BBmap on HPC cluster:

What is BBmap?

BBMap is a short read aligners. It is written in pure Java, can run on any platform, and has no dependencies other than Java being installed (compiled for Java 6 and higher). All tools are efficient and multithreaded.

The full documentation for BBmap is found in the following links:

[GitHub](#)

Versions Available:

- BBmap-v 37.32

How to load a version of BBmap?

To load a version of BBmap on the HPC, use the following command:

```
module load bio/bbmap
```

Verify by using this command:

```
module list
```

The loaded software and dependencies, java in this case, will be shown.

How to use BBmap on the cluster?

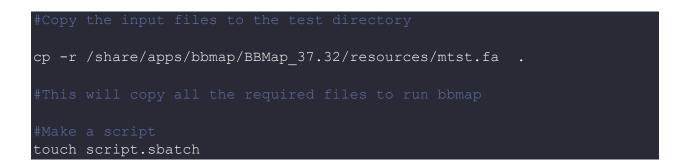There are two methods to run BBmap on the cluster.

The Interactive Way:
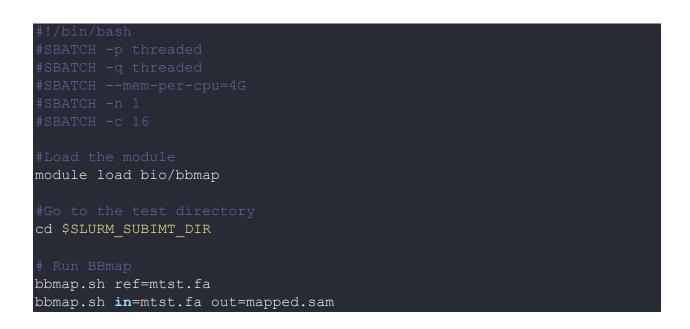
To run the program interactively, follow the steps:

```
#Open a bash session on compute node
srun -p main --qos main -n 1 -c 12 --mem 10G --pty bash

#Load the module
module load bio/bbmap

# Start your commands here
bbmap.sh  --help
#Follow with commands to execute

#This method is ideal for a short job run which produces runtime
#output and to debug the codes.
```

The Script (Preferred):

To run a slurm job, the user must prepare input files. For this example, get input files with,

```
#Copy the input files to the test directory

cp -r /share/apps/bbmap/BBMap_37.32/resources/mtst.fa   .

#This will copy all the required files to run bbmap

#Make a script
touch script.sbatch
```

Use the following script as a template,

```bash
#!/bin/bash
#SBATCH -p threaded
#SBATCH -q threaded
#SBATCH --mem-per-cpu=4G
#SBATCH -n 1
#SBATCH -c 16

#Load the module
module load bio/bbmap

#Go to the test directory
cd $SLURM_SUBIMT_DIR

# Run BBmap
bbmap.sh ref=mtst.fa
bbmap.sh in=mtst.fa out=mapped.sam
```

Schedule the job with the following sbatch command.

sbatch script.sbatch

All the processed files will be generated in the same directory as the script.

Where to find help?

If you are stuck on some part or need help at any point, please contact OIT at the following address.

https://ua-app01.ua.edu/researchComputingPortal/public/oitHelp