Improving Programmer Productivity and Software Sustainability

Resources from the IDEAS Scientific Software Productivity Project

ideas-productivity.org/resources/howtos/

The IDEAS Scientific Software Productivity Project is dedicated to improving programmer productivity and software sustainability for extreme-scale computational science and engineering (CSE).

The following documents provide definitions (“What Is...”) and strategies (“How to...”) targeted at CSE software teams.

- What Is CSE Software Productivity?
- What Is Software Configuration?
- How to Configure Software
- What Is Performance Portability?
- How to Enable Performance Portability
- What Is CSE Software Testing?
- What Are Software Testing Practices?
- How to Add and Improve Testing in a CSE Software Project
- What Is Good Documentation?
- How to Write Good Documentation
- What Are Interoperable Software Libraries?
- What Is Version Control?
- How to Do Version Control with Git

This material is based upon work supported by the U.S. Department of Energy Office of Science, Advanced Scientific Computing Research and Biological and Environmental Research programs.