

Using built-in HTCondor file transfer

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Overview

HTCondor has a built-in mechanism to transfer binaries and files to and from compute nodes. If users **have relatively small amounts of data and binaries to transfer (<1 GB per job)** or need to do ad-hoc job submissions, then this mechanism can be effective.

Preliminaries

Before getting started, users should login to login01.osgconnect.org and get a copy of the tutorial files:

Setting tutorial up

```
% ssh login01.osgconnect.org
$ tutorial htcondor_transfer
$ cd tutorial-htcondor_transfer
```

Word Distribution Example

This example will use the HTCondor transfer mechanisms to transfer a binary ([distribution](#)) and a file with a list of words ([random_words](#)) to compute nodes that are running the jobs. The condor file that will be used is shown below:

transfer.submit

› Expand

source

```
universe = vanilla
notification=never
executable = app_script.sh
output = logs/transfer.out.$(Process)
error = logs/transfer.err.$(Process)
log = logs/transfer.log
+ProjectName = "ConnectTrain"

transfer_input_files = distribution, random_words
ShouldTransferFiles = YES
when_to_transfer_output = ON_EXIT

queue 50
```

The key parts of the submit file are the `transfer_input_files` parameter that gives a comma separated list of paths to the files that will be transferred. In addition, `ShouldTransferFiles` needs to be set to YES and `when_to_transfer_output` needs to be set to ON_EXIT in order to make sure that the HTCondor will return the output.

Finally, change submit file to by replacing `PROJECT_NAME` with the appropriate value before submitting the file:



path warning

You must run `condor_submit` in the same directory that you created the files and directories in. Otherwise HTCondor will give you an error due to not being able to find the `distribution` and `random_words` files

Submit job

```
$ condor_submit transfer.submit
```

When the jobs are completed, verify the output:

Job verification

[Expand](#)

```
$ cat logs/transfer.out.0
```

```
Ashkenazim | 45 (0.44%) ++++++source
BIOS       | 45 (0.44%) ++++++
Anaheim    | 44 (0.43%) ++++++
Aymara     | 44 (0.43%) ++++++
Arthurian  | 43 (0.42%) ++++++
Anaxagoras | 43 (0.42%) ++++++
Bactria    | 43 (0.42%) ++++++
Alexis     | 43 (0.42%) ++++++
Ariel      | 43 (0.42%) ++++++
Aubrey     | 42 (0.41%) ++++++
Baryshnikov | 42 (0.41%) ++++++
Bahia      | 42 (0.41%) ++++++
Angstrom   | 42 (0.41%) ++++++
Asoka      | 42 (0.41%) ++++++
Alcatraz   | 41 (0.40%) ++++++
```