

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-3.12.git"`
- `linux_git_branch="master"`
- `git clone git://git.openfabrics.org/compat-rdma/linux-3.12.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-3.12.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-3.12/`
- `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-3.12: examples

- `./build.pl --version 3.12 -r -p packages-ofed --skip-postbuild`
- `./build.pl --version 3.12 rc1 -r -p packages-ofed --skip-postbuild`

Daily build for OFED 3.12

- `./build.pl --version 3.12 --daily -d OFED -p packages-ofed/ --post-build /home/vlad/scripts/build/post-build-ofed-3.12`

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-3.12.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`