

# Using the GRUNT Shell

---



**Janani Ravi**

CO-FOUNDER, LOONYCORN

[www.loonycorn.com](http://www.loonycorn.com)

# 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

---

# Four Modes of Operation

**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
```

---

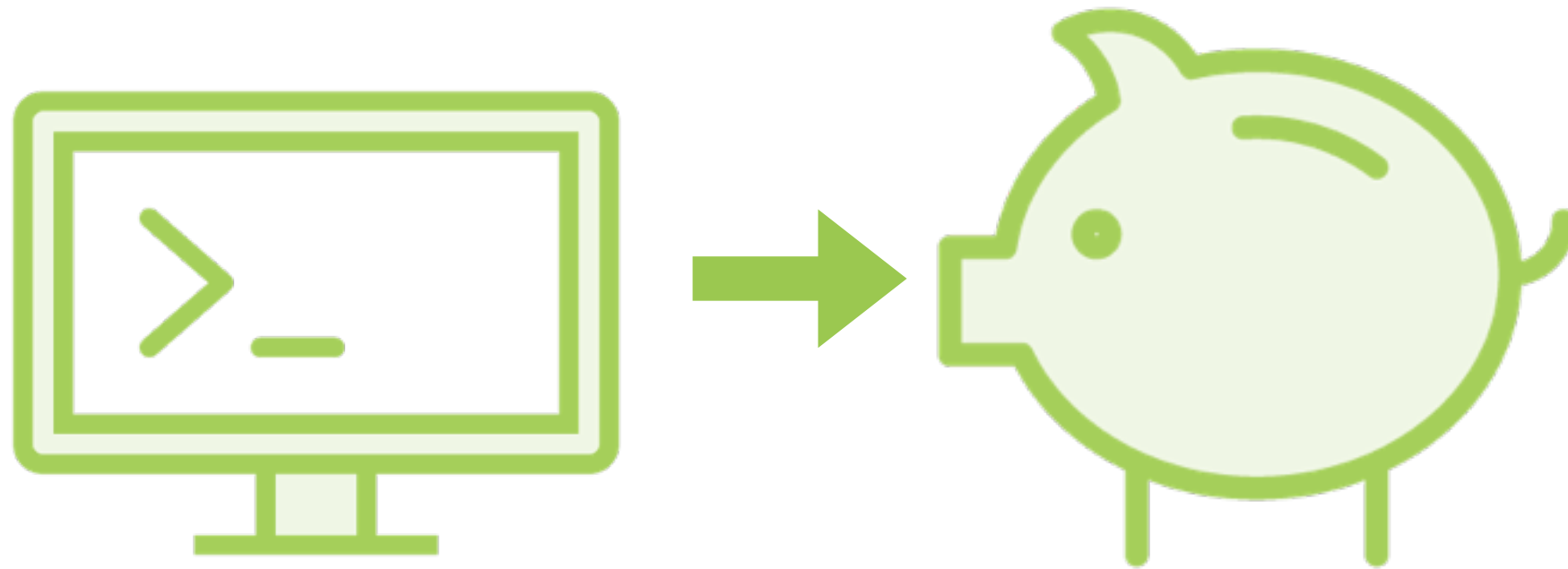
## Running HDFS Commands on the Grunt Shell

**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**