d@egi.eu": [
    "augersgm"
  ],
  ...
  ...
  ],
  "6d77443e151c3df29c1a4b6a5025f122cfabe7bc65a93b0a8e6dbed171583a1d@egi.eu": [
    "northgridsgm"
  ]
}
```

One (of many) use case

```
$ cat /var/lib/containers/oci/cvmfs/egi-checkin/etc/pam_oauth2_device/users.json
{
  "2dee939532f16e482748b6c25f6ebbf2cac57abd28ca98bee06a114393d14a89@egi.eu": [
    "intertwinsgm",
    "unpackedsgm"
  ],
  "a4e7130df3fb16992ee66f02f7a31c70583aa0dc9b63916ed03235fec10bf7d9@egi.eu": [
    "intertwinsgm",
    "unpackedsgm"
  ],
  "9fa6b76121ba5fd9df4ff9f3ad968ebe1a0156dba9b9027b0673147b7f7331a9@egi.eu": [
    "gridppsgm",
    "testsgm"
  ],
  "bb70a414551b133a0e36ab5a13e82fa677756dbc48dad5008ef176919e8fc72d@egi.eu": [
    "augersgm"
  ],
  ...
  ...
  ],
  "6d77443e151c3df29c1a4b6a5025f122cfabe7bc65a93b0a8e6dbed171583a1d@egi.eu": [
    "northgridsgm"
  ]
}
```



Other cases

- **Update pinned versions of RPMs**
 - xrootd
 - gfal
- **Update the content of the .lsc files for VOMS servers**
- **Add an entry to a grid-mapfile**
- **Add a new item to the list of CVMFS repositories**
- ...

Demo time



More potential use cases?

- add/remove ssh key for new/leaving people
- add/remove members in admin.pan
- any update of a version number:
 - pinned RPMs
 - docker image version
 - ...
- add/remove/update values in config files
 - Batch Farm parameters
 - Add/remove people from ACL lists, black lists, ...
 - ...
- ...

...if and only if...

1. The use case has been reviewed and approved.
2. The script has been validated.
3. Peers are notified of the changes, so they can be audited.



FAQ: is your code available?

I am not pitching my code. Just sharing my experience, in case a similar approach may be helpful to others.

FAQ: what happens if something goes wrong?

Every step should abort in case of failure, with a loud log message/email.

If the automation runs to the end, and something goes really bad... well... hmm...
are you member of an Union?

FAQ: can it be used for more complex workflows?

In principle yes, if done carefully and, again, it has been pre-approved.