



Update on performance optimization working group

- **Roland Haas** (presenter), Erik Schnetter, Zach Etienne



Current status

- WG has been approved by ET
- have monthly call on last Friday of the month at noon Central, 17:00 European time
- next call: Friday April 27th
- currently reviewing performance goals dicussed at ET meeting at NCSA

Milestones

1. review existing optimization efforts currently in private branches: <DEADLINE> to be added by bracketed persons by 2018-04
 - a. **[Erik]** Carpet/eschnett/funhpc
 - by 2018-05-31: review of features, decision which features to include into Cactus, extract features into new branch, start discussion on ET mailing list
 - b. **[Ian]** CactusNumerical/ianhinder/rkprol
 - c. **[Roland, Erik]** CactusExamples/eschnett/hydro
 - d. **[Zach]** NRPy+, a “Kranc-like”, but Python/SymPy-based code capable of creating the mathematical “guts” of ETK thorns (as C code, supporting AVX256/AVX512 intrinsics). (public git repo, code announcement paper). NRPy+ already provides
 - RHSs for SphericalBSSN thorn (code announcement paper), and
 - an ETK GRMHD initial data thorn (magnetized BH accretion disk) (public git repo)
2. import identified optimization efforts into master branches: <DEADLINE> date TBD by 2018-04
3. review discussion on in "Breakout Discussion on Scalability" in Notes from ET 2017 meeting at NCSA: 2018-04 (next call)
4. advertise efforts and bring in more developers: 2018-04 (next call)