Location of GIT Trees

Build system:

- Git URL: git://git.openfabrics.org/~vlad/build.git
- Branch: master
- git clone git://git.openfabrics.org/~vlad/build.git –b master

Compat-rdma git trees:

Linux:

- linux_git_url="git://git.openfabrics.org/compat-rdma/linux-3.18.git"
- linux_git_branch="master"
- git clone git://git.openfabrics.org/compat-rdma/linux-3.18.git –b master

compat:

- compat_git_url="git://git.openfabrics.org/compat-rdma/compat.git"
- compat_git_branch="ofed"
- git clone git://git.openfabrics.org/compat-rdma/compat.git –b ofed

compat-rdma:

- git_url="git://git.openfabrics.org/compat-rdma/compat-rdma.git"
- git_branch="master"
- git clone git://git.openfabrics.org/compat-rdma/compat-rdma.git –b master

OFED Build process

Clone the necessary git trees:

- git clone git://git.openfabrics.org/~vlad/build.git –b master
- git clone git://git.openfabrics.org/compat-rdma/linux-3.18.git –b master
- git clone git://git.openfabrics.org/compat-rdma/compat.git –b ofed
- git clone git://git.openfabrics.org/compat-rdma/compat-rdma.git –b master

Next Steps

Perform the following steps to compile the kernel part of OFED after cloning the compat/linux git trees.

Set environment variables

- cd compat-rdma
- export GIT_TREE=/home/username/linux-next/
    - export GIT_TREE=/home/rupertd/linux-3.18/
- export GIT_COMPAT_TREE=/home/username/compat
    - export GIT_COMPAT_TREE=/home/rupertd /compat

Prepare compilation environment

- cd compat-rdma
- ./scripts/admin_rdma.sh -n -p
    - This is what applies all the patches: backports from patches directory, the patches from linux-next-cherry-picks directory and the patches on the linux-next-pending directory

Compilation procedure:
Note: Procedure to build/install OFED kernel modules on your local machine.

- ./configure --with-core-mod --with-user_mad-mod --with-user_access-mod --with-addr_trans-mod --with-mthca-mod --with-mlx4-mod --with-mlx4_en-mod --with-cxgb3-mod --with-cxgb4-mod --with-nes-mod --with-qib-mod --with-ipoib-mod --with-srp-mod --with-nfsrdma-mod
- make
- make install

Notes:

- All backport patches should go into "compat-rdma/patches/" directory
- You may have to add required functionality to the git://git.openfabrics.org/compat-rdma/compat.git. For example missing defines and symbols.

Building OFED-3.18: examples

- ./build.pl --version 3.18 -r -p packages-ofed --skip-postbuild
- ./build.pl --version 3.18 rc1 -r -p packages-ofed --skip-postbuild

Daily build for OFED 3.18

- ./build.pl --version 3.18 --daily -d OFED -p packages-ofed/ --post-build /home/vlad/scripts/build/post-build-ofed-3.18

Output: /tmp/username

General Notes:

- build/packages-ofed/ - location of the configuration files for each package
- compat-rdma/patches - location of the patches to be applied

Pre-build process

- Change directory to the location of the configuration files
  - **For example**: /home/rupertd/scm/build/packages-ofed
- Check the configuration files for each ofed package:
  - If the author creates a latest.txt file then the conf should specify use_latest=1. For example:
    - getMethod=tarball
    - URL="http://www.openfabrics.org/downloads/perftest"
    - use_latest=1
  - Otherwise the conf file should specify latest package supplied by the author. For example:
    - getMethod=tarball
    - URL=http://www.openfabrics.org/downloads/cxgb4/libcxgb4-1.3.0.tar.gz
- Change directory to the location of the patch files
  - **For example**: /home/rupertd/scm/compat-rdma/patches
- Verify and add new patches that have been approved:
  - If a new patch has been received, the file should be added in the directory /compat-rdma/patches.
    For example:
    - 0001-BACKPORT-ib_core.patch
    - 0002-BACKPORT-mlx4-mlx4_core-mlx4_en-and-mlx4_ib.patch

Making your git tree publically available

- Create a directory called “scm” under your home directory and clone your git trees there.
  - **For example**: cd /home/rupertd/scm
  - git clone git://git.openfabrics.org/compat-rdma/linux-3.18.git –b master
- Edit the file .get/description for each tree that you clone
  - **For example**: /home/rupertd/scm/build/.git/description ➔ Rupert’s Build Project
- Change to the /pub/scm directory
- Create a link to your home directory
  - **For example**: sudo ln -s /home/rupertd/scm \~rupertd
- Go to the OpenFabrics git repository and you will see your directories.
  - http://git.openfabrics.org/git/

Committing your changes

- Add a line to your .bashrc file for editing comments
  - **For example**: export EDITOR=vim
- Review the files you changed
  - **For example**: git status
- Commit your changes
  - **For example:** git commit –a –s
  - Add a one line description of the changes you made
  - Delete the line “Signed off by ….
  - To exit and finalize the commit: in vim “:x” or “:wq”
- Notify Vlad and Rupert that you have made committed changes

Problems with the build

There are several options if you have problems compiling because of a failed kernel module or user space package.

- Use the new installation flag ‘--without-<package>’
  - ./install.pl --all --without-ocrdma --without-nfsrdma
- Edit ofed.conf.
  - nfsrdma=n
  - ocrdma=n