

Item 385

git_comments:

1. ! \return whether type is a float16 type.
2. Do not read the first undef lane.
3. Emit CUDA code to access fp16 vector elements. half4 is stored as uint2 h4.x is emitted as `*(half2*)&(u2.x)).x` h4.y is emitted as `*(half2*)&(u2.x)).y` h4.z is emitted as `*(half2*)&(u2.y)).x` h4.w is emitted as `*(half2*)&(u2.y)).y`
4. Pack two half values.

git_commits:

1. **summary:** [CodeGen][CUDA] Improve CUDA vectorizer (#4736)
message: [CodeGen][CUDA] Improve CUDA vectorizer (#4736) - Fixes issues to enable fp16 vectorizer. Now correct packing and unpacking CUDA code will be emitted. Enabled more unit tests. - Do not emit code to read the first lane from an undef variable `int _3; _3 = _3 & ~(0x000000ff << 0) | ...` and emit the following code instead: `_3 = (((0x000000ff & (_1 >> 0))+(0x000000ff & (_2 >> 0))) << 0);` Note that nvcc 10.2 is forgiving and emits the same code for both cases. A warning appears in `test_codegen_cuda.py`. Signed-off-by: Wei Pan <weip@nvidia.com>

github_issues:

github_issues_comments:

github_pulls:

1. **title:** [CodeGen][CUDA] Improve CUDA vectorizer
body: - Fixes issues to enable fp16 vectorizer. Now correct packing and unpacking CUDA code will be emitted. Enabled more unit tests. - Do not emit code to read the first lane from an undef variable `int _3; _3 = _3 & ~(0x000000ff << 0) | ...` and emit the following code instead: `_3 = (((0x000000ff & (_1 >> 0))+(0x000000ff & (_2 >> 0))) << 0);` Note that nvcc 10.2 is forgiving and emits the same code for both cases. A warning appears in `test_codegen_cuda.py`. Signed-off-by: Wei Pan <weip@nvidia.com> Thanks for contributing to TVM! Please refer to guideline <https://docs.tvm.ai/contribute/> for useful information and tips. After the pull request is submitted, please request code reviews from [Reviewers] (<https://github.com/apache/incubator-tvm/blob/master/CONTRIBUTORS.md#reviewers>) by @ them in the pull request thread.

github_pulls_comments:

1. Thanks @wpan11nv this is merged

github_pulls_reviews:

jira_issues:

jira_issues_comments: