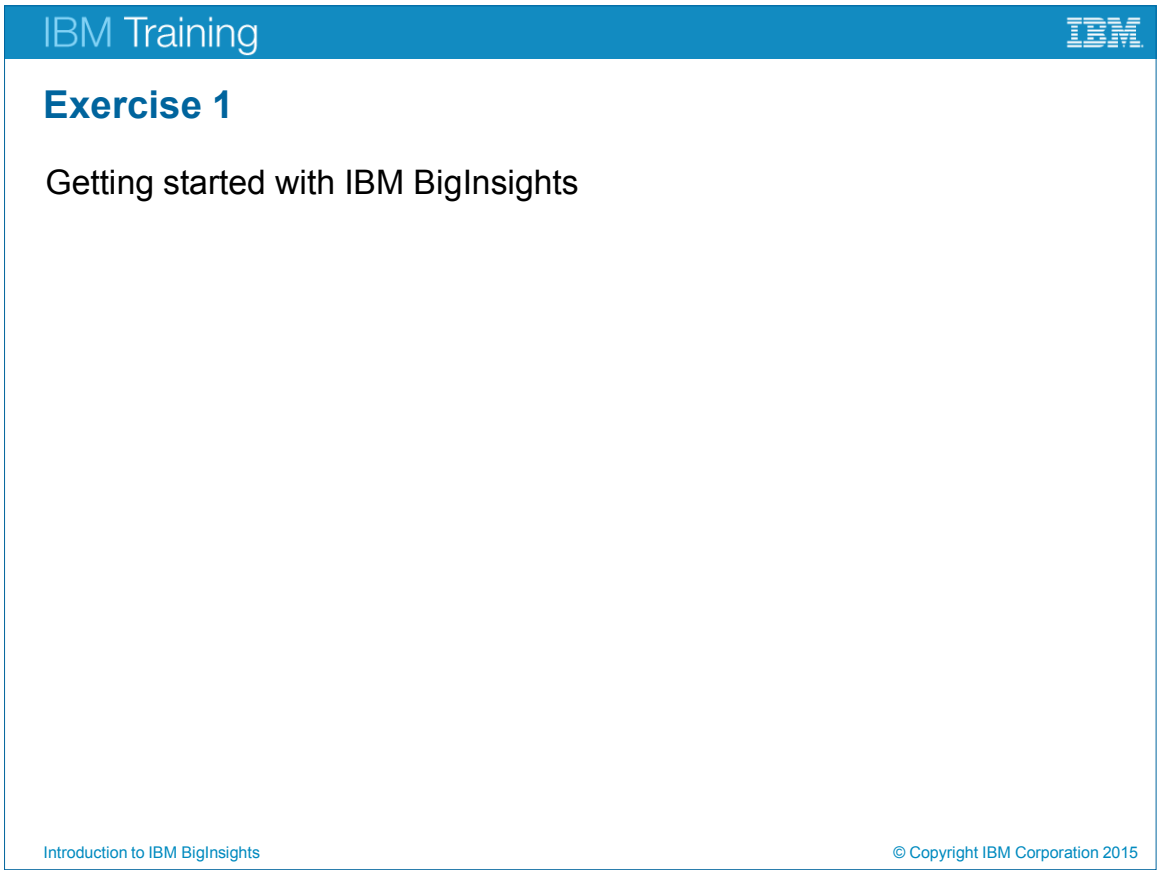

Exercise 1: Getting started with IBM BigInsights

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Purpose:
You will learn more about the file system and directory structures of the IBM value-adds that are available with IBM BigInsights, and begin working with basic Hadoop commands.

User/Password: **biadmin/biadmin**
root/dalvm3
Services Password: **ibm2blue**

Important: Before doing this exercise, ensure that your access and services are configured and running. Check that:

- /etc/hosts displays your environment's IP address
- in the Ambari console, ensure that all BigInsights services are running

If you are unsure of the steps, please refer to Unit 1, Exercise 1 to ensure that your environment is ready to proceed. You should review the steps in Task 1 (Configure your image) and Task 2 (Start the BigInsights components).

Task 1. Navigate the file system.

In this task, you will get a brief overview of the file system.

1. To open a new terminal, right-click the desktop, and then click **Open in Terminal**.

   There are two main directories of where all of the BigInsights and the IBM Open Platform (IOP) components are installed.
2. To navigate to the IBM value-adds directory, type the following:
   `cd /usr/ibmpacks`
3. Type `ls` to see a listing of the components that are currently installed in the VM.

   Each of those directories contains specific functions related to it. There will be a directory for each of the components installed (such as bigr, bigsheets, etc.)
4. Navigate to **/usr/ibmpacks/bin**.

   This is where the scripts reside to remove the value-adds from the IOP stack. This is useful to know, if you no longer need any of the services and want to save space and memory.

5. Navigate to **/usr/ibmpacks/current**.

   This directory links to the current releases of those value-add components.
6. To navigate to the **IOP directory**, where you can access the Apache stack containing the open source components, type the following:

   ```
   cd /usr/iop/current
   ```

   This is where you navigate to if you want to use the IOP components. You will use these components in the IOP section of this course.
7. Close the terminal.

Task 2. Working with basic Hadoop commands.

In this task, you will get a brief overview of the file system.

1. To open a new terminal, right-click the desktop, and then click **Open in Terminal**.
2. To switch to the root user, type **`su -`**, and then type the password **dalvm3**.
3. Create the **biadmin** folder on the **hdfs** under **/user**:

   ```
   su - hdfs -c "hdfs dfs -mkdir -p /user/biadmin/"
   ```
4. Change the ownership of the folder to **biadmin**:

   ```
   su - hdfs -c "hdfs dfs -chown -R biadmin /user/biadmin"
   ```
5. To log out of the root user, type **`exit.`**
6. Do a listing of the **/user** directory to see that the **biadmin** directory has been created.

   ```
   hdfs dfs -ls /user
   ```

   On your local system, in the /home/biadmin folder, is a labfiles directory. In this directory are some of the data files that you will be using throughout this exercise.
7. Navigate to the **/home/biadmin/labfiles** directory, and do a listing to see the files.
8. To upload the **Pride_and_Prejudice.txt** file in to the HDFS, type the following:

   ```
   hdfs dfs -put /home/biadmin/labfiles/Pride_and_Prejudice.txt
   /user/biadmin
   ```
9. To see a listing of the **/user/biadmin** directory, and the uploaded file on the hdfs, type the following:

   ```
   hdfs dfs -ls /user/biadmin
   ```

10. To view the contents of the file, type the following:

    ```
    hdfs dfs -cat /user/biadmin/Pride_and_Prejudice.txt
    ```

    You are not going to do anything else with that file now. The purpose of this exercise was to introduce you to some basic HDFS commands. They are similar, if not exactly the same as common Linux commands. You will work more with Hadoop commands in an upcoming exercise.

Results:
You have learned more about the file system and directory structures of the IBM value-adds that are available with IBM BigInsights, and you began working with basic Hadoop commands.