

Using the GRUNT Shell

Overview

Install and set up Pig to run in the local mode

Know the various modes of operation for Pig

Understand the basics of the Grunt shell where Pig commands are run

Work with the interactive as well as batch modes for Pig

Demo

Download and install the Pig binary

Four Modes of Operation

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Local Mode

MapReduce Mode

Tez Local Mode

Tez Mode

Local Mode

Runs on a **single** machine

Files are set up and run using the **local file system**

Used for **prototype** development and debugging

```
pig -x local
```

MapReduce Mode

Runs on a **Hadoop cluster** with HDFS installed

Pig can be installed on any machine which **connects to the cluster**, this is the gateway machine

Used in a **production** environment

```
pig -x mapreduce
```

Tez Local Mode

Runs on a **single** machine

Files use the **local file system**

Uses the **Tez runtime environment** rather than MapReduce

Used for **development** and debugging

Is still in the experimental phase

```
pig -x tez_local
```


Tez Mode

Runs on a **Hadoop cluster** with HDFS installed

Uses the **Tez runtime environment** rather than MapReduce

Used in a **production** environment

```
pig -x tez
```

Interactive and Batch Modes

REPL Environment

Using the command line to type out individual commands

Pig Scripts

Create a script file with commands and run them in one go

Demo

Run Pig in local interactive mode on your machine

Turn off deprecated property warnings while running in local mode

Demo

**Execute a Pig script in batch mode on
your local machine**

Using the Grunt Shell

The Grunt Shell



The Pig shell which runs commands in both interactive and batch modes

The Grunt Shell



**Invoked when we use the `pig` command in
any mode of operation**

The Grunt Shell



**Can also be used as a shell to run HDFS
commands**


```
copyFromLocal localFile hdfsFile
```

Running HDFS Commands on the Grunt Shell

Copy from the local file system to HDFS

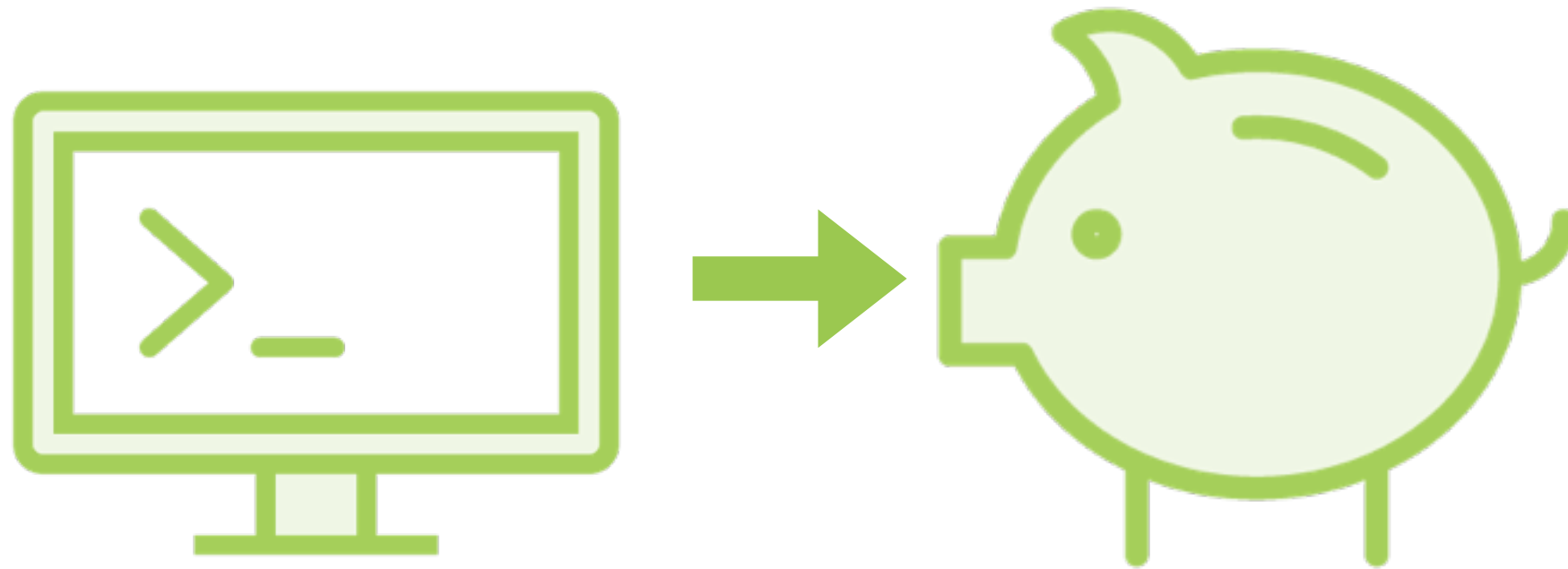
```
copyToLocal hdfsFile localFile
```

Running HDFS Commands on the Grunt Shell

Copy from HDFS to the local file system

Pig Commands: Behind the Scenes

Executing Pig Commands



Write commands in Pig Latin on the Grunt shell or a script file

Executing Pig Commands



Pig will translate the commands to MapReduce tasks and run them on Hadoop

Executing Pig Commands



MapReduce will process files on HDFS and return results to Pig

Summary

Installed Pig on your local machine and connected to Pig in the local mode

Understood the basics of the Grunt shell where Pig commands are run

Run commands in the interactive as well as the batch modes