

Big Red II Workshop – Storage Presentation

Striping Demo

Log in to BR2

```
$ ssh bigred2.uits.iu.edu
```

```
# Submit a job for an interactive session on compute
```

```
$ qsub -I -q cpu -lgres=ccm -l nodes=1:ppn=32
```

```
-> Wait for job submission to return
```

```
$ module load ccm
```

```
$ ccmlogin
```

```
-> Wait to be placed on a CCM compute node
```

```
# Move to Data Capacitor 2
```

```
$ cd /N/dc2/scratch/username
```

```
$ mkdir demo
```

```
$ cd demo
```

```
$ dd if=/dev/zero of=sample1stripe bs=1M count=4K
```

```
-> See write rate for single stripe 4GB file
```

```
$ lfs getstripe sample1stripe
```

```
-> See that file is on one OST
```

```
# Create directory for 8 way striping
```

```
$ mkdir 8stripe
```

```
# Set a stripe count of 8 for new directory
```

```
$ lfs setstripe -c8 8stripe
```

```
$ cd 8stripe
```

```
$ dd if=/dev/zero of=sample8stripe bs=1M count=4K
```

```
-> See write rate for eight stripe 4GB file
```

```
$ lfs getstripe sample8stripe
```

```
-> See that file is on eight OSTs
```

Feel free to experiment with different stripe counts and using dd to read the file to /dev/null to see read rate.

E.g. dd if=sample1stripe of=/dev/null bs=1M

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Scholarly Data Archive Demo

NOTE: If you do not have an SDA account, go to <http://itaccounts.iu.edu> to request one.

This will take some time, so you will not be able to do the demo right now. Save these instructions and try them later.

Log in to BR2

```
$ ssh bigred2.uits.iu.edu
```

```
# Load HPSS module so correct binaries are in your path
```

```
$ module load hpss
```

```
# Create a 32MB file for the purpose of this demo
```

```
$ dd if=/dev/zero of=sample bs=1M count=32
```

```
# Start the hsi program to connect to SDA
```

```
$ hsi
```

```
# This will ask for your username and password
```

```
Kerberos Principal: username
```

```
Password:
```

```
# Once inside hsi, look at the available commands
```

```
? help
```

```
# Use command to put the sample file create on SDA
```

```
? put sample
```

```
# See the amount of space you are using
```

```
? du -k
```

```
# Exit hsi
```

```
? exit
```

Open up web browser and navigate to <https://www.sdarchive.iu.edu/>
Login to view file you just uploaded