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ASC Customer Support

WBS STPR 04 Milestone 24

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EXECUTIVE SUMMARY

This report documents the completion of milestone STPR04-24 "Provide high quality (production) Kokkos support and consultation for ASC applications and libraries.". The Kokkos team resolved 344 issues reported to github (no explicit tracking of ASC vs non-ASC was performed). We engaged actively on the Kokkos slack channel, which now averages about 60 unique users per week. A survey of ASC customers was conducted with regards to the experienced support. The feedback indicates that the ASC customers are satisfied by Kokkos' support efforts.

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1. INTRODUCTION

In order to be able to effectively use a programming model or any other software technology product, support for the product must be sufficient. This includes addressing bug reports and feature enhancement requirements as well as simply having a way to get answers to questions. Kokkos provides its support primarily via GitHub and Slack.

2. MILESTONE OVERVIEW

2.1 DESCRIPTION

Provide high quality (production) Kokkos support and consultation for ASC applications and libraries.

2.2 EXECUTION PLAN

- Monitor, prioritize and resolve github issues
- Monitor Slack channel
- Conduct a ASC customer survey

2.3 COMPLETION CRITERIA

Resolve issues on github in a timely manner, answer questions on the slack channel, and conducting a survey of ASC customers on whether those efforts satisfy their support needs.

3. TECHNICAL WORK SCOPE, APPROACH, RESULTS

3.1 GITHUB ISSUES

In FY19 about 340 issues were opened on the Kokkos github page. In the same time frame about 330 issues were resolved. We do not have a breakdown which issues were created by ASC customers. In order to minimize risks about disclosing information about export controlled codes we do not generally perform that association. Of those issue 57 were bug reports, 103 enhancements, 66 questions, 13 Feature Requests with the bulk of the rest being internal issues tracking progress on work such as the CMake build system upgrade. The resolution rate indicates that the team is able to keep pace with the support requests.

3.2 SLACK USAGE

The slack channel has seen significant usage increase during the course of FY19. Most of it comes from outside users. Very few ASC users are utilizing slack at this point, partly because most of them feel that a phone call can answer questions too. The notable exception are ASC users from LANL which are largely

communicating via the slack channel with the Kokkos team. At the end of the year the number of unique active users per week reached about 60, meaning 60 different developers are logged in and read messages. About half of them post messages too.
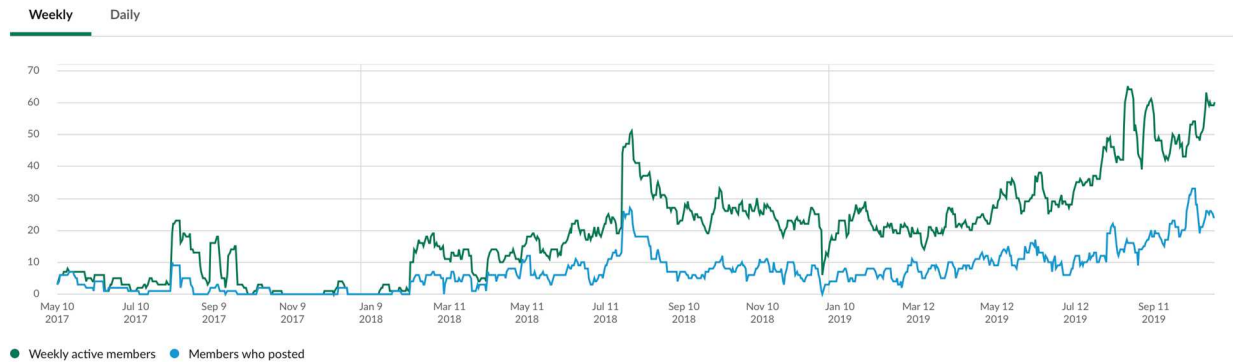
3.3 SURVEY

In order to gauge customer satisfaction a survey was conducted. Since one of the greatest issue is getting responses at all the survey was designed to be answered in just a few minutes. The goal was mostly to identify whether deficiencies exist and then follow up to get details if necessary. The survey consisted thus of the following nine questions:

1. Did you ever open an issue for Kokkos on github?

2. Did you ever use the kokkosteam.slack.com channel?

3. When reporting bugs: did the Kokkos team react to the report appropriately fast?

4. When reporting bugs: did the Kokkos team fix the problem appropriately fast?

5. When reporting bugs: did you feel you could follow where the process is?

6. When requesting a feature: did the Kokkos team react to the request appropriately fast?

7. When requesting a feature: did the Kokkos team implement the feature appropriately fast?

8. When requesting a feature: did you feel you could follow where the process is?

9. Do you feel you get timely answers on questions regarding Kokkos on Slack or GitHub?

The survey was send to 9 ASC application teams, and 8 responded. Of those 8 only 5 had ever filed a github issue, and only 2 (the two LANL ASC apps in the survey) had posted questions on the slack channel.

6 teams had filed a bug report (including via email) and all of them felt that the Kokkos team reacted fast, fixed the bug in a timely manner, and that they could follow along where the bug fixing process is.

5 of the 8 teams had requested new features. 4 of them felt the team reacted fast to the request, while one said mostly. Implementing the requested feature was judged as appropriately fast by three of the teams, while two answered partly. One of the two teams who said that the time in which requests were resolved was not always good, was a LANL team and attributed the delay to lower priority for non SNL customers. 4 of the 5 teams answered that they could follow the process of getting their feature request resolved. The 5th team again was from LANL and said they lacked insight into the meetings and discussions happening at Sandia.

6 teams have asked general questions on Slack or GitHub and all of them felt answers were timely.

4. RESOURCE REQUIREMENTS

The work performed here required 1.0 FTE, distributed over 8 developers: Steven Bova, Nathan Ellingwood, David Hollman, Dan Ibanez, Duane Labreche, Jeff Miles, Dan Sunderland and Christian Trott.

5. CONCLUSIONS AND FUTURE WORK

The team will continue to provide support. The customer survey indicates that users are generally happy with the level of support. We will encourage our ASC customers to make more use of the Kokkos Slack channel as it provides a rapid response channel for questions. Increasing the transparency on some of our work planning is another action item – this was also highlighted by the ASC SQE Appraisal, which found the work planning documentation lacking.

6. ACKNOWLEDGMENTS