

# CloudDOE User Manual - Operate

## Introduction

*CloudDOE - Operate* is a wizard aims at providing users with choices and execution of the supported MapReduced-based bioinformatics applications from its dashboard. Users can handle an experiment and benefit from:

- Upload and manage analysis data
- Alter parameters and run experiments
- Monitor experiment progress
- Download experimental results
- And more...

For any experimental issues, please contact to:

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## System requirement

- A Graphic User Interface supported system with Java Run-Time Environment 1.6 (or higher) installed
  - Windows, Linux, and Mac
- A decompression tool
- Access rights for a Hadoop Cloud

## Installation

Download the CloudDOE package and decompress it. Then you will get:

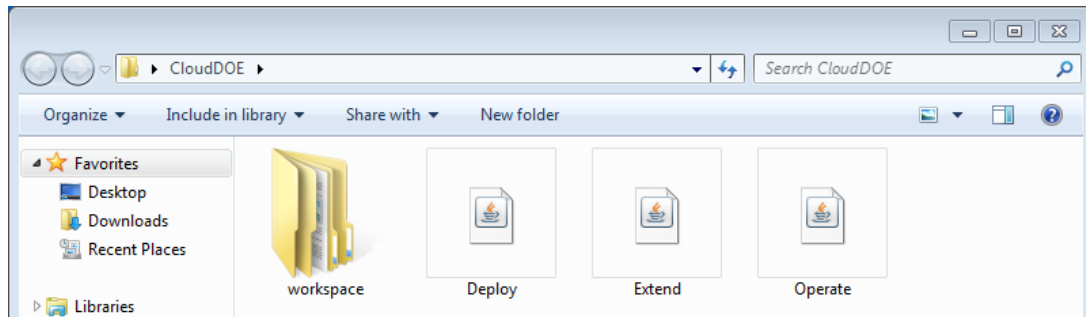
- Operate.jar: this program
- Workspace directory: running environments of CloudDOE
- Miscellaneous files such as test data, setup properties, and other programs

## Usage

We are now using Windows 7 as our platform to illustrate the usage of each components of *CloudDOE - Operate* with CloudBrush.

## Start CloudDOE - Operate

1. Double click the **Operate.jar**, or  
Right click the **Operate.jar** and select the Java run-time environment you preferred.
2. Then you will see the main panel and the other 3 panels of the program Operate.jar.

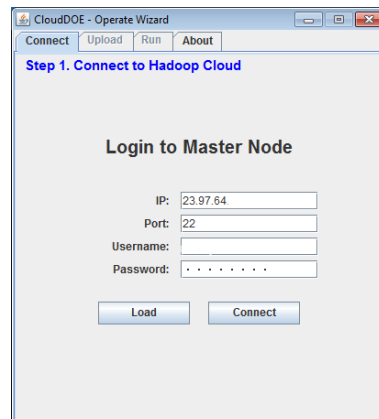


## Components

### Connect Panel (The main panel of Operate.jar)

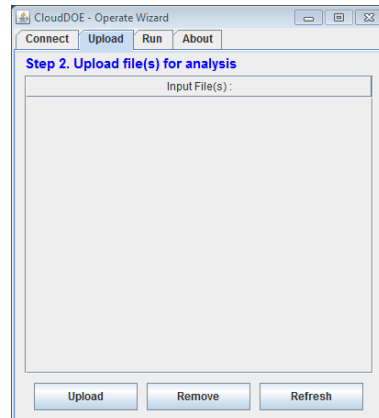
You are requested to fill out the information for connection.

Please consult your cluster provider or manager for the connection information.



### Upload Panel

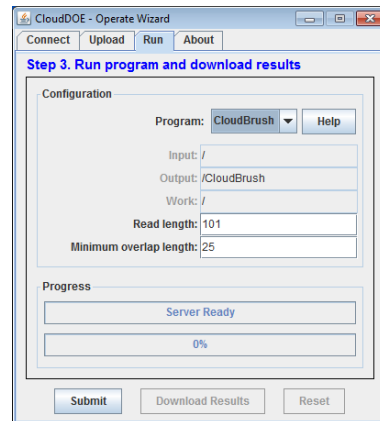
You can manage the data for analysis by **Upload** a file, **Remove** unwanted files. You can also **Refresh** the list.



## Run Panel

You can select a program and alter its parameters, and monitor its progress of an experiment.

You can download results after completion of an experiment. You can also cancel an ongoing experiments and then re-run it later.



## About Panel

Copyright and contact information may be found on this panel. You can mail us if you have any problem in using CloudDOE.

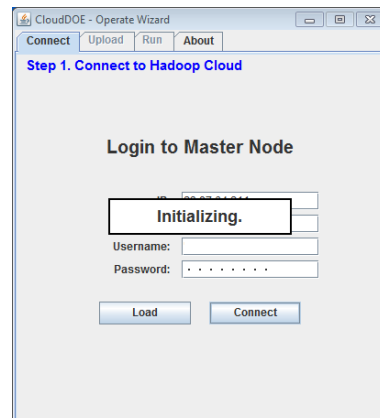


## Running experiments

### Connect to a Cloud

1. Fill out information provided by your cloud provider or manager for connection information, including IP address and port number of the Master Node, and username and password of your account to use the Hadoop cloud.
2. Click **Connect** button

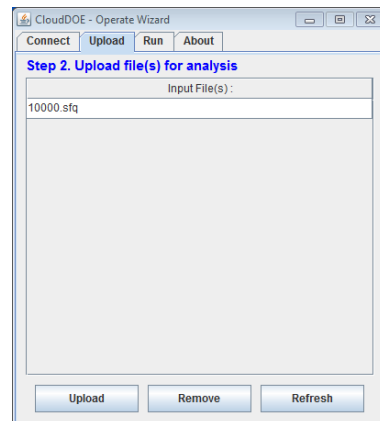
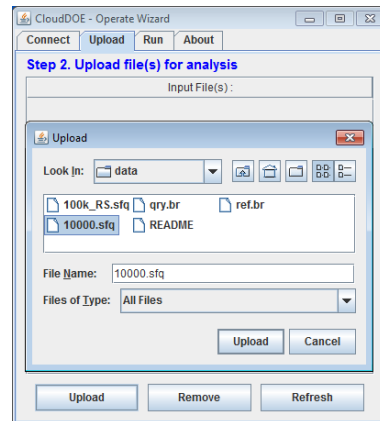
Note: At the first time of usage, the program initiates the running environments, and it may take a short time.



## Upload experiment data

1. Click the **Upload** button and select a file for analysis.
2. The filename will be list on the panel after uploading.

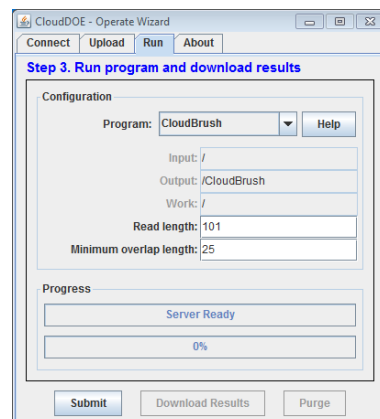
Note: The uploading procedure depends on your computer and network environment. A 2 Megabytes file may cost 10 seconds for uploading.



## Run an experiment

1. Select a program and alter the parameters of this experiment.
2. Click the **Submit** button for running.

Note: You can close this wizard. The status of an on-going experiment will be recovered at the next time of usage.

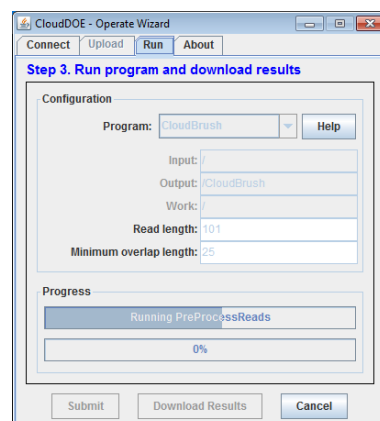


## Monitoring experiments

### Monitor experiment progress

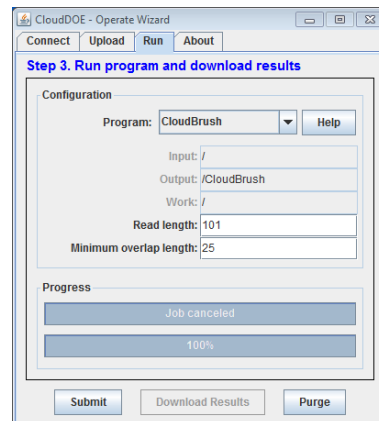
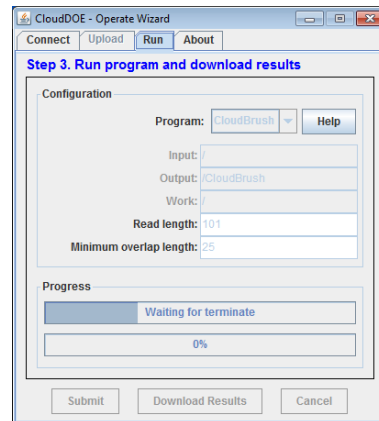
There are two progress bars for an on-going experiment.

1. The upper one is the progress of each program module.
2. The lower one is the total progress of experiments (if available).



## Canceling experiments

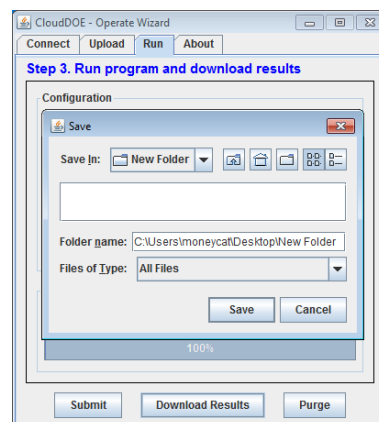
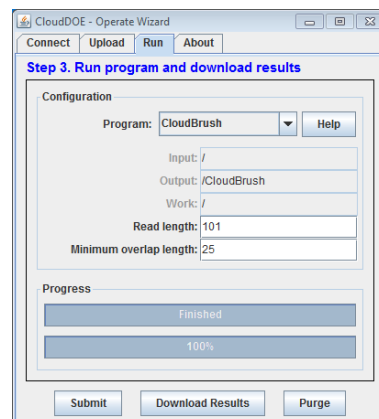
1. Click the **Cancel** button.
2. Waiting for on-going experiment cancelled.
3. You can run a new experiment after the on-going experiment is cancelled.
4. You can click the **Reset** button for a full reset of experiments.



## Download experimental results

When an experiment is finished, you can download the results to your computer.

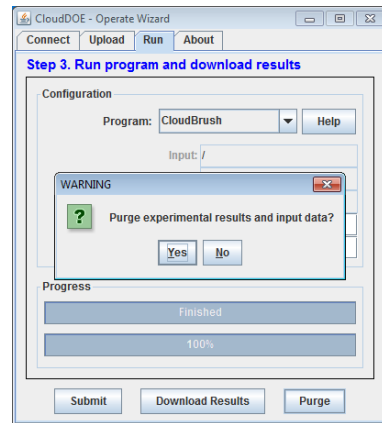
1. Click the **Download Results** button.
2. Select the destination and wait for experimental results downloading.



## Purge data of an experiment

You can do a fully purge of the experiment.

Analysis data, intermediate data of program, and results are removed after click the **Purge** button.



## The experiment results

There are at least two result files of CloudBrush:

1. output.fasta: the contig file of this experiment,
2. stats.jpg: a visualized N50 statistics of you results.

