Research: use c11 standard

Currently we use c99, or rather gnu99. c11 brings some nice improvements like thread local, atomics, anonymous structs and unions.

First step is to investigate if all platforms have a c11 compliant compiler available.

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### Related issues:

- Related to Optimization #3655: default to c11 standard

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### History

#### #1 - 01/21/2020 09:01 AM - Victor Julien

CentOS 6's gcc is too old. A c11 version can be installed through 'scl'. See for example https://edwards.sdsu.edu/research/c11-on-centos-6/

#### #2 - 01/21/2020 11:19 AM - Victor Julien

Snippet from my Gitlab-CI centos:6 builder:

```bash
centos:6:scl:
  image: centos:6
  stage: test
  before_script:
    - source setupenv.sh
    - yum --install epel-release centos-release-scl
    - yum --install devtoolset-8
    - source /opt/rh/devtoolset-8/enable
    ...
```

This gets us:

GCC version 8.3.1 20190311 (Red Hat 8.3.1-3), C version 199901

#### #3 - 01/21/2020 04:17 PM - Victor Julien

Probably a stretch, but for good measure we should consider c18 while at it.

#### #4 - 04/17/2020 07:47 AM - Victor Julien

- Related to Optimization #3655: default to c11 standard added

#### #5 - 04/17/2020 07:48 AM - Victor Julien

- Status changed from New to Closed

c18 is too recent for us. Support is absent in many of the supported platforms. c11 support has been added #3655.