环境配置

1. 必备配置

- A modern C++ compiler compliant with the C++-17 standard (gcc >= 7, Intel >= 19.0.1, clang >= 7.0)
- CMake (>= 3.13)
- Boost library (>= 1.58.0, we recommend building/installing the full library)
- libllvm (>= 7.0 with RTTI support)
- libfmt (>= 4.0)

2. 可选配置

- Linux HUGE_PAGES support (please see www.kernel.org/doc/Documentation/vm/hugetlbpage.txt). Performance will most likely degrade without HUGE_PAGES enabled. Galois uses 2MB huge page size and relies on the kernel configuration to set aside a large amount of 2MB pages.
- libnuma support. Performance may degrade without it. Please install libnuma-dev on Debian like systems, and numactl-dev on Red Hat like systems.
- Doxygen (>= 1.8.5) for compiling documentation as webpages or latex files
- PAPI (>= 5.2.0.0) for profiling sections of code
- Vtune (>= 2017) for profiling sections of code
- MPICH2 (>= 3.2) if you are interested in building and running distributed system applications in Galois
- CUDA (>= 8.0 and < 11.0) if you want to build GPU or distributed heterogeneous applications. Note that versions >= 11.0 use an incompatible CUB module and will fail to execute.
- Eigen (3.3.1 works for us) for some matrix-completion app variants

文件说明

- build：项目编译目录，存放可执行文件
- libgalois：包含共享内存Galois库的源代码 e.g., runtime, graphs, worklists, etc.
- lonestar：包含Lonestar基准测试应用程序和Galois教程示例
- libdist：包含分布式内存和异构Galois库的源代码
- lonestardist：包含分布式内存和异构基准测试应用程序的源代码。请参考“lonestardist/README”。获取构建和运行这些应用程序的说明。
- tools：包含各种辅助程序，例如用于在图形文件格式之间进行转换的图形转换器和用于打印图形属性的图形统计

- libcusp：包含了名为cusp的分区策略
- libgluon：分布式通信库，传递同步信息，根据通信量的不同选择不同的通信策略
- libpangolin：这是用于高效灵活的图挖掘的pangolin框架

执行命令

1. 生成数据集

/home/ubuntu/lhy/run/Myproject/generator_graph/src/generator_one_graph 10 10 /home/ubuntu/lhy/run/Myproject/dataset/dataset3.bin

1.1 参数解释

生成数据集的可执行文件

顶点数n（2^n)

边数m(n*m)

生成数据集位置

2. 数据集格式转化

/home/ubuntu/lhy/run/build/tools/dist-graph-convert/dist-graph-convert --edgeType=void --bin2gr --tempDir=/home/ubuntu/lhy/run/Myproject/temp -numNodes=1024 /home/ubuntu/lhy/run/Myproject/dataset/dataset3.bin /home/ubuntu/lhy/run/Myproject/dataset/dataset3.gr

2.1 参数解释

数据集格式转换的可执行文件

指定边类型

格式转化

临时目录，中间需要放临时文件

顶点数

转换前的数据集文件

生成的数据集文件