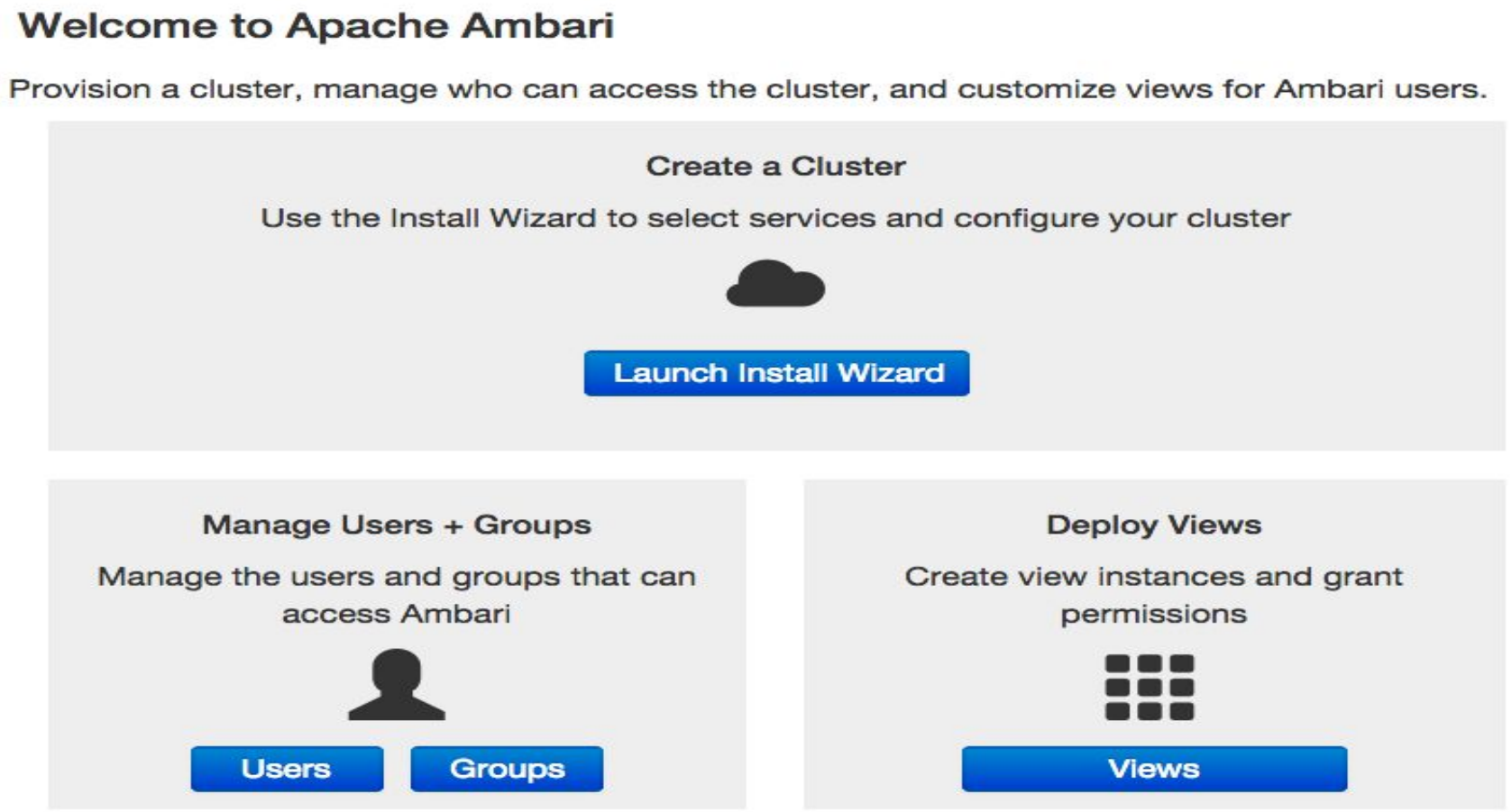
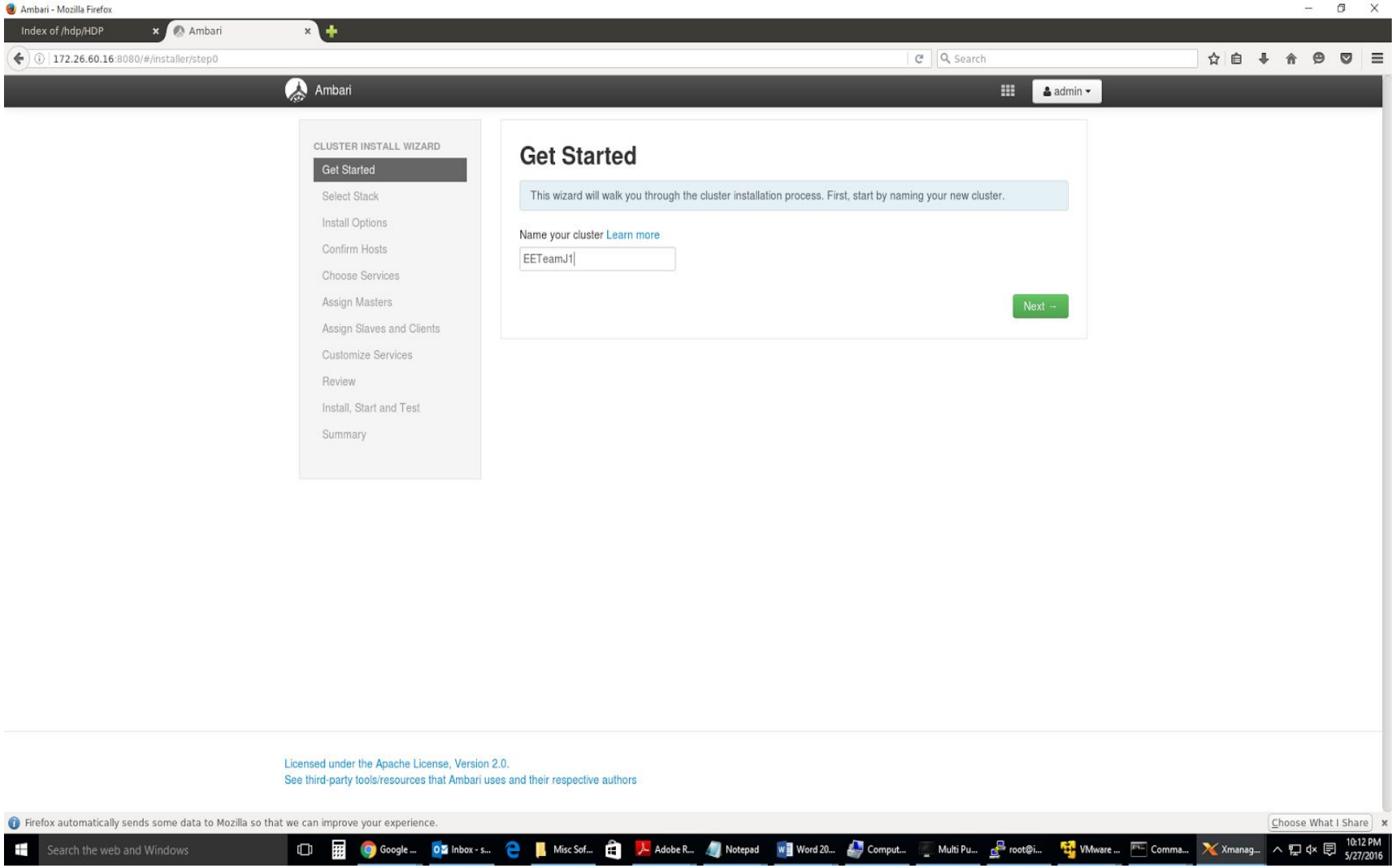
Ambari provides an end-to-end management and monitoring solution for your HDP cluster. Using the Ambari Web UI and REST APIs, you can deploy, operate, manage configuration changes, and monitor services for all nodes in your cluster from a central point.

After starting the Ambari service, open Ambari Web using a web browser and log In to Apache Ambari

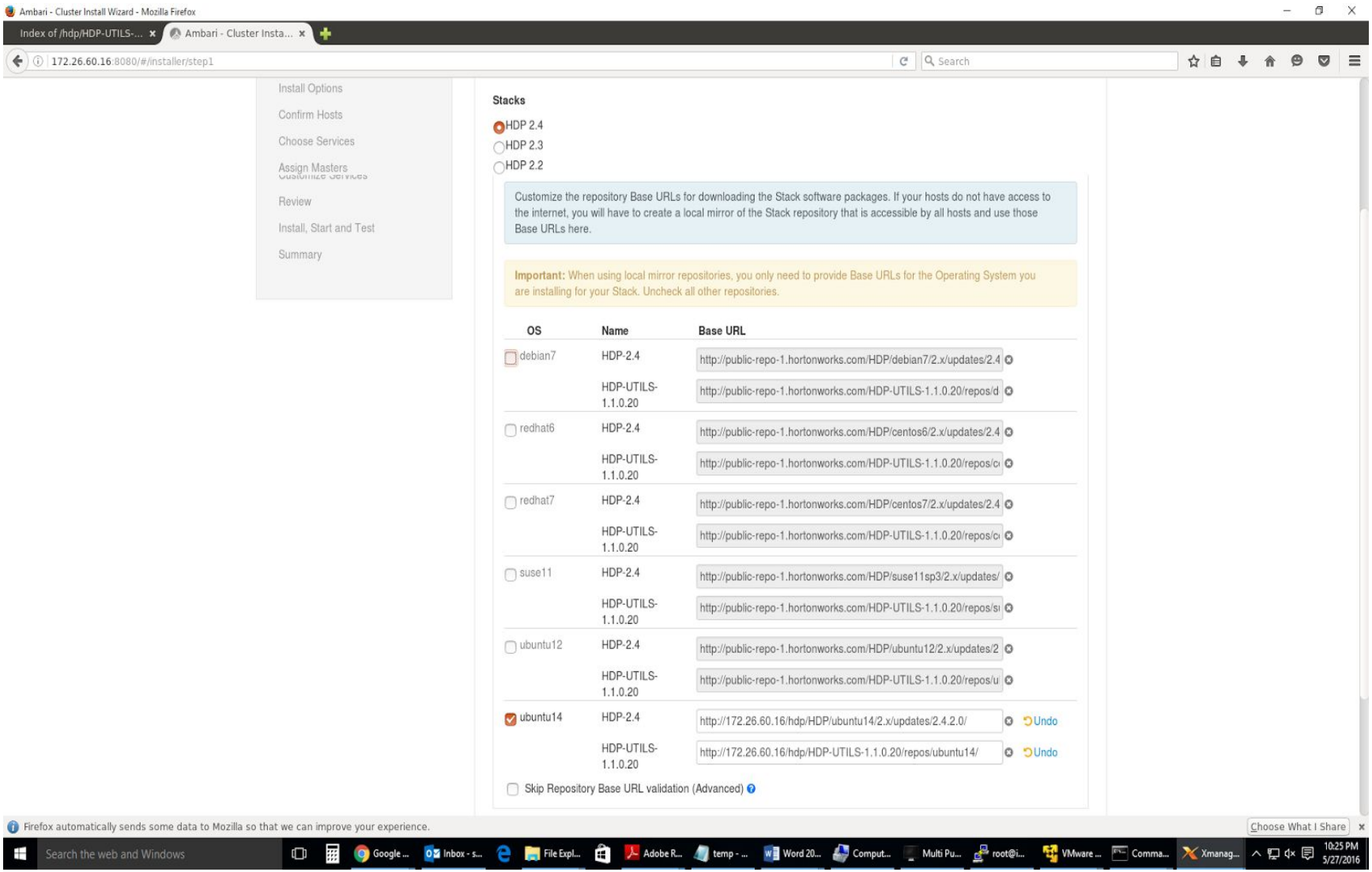
- Point your browser to http://172.26.60.16:8080 , where ambari server is installed
- Log in to the Ambari Server using the default user name/password: admin/admin.
- From the Ambari Welcome page, choose Launch Install Wizard.



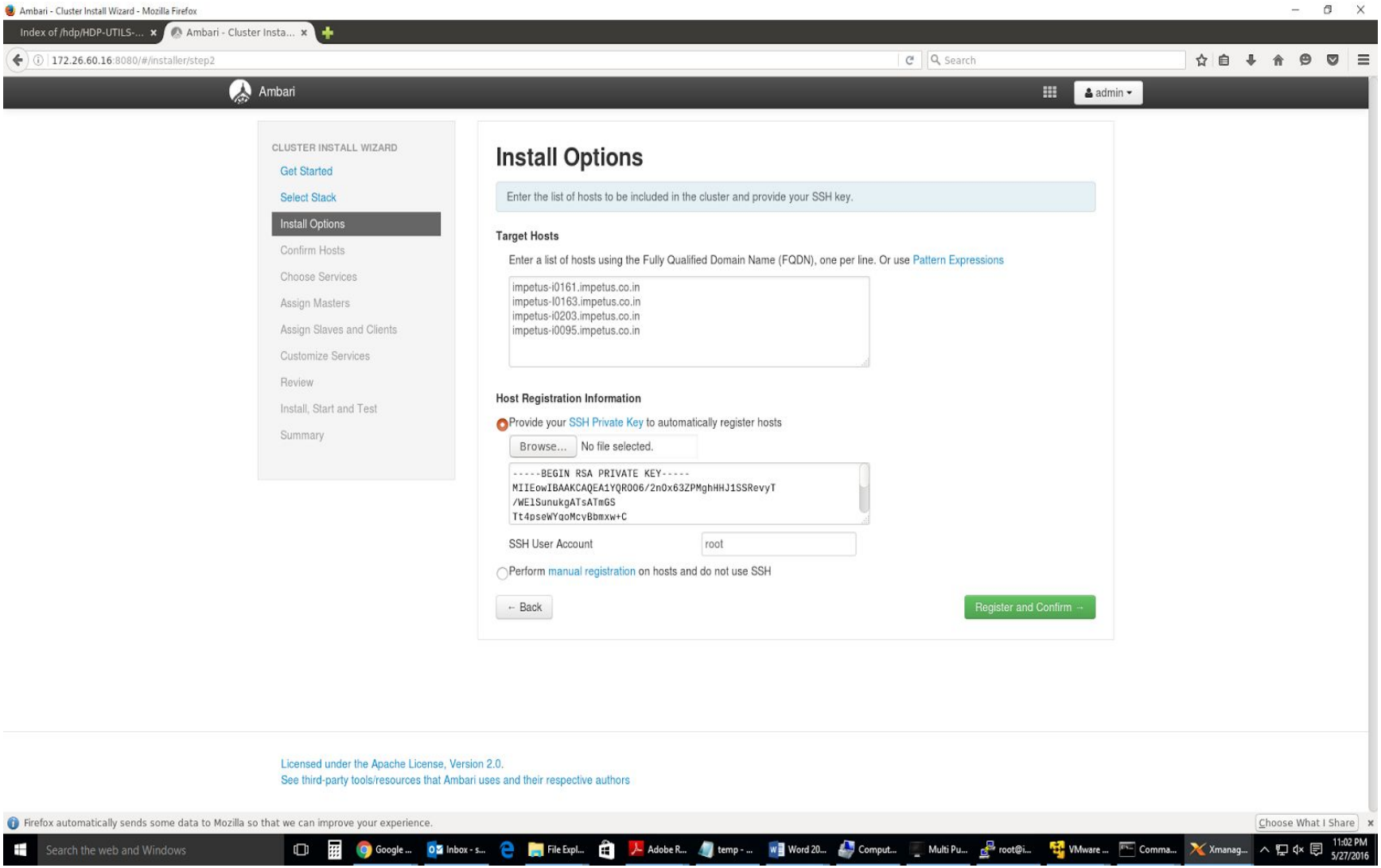
1. Give an name to the cluster

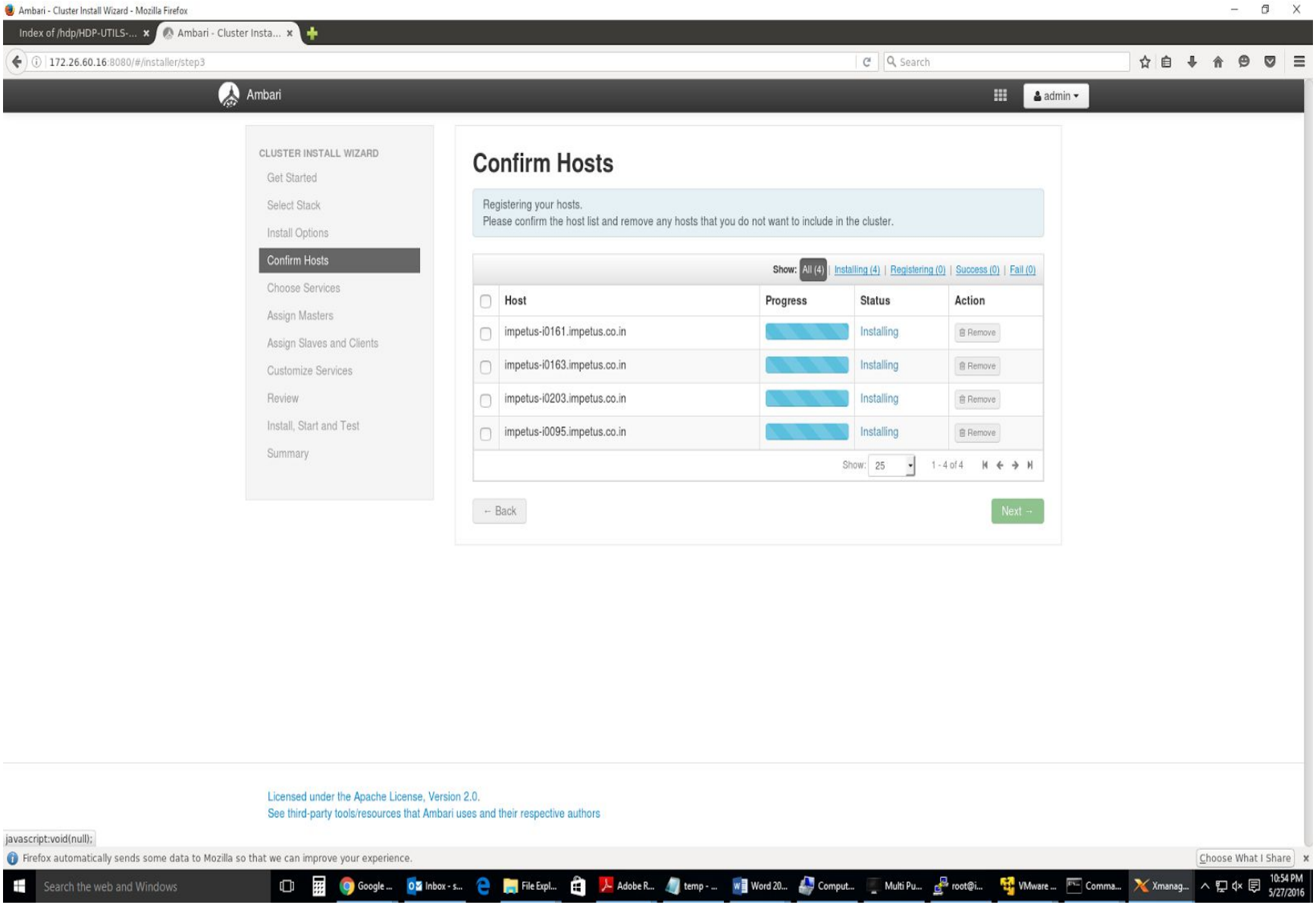


Select HDP stack version and manually enter the path of our local repository for Ubuntu 14 (http://172.26.60.16/hdp)



Enter the hostnames (FQDN) of all box which will be part of our cluster and ftp or copy the id_rsa key for root which was created during the creation of password less ssh.


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step2
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Install Options
Enter the list of hosts to be included in the cluster and provide your SSH key.
Target Hosts
Enter a list of hosts using the Fully Qualified Domain Name (FQDN), one per line. Or use Pattern Expressions
impetus-i0161.impetus.co.in
impetus-I0163.impetus.co.in
impetus-i0203.impetus.co.in
impetus-i0095.impetus.co.in
Host Registration Information
Provide your SSH Private Key to automatically register hosts
Browse...
No file selected.
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEA1YQRO06/2n0x63ZPMghHHJ1SSRevyT
/WE1SunukgATsATmGS
Tt4pseWYqoMcyBbmxw+C
SSH User Account
root
Perform manual registration on hosts and do not use SSH
← Back
Register and Confirm →
Licensed under the Apache License, Version 2.0.
See third-party tools/resources that Ambari uses and their respective authors
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
Search the web and Windows
11:02 PM
5/27/2016


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step3
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Confirm Hosts
Registering your hosts.
Please confirm the host list and remove any hosts that you do not want to include in the cluster.
Show: All (4) | Installing (4) | Registering (0) | Success (0) | Fail (0)
Host
Progress
Status
Action
impetus-i0161.impetus.co.in
impetus-i0163.impetus.co.in
impetus-i0203.impetus.co.in
impetus-i0095.impetus.co.in
Installing
Remove
Show: 25
1 - 4 of 4
← Back
Next →
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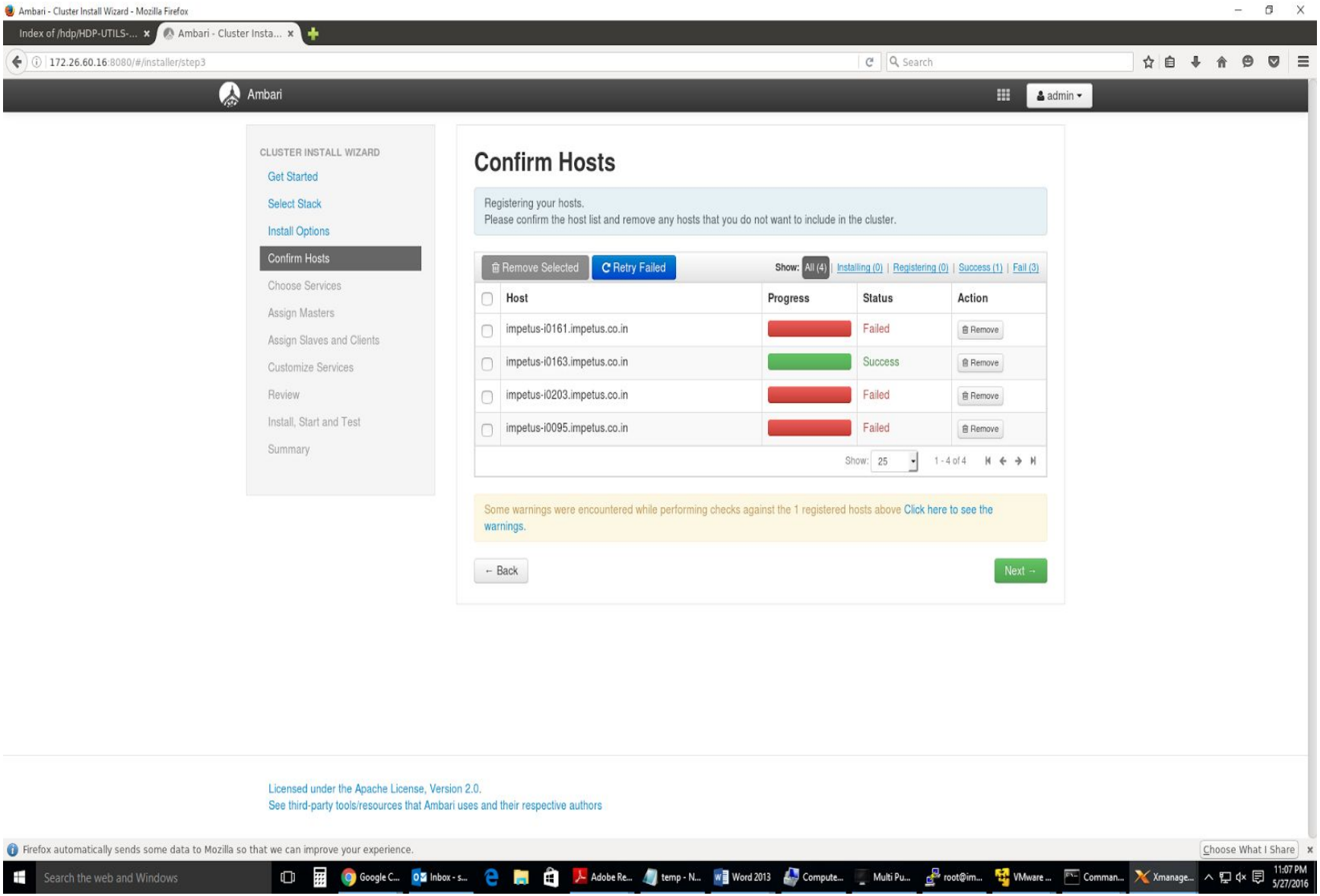
javascript:void(null);
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
Search the web and Windows
10:54 PM
5/27/2016

You might get issue multiple time for any one host or all... Check the error by clicking on the failed link and try to resolve errors mentioned.


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step3
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Confirm Hosts
Registering your hosts.
Please confirm the host list and remove any hosts that you do not want to include in the cluster.
Remove Selected
Retry Failed
Show: All (4) | Installing (0) | Registering (0) | Success (1) | Fail (3)
Host
Progress
Status
Action
impetus-i0161.impetus.co.in
Failed
Remove
impetus-i0163.impetus.co.in
Success
Remove
impetus-i0203.impetus.co.in
Failed
Remove
impetus-i0095.impetus.co.in
Failed
Remove
Show: 25
1 - 4 of 4
Some warnings were encountered while performing checks against the 1 registered hosts above Click here to see the warnings.
← Back
Next →
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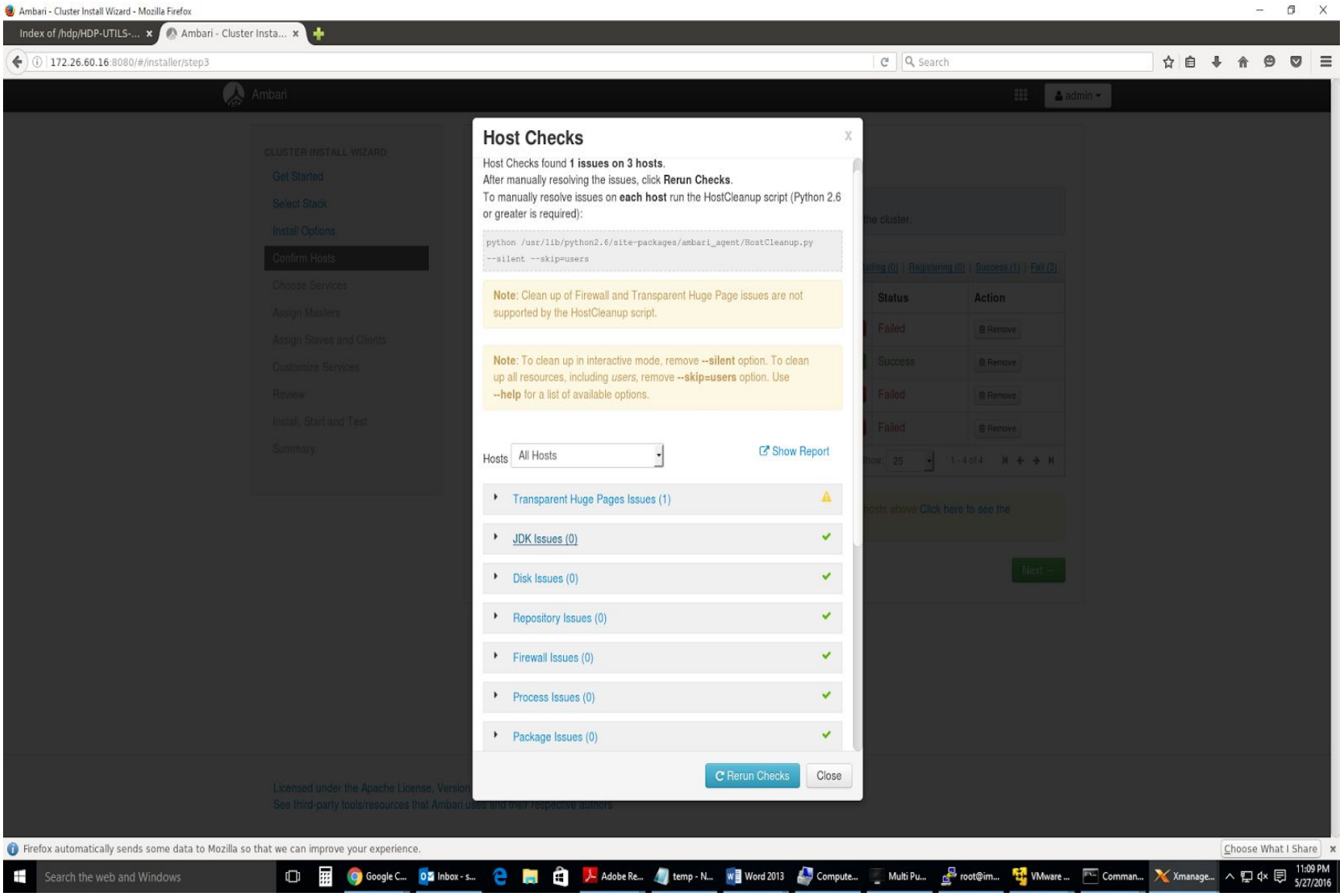
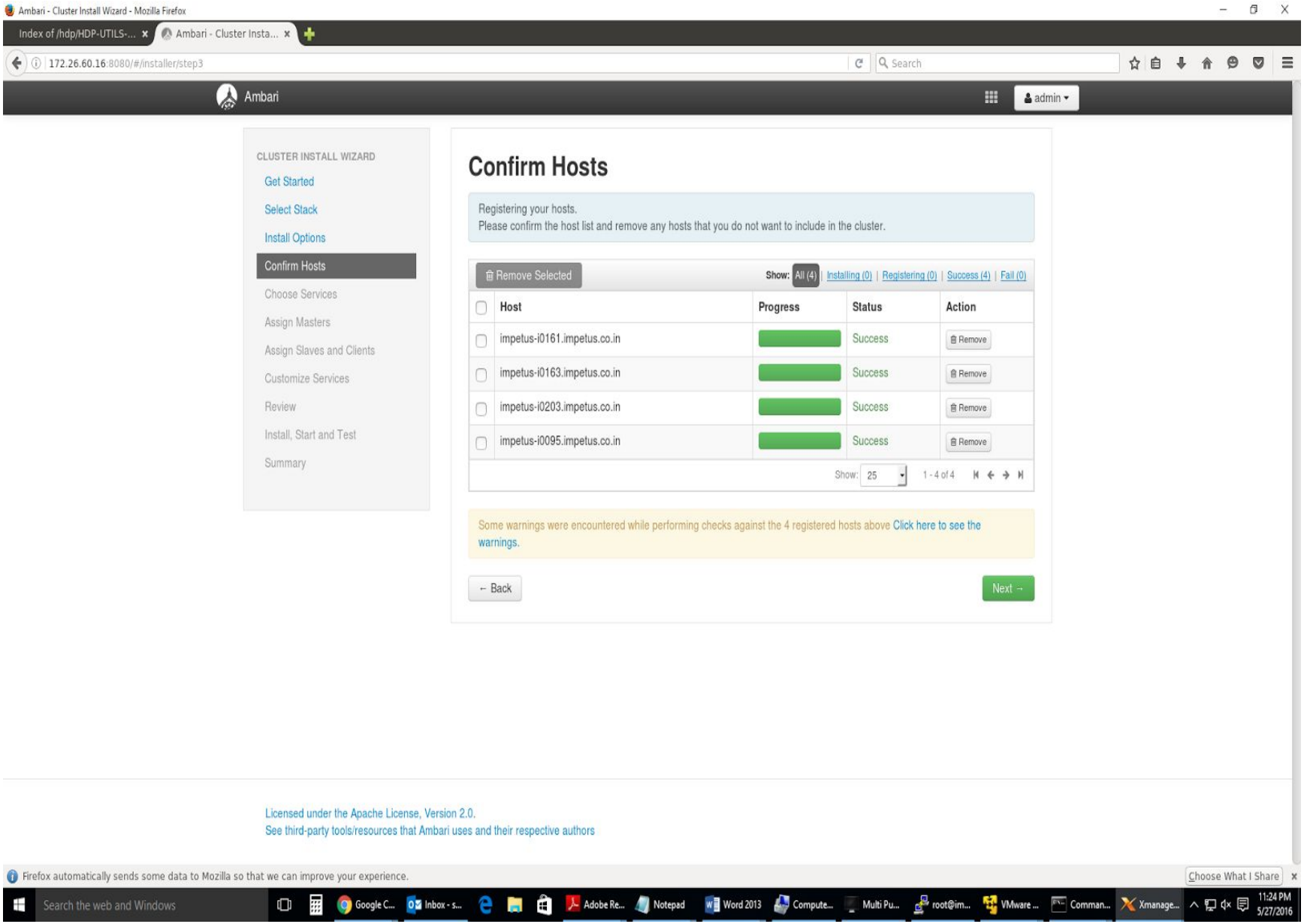
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
Search the web and Windows
11:07 PM
5/27/2016

If you get this error " Transperent Huge Pages Issue" then you can ignore this on Ubuntu 14 and continue.

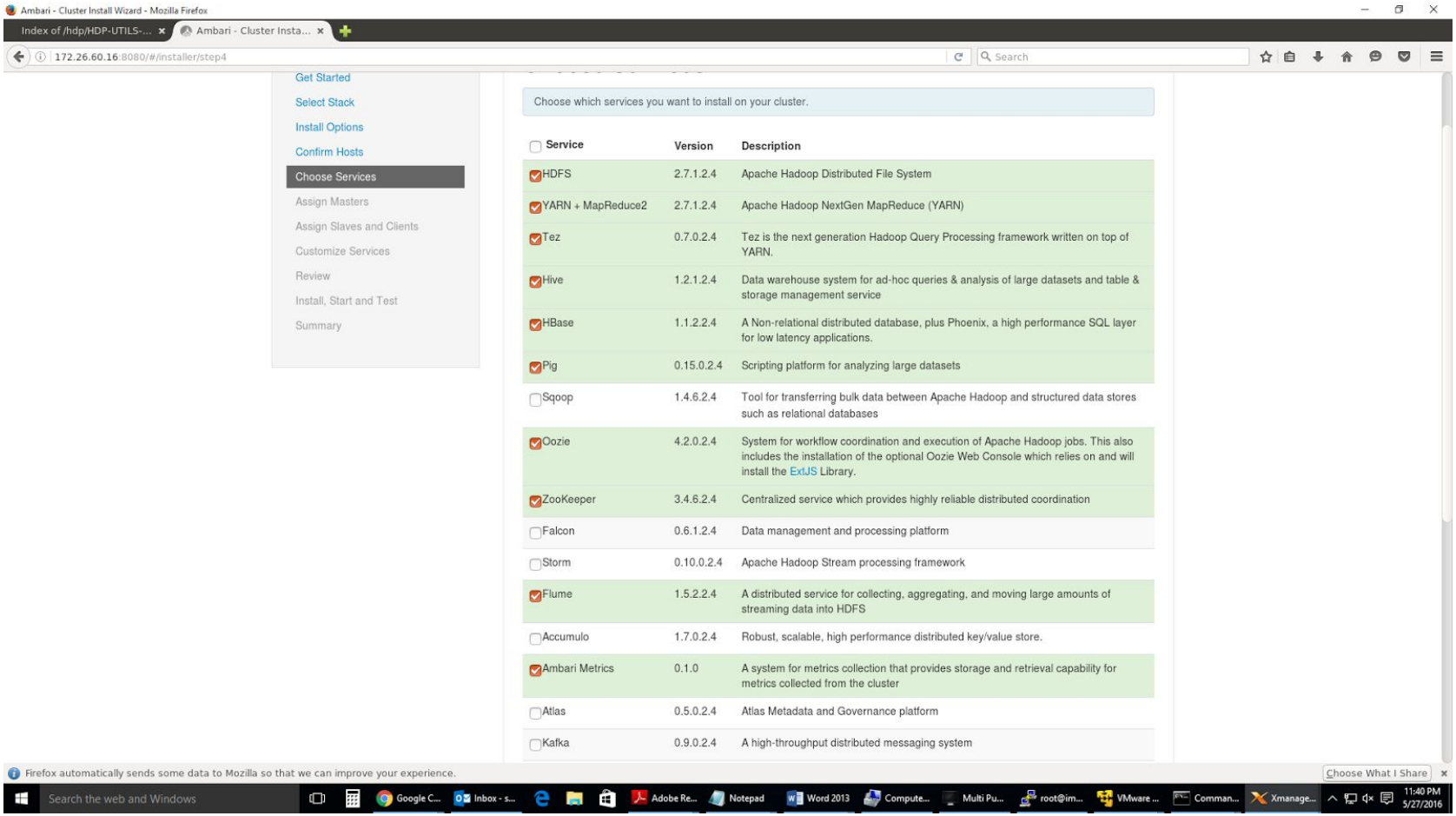


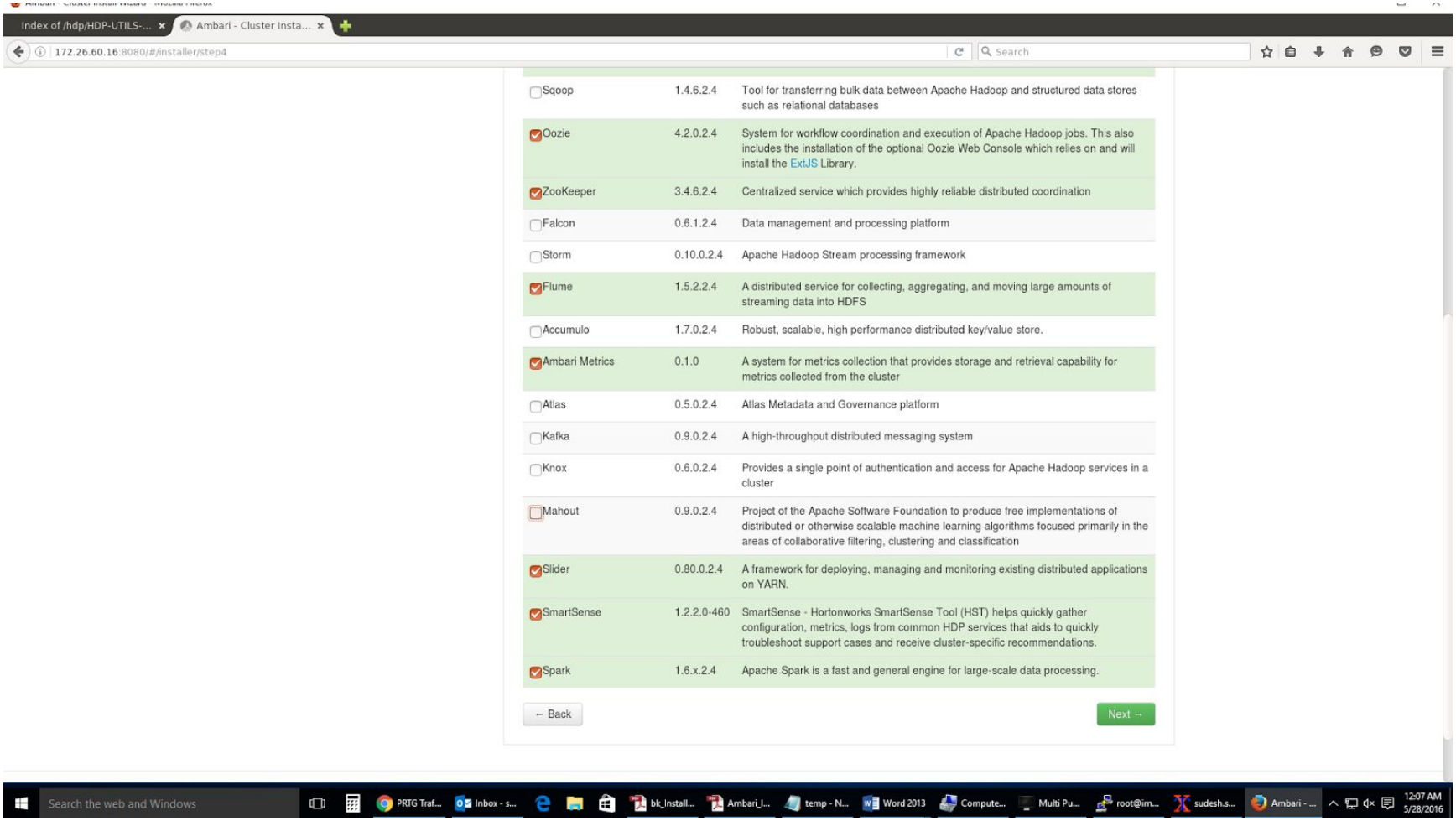

Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step3
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Confirm Hosts
Registering your hosts.
Please confirm the host list and remove any hosts that you do not want to include in the cluster.
Remove Selected
Show: All (4) | Installing (0) | Registering (0) | Success (4) | Fail (0)
Host
Progress
Status
Action
impetus-i0161.impetus.co.in
Success
Remove
impetus-i0163.impetus.co.in
Success
Remove
impetus-i0203.impetus.co.in
Success
Remove
impetus-i0095.impetus.co.in
Success
Remove
Show: 25
1 - 4 of 4
Some warnings were encountered while performing checks against the 4 registered hosts above Click here to see the warnings.
← Back
Next →
Licensed under the Apache License, Version 2.0.
See third-party tools/resources that Ambari uses and their respective authors
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
Search the web and Windows
11:24 PM
5/27/2016

Choose Services

Based on the Stack chosen during Select Stack, you are presented with the choice of Services to install into the cluster. HDP Stack comprises many services. You may choose to install any other available services now, or to add services later. The install wizard selects all available services for installation by default. Choose or clear individual checkboxes to define a set of services to install now. I selected the following service based on our case study.

After selecting the services to install now, choose Next.

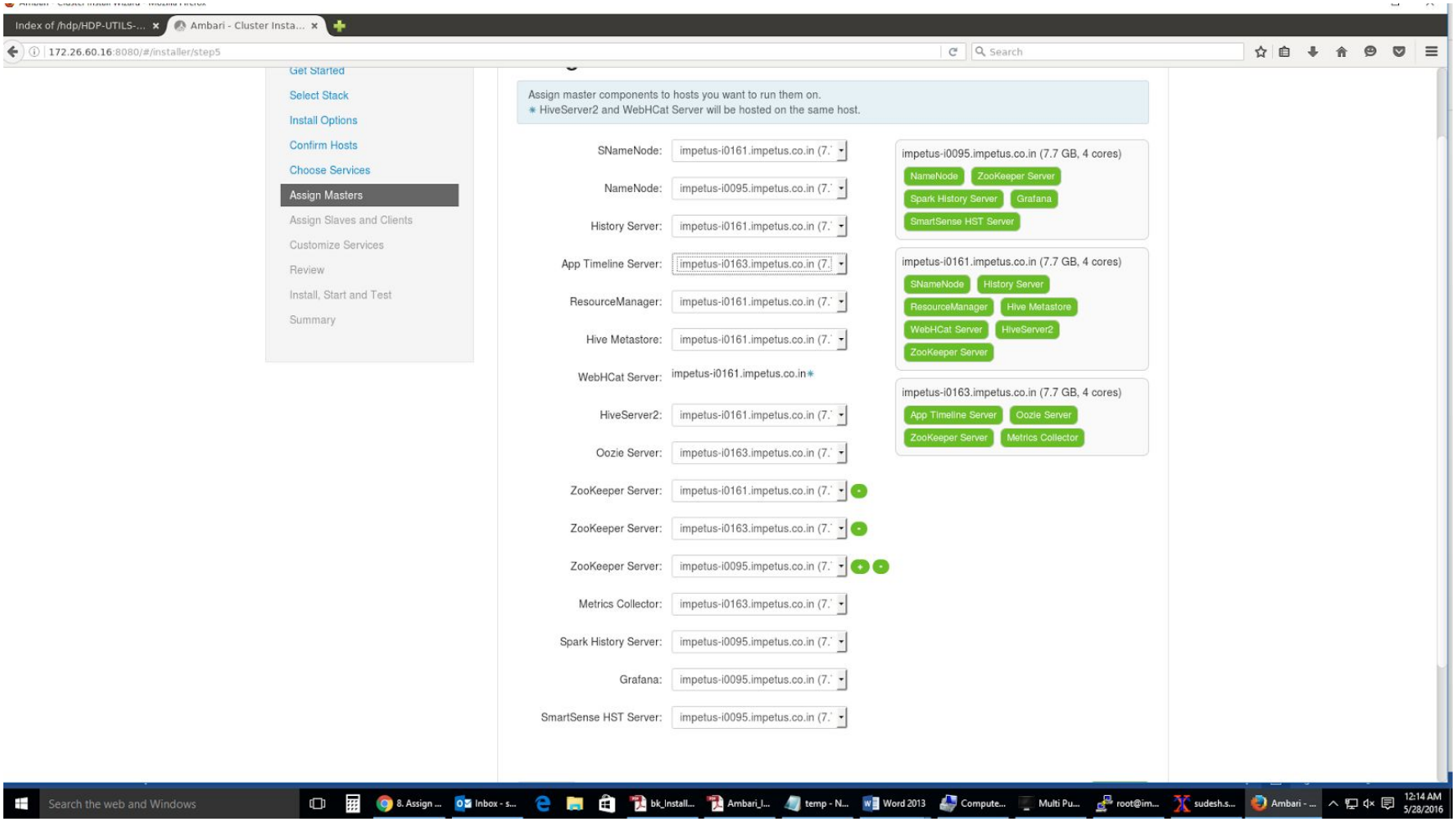

Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step4
Search
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Choose which services you want to install on your cluster.
Service
Version
Description
HDFS
2.7.1.2.4
Apache Hadoop Distributed File System
YARN + MapReduce2
2.7.1.2.4
Apache Hadoop NextGen MapReduce (YARN)
Tez
0.7.0.2.4
Tez is the next generation Hadoop Query Processing framework written on top of YARN.
Hive
1.2.1.2.4
Data warehouse system for ad-hoc queries & analysis of large datasets and table & storage management service
HBase
1.1.2.2.4
A Non-relational distributed database, plus Phoenix, a high performance SQL layer for low latency applications.
Pig
0.15.0.2.4
Scripting platform for analyzing large datasets
Sqoop
1.4.6.2.4
Tool for transferring bulk data between Apache Hadoop and structured data stores such as relational databases
Oozie
4.2.0.2.4
System for workflow coordination and execution of Apache Hadoop jobs. This also includes the installation of the optional Oozie Web Console which relies on and will install the ExtJS Library.
ZooKeeper
3.4.6.2.4
Centralized service which provides highly reliable distributed coordination
Falcon
0.6.1.2.4
Data management and processing platform
Storm
0.10.0.2.4
Apache Hadoop Stream processing framework
Flume
1.5.2.2.4
A distributed service for collecting, aggregating, and moving large amounts of streaming data into HDFS
Accumulo
1.7.0.2.4
Robust, scalable, high performance distributed key/value store.
Ambari Metrics
0.1.0
A system for metrics collection that provides storage and retrieval capability for metrics collected from the cluster
Atlas
0.5.0.2.4
Atlas Metadata and Governance platform
Kafka
0.9.0.2.4
A high-throughput distributed messaging system
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
Search the web and Windows
11:40 PM
5/27/2016



Assign Masters

The Ambari install wizard assigns the master components for selected services to appropriate hosts in your cluster and displays the assignments in Assign Masters. The left column shows services and current hosts. The right column shows current master component assignments by host, indicating the number of CPU cores and amount of RAM installed on each host.

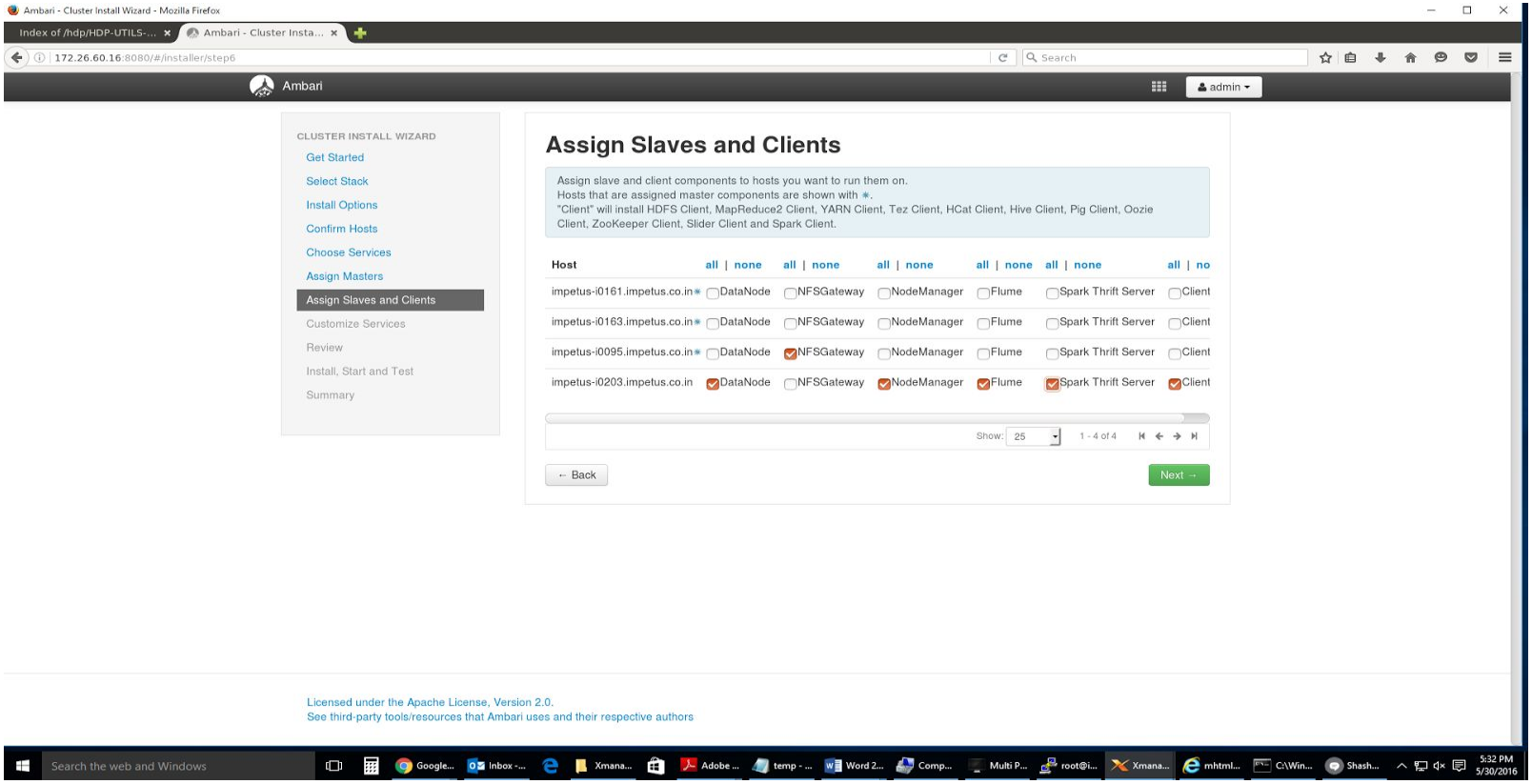
1. To change the host assignment for a service, select a host name from the drop-down menu for that service.
2. To remove a ZooKeeper instance, click the green minus icon next to the host address you want to remove.
3. When you are satisfied with the assignments, choose `Next`.
4. I moved some components to other server from default ones so that one server is not loaded with more components.



Assign Slaves and Clients

The Ambari installation wizard assigns the slave components (DataNodes, NodeManagers, and RegionServers) to appropriate hosts in your cluster. It also attempts to select hosts for installing the appropriate set of clients.

1. Use **all** or **none** to select all of the hosts in the column or none of the hosts, respectively.
2. If a host has an asterisk next to it, that host is also running one or more master components. Hover your mouse over the asterisk to see which master components are on that host.
3. Fine-tune your selections by using the checkboxes next to specific hosts.
4. When you are satisfied with your assignments, choose Next.



Customize Services

The Customize Services step presents you with a set of tabs that let you review and modify your HDP cluster setup. The wizard attempts to set reasonable defaults for each of the options. You are **strongly encouraged** to review these settings as your requirements might be slightly different.

Browse through each service tab and by hovering your cursor over each of the properties, you can see a brief description of what the property does. The number of service tabs shown depends on the services you decided to install in your cluster. **Any tab that requires input shows a red badge with the number of properties that need attention.** Select each service tab that displays a red badge number and enter the appropriate information.

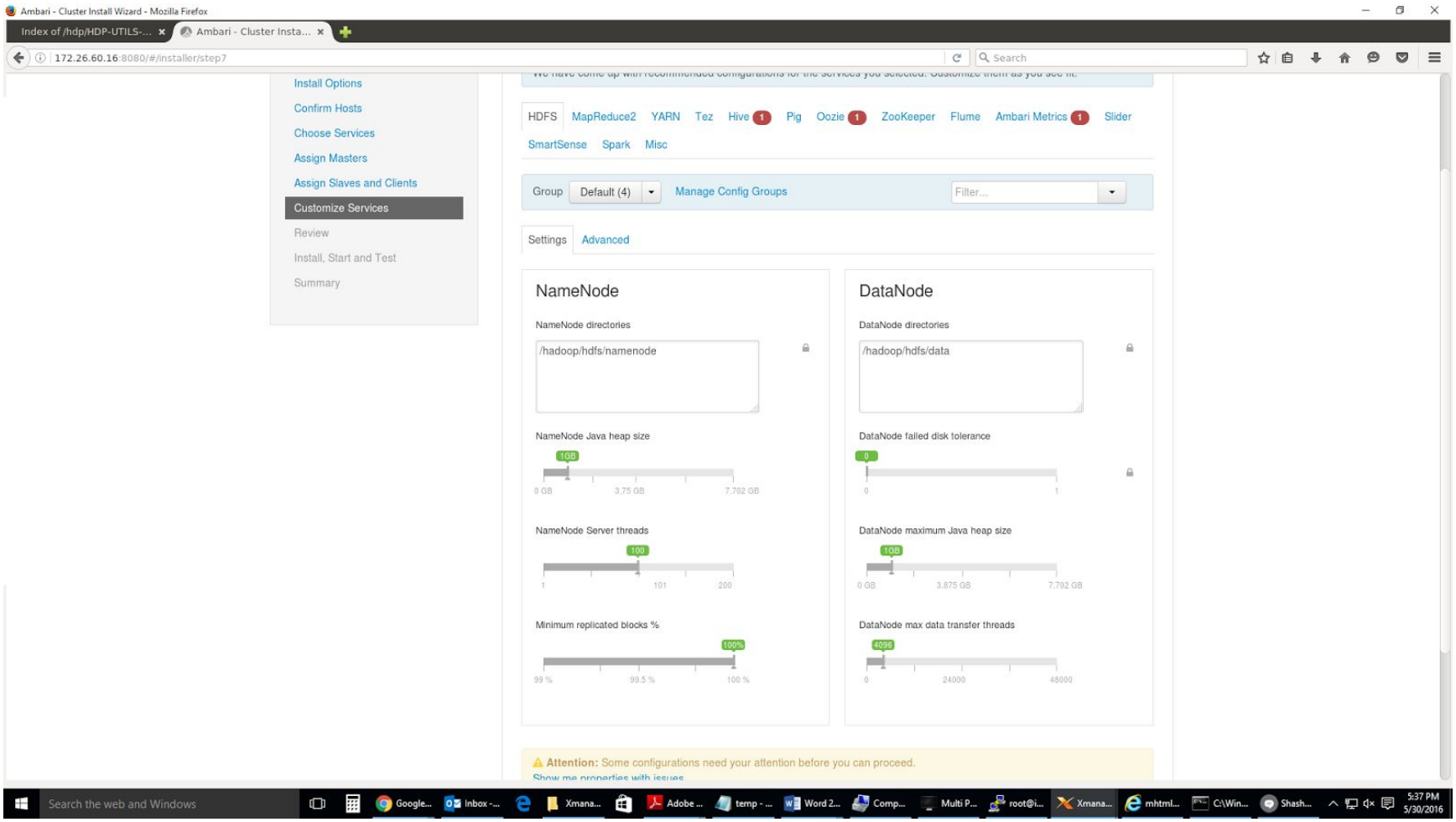
Directories
The choice of directories where HDP will store information is critical. Ambari will attempt to choose reasonable defaults based on the mount points available in your environment but you are **strongly encouraged** to review the default directory settings recommended by Ambari. In particular, confirm directories such as /tmp and /var are **not** being used for HDFS NameNode directories and DataNode directories under the **HDFS** tab.

Passwords
You must provide database passwords for the Hive and Oozie services and the Master Secret for Knox. Using Hive as an example, choose the **Hive** tab and expand the Advanced section. In Database Password field marked in red, provide a password, then retype to confirm it.

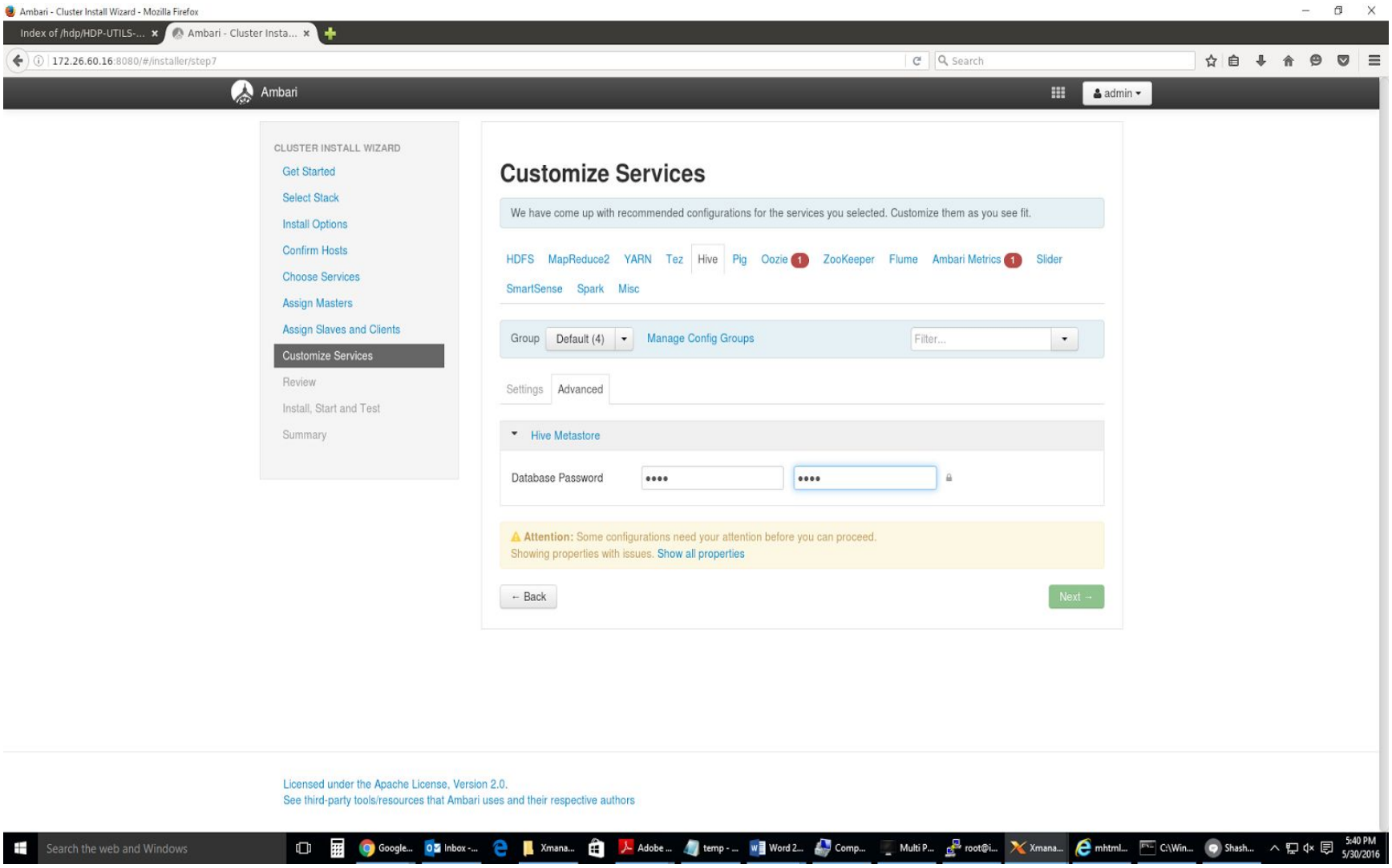
Note
By default, Ambari will install a new MySQL instance for the Hive Metastore and install a Derby instance for Oozie. If you plan to use existing databases for MySQL, Oracle or PostgreSQL, modify these options before proceeding. Refer to Using Non-Default Databases for more information on using existing databases.

Important
Using the **Microsoft SQL Server** or **SQL Anywhere** database options are not supported.

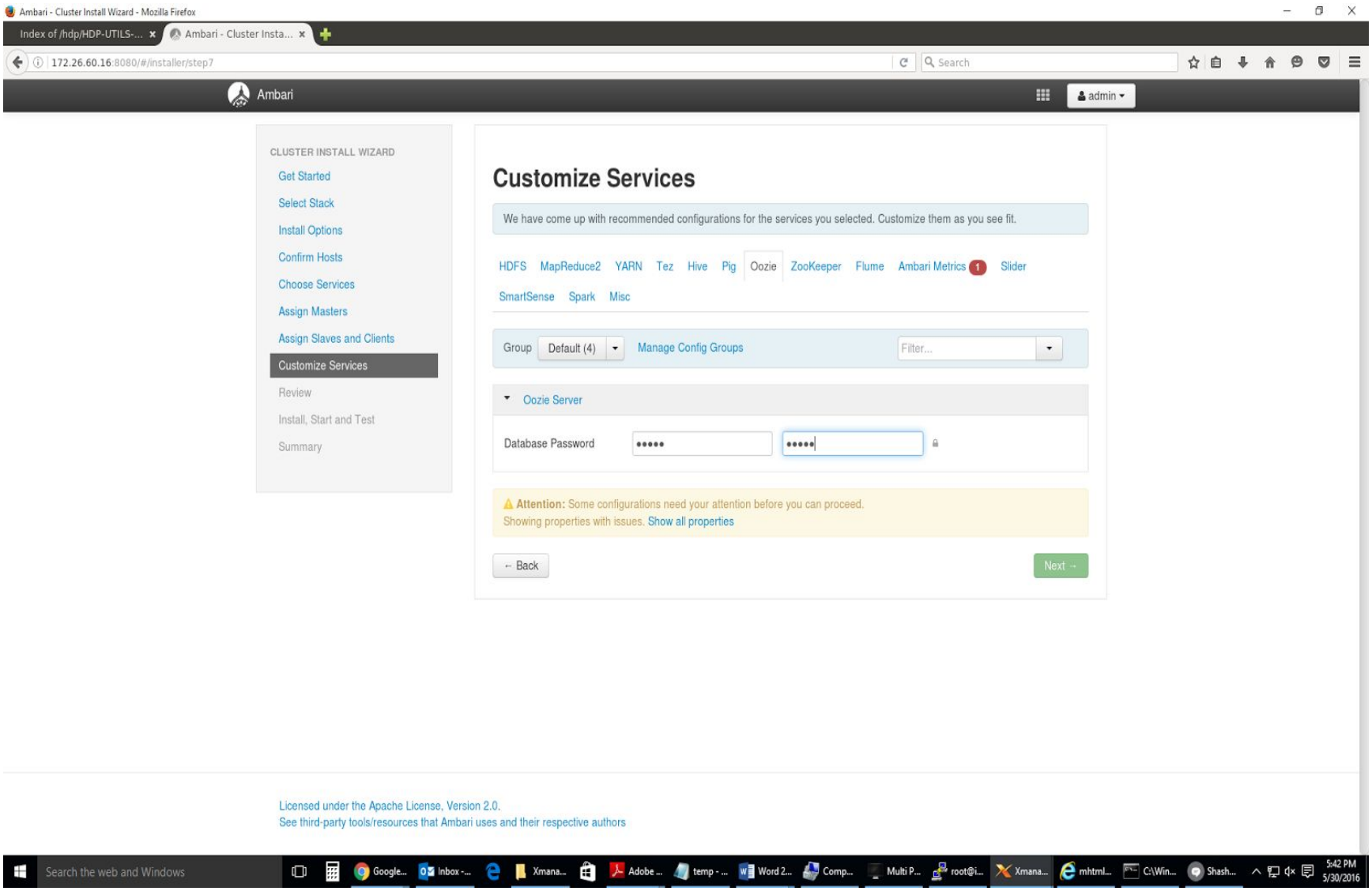
Service Account Users and Groups
The service account users and groups are available under the **Misc** tab. These are the **operating system accounts the service components will run as**. If these users do not exist on your hosts, Ambari will automatically create the users and groups locally on the hosts. If these users already exist, Ambari will use those accounts.
Depending on how your environment is configured, you might not allow groupmod or usermod operations. If this is the case, you **must** be sure all users and groups are already created and **be sure to** select the "Skip group modifications" option on the **Misc** tab. This tells Ambari to not modify group membership for the service users.
Refer to the Ambari Reference Guide Customizing HDP Services for more information on the service account users and groups that are needed for HDP.
After you complete Customizing Services, choose `Next`.



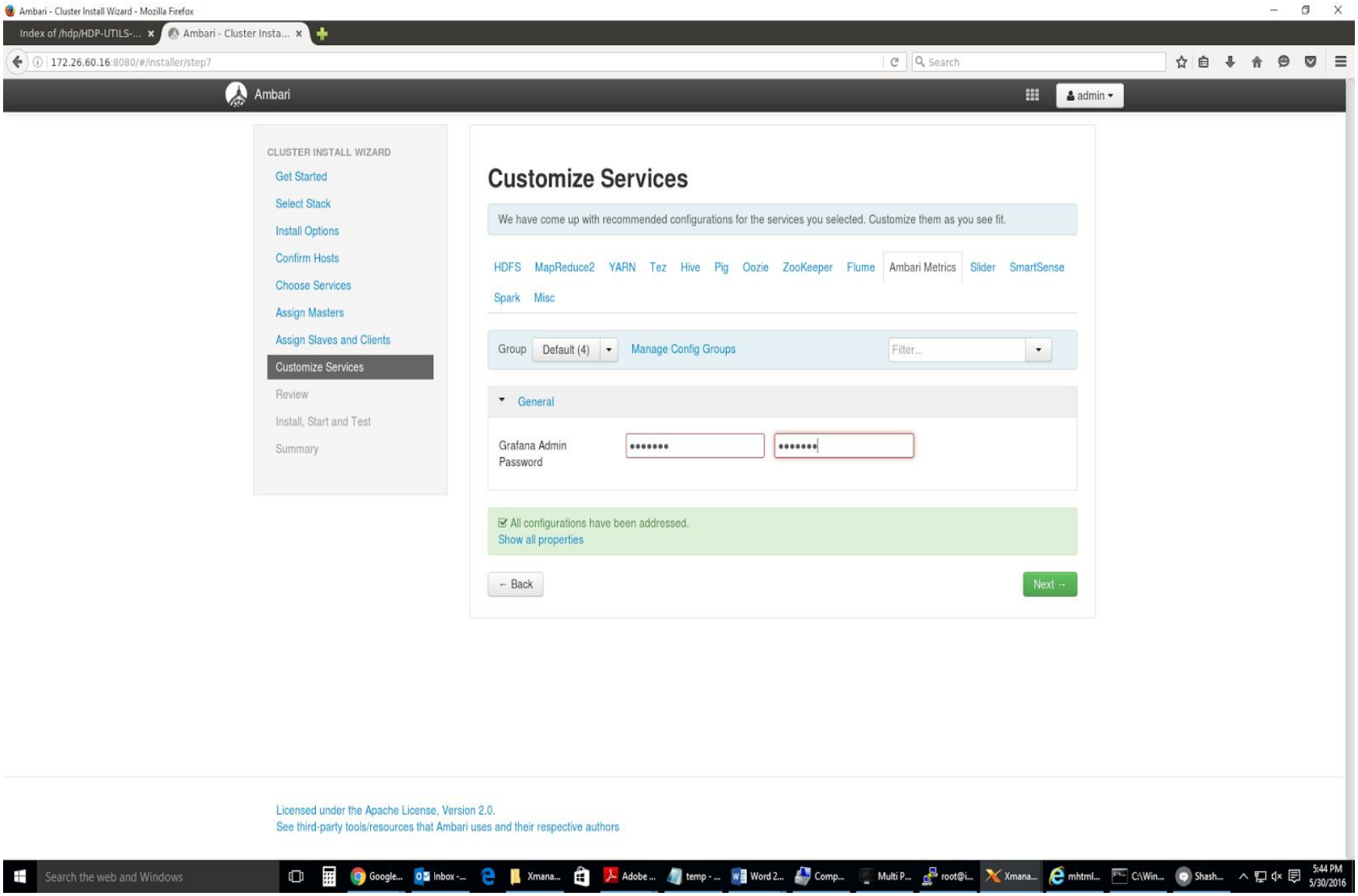
Gave Hive Database password as hive/hive



Gave oozie database password as oozie/oozie



Gave Grafna Admin password as grafana/grafana


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step7
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Customize Services
We have come up with recommended configurations for the services you selected. Customize them as you see fit.
HDFS MapReduce2 YARN Tez Hive Pig Oozie ZooKeeper Flume Ambari Metrics Slider SmartSense Spark Misc
Group Default (4) Manage Config Groups
Filter...
General
Grafana Admin Password
All configurations have been addressed.
Show all properties
← Back
Next →
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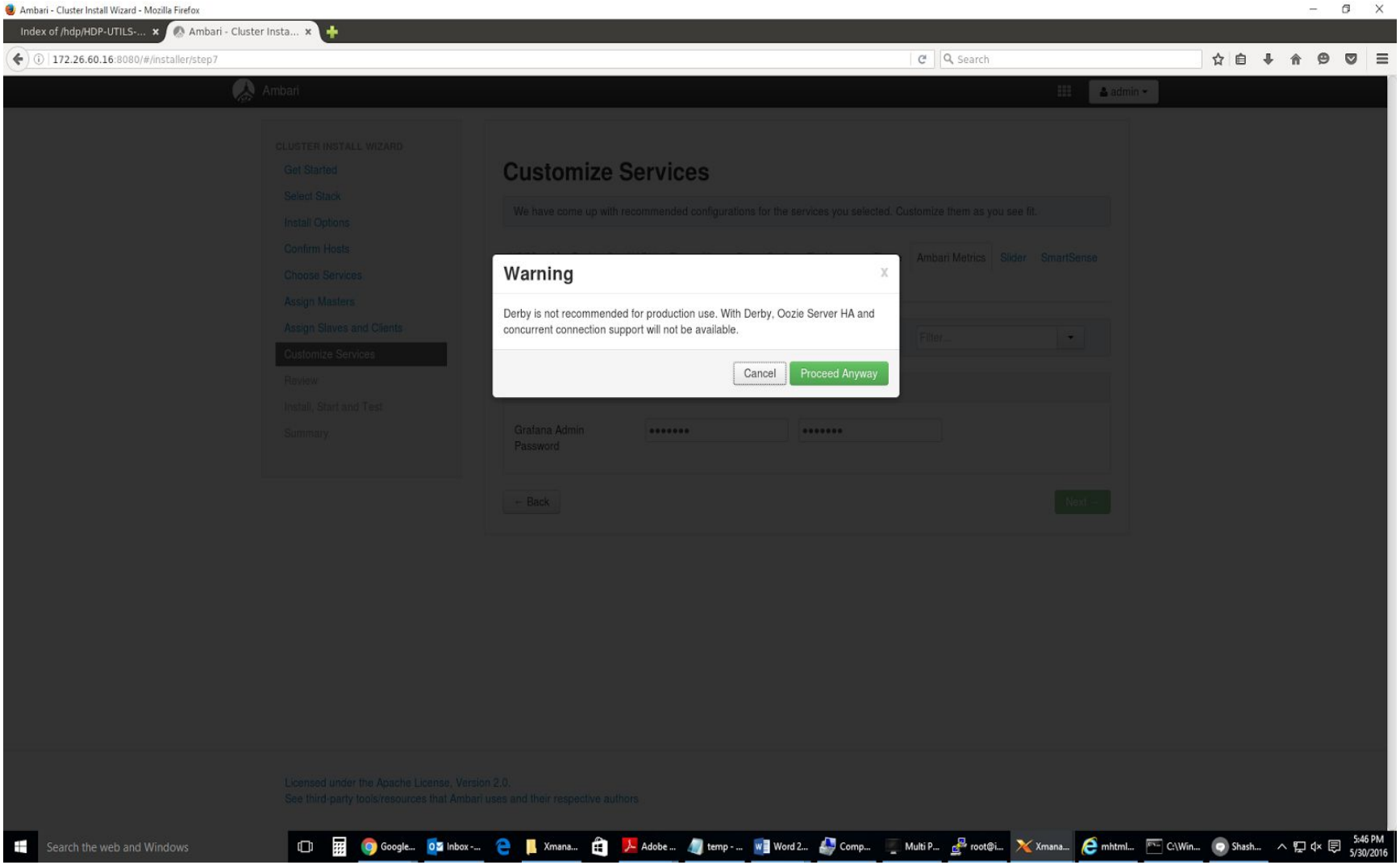
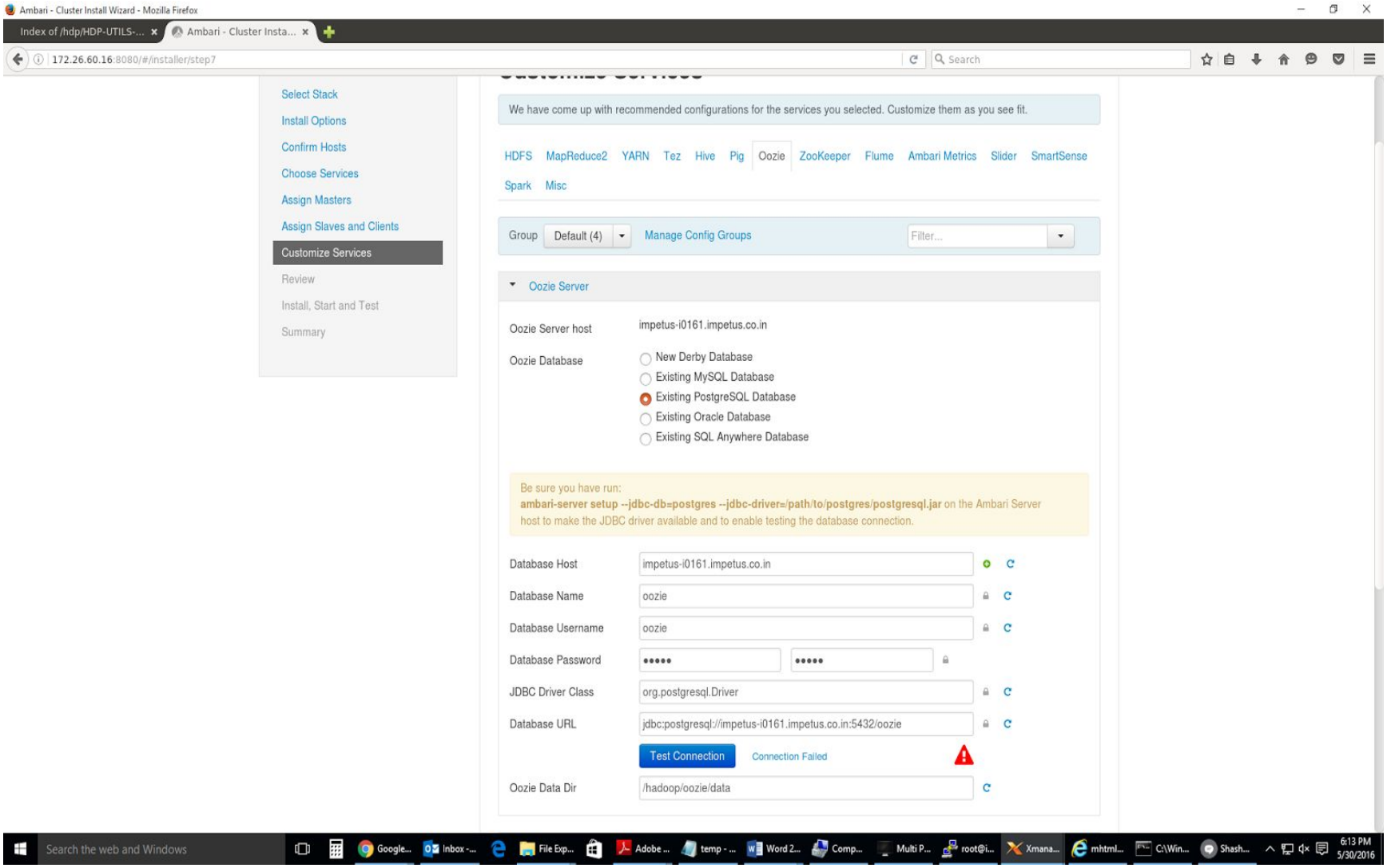
See third-party tools/resources that Ambari uses and their respective authors
Search the web and Windows
5:44 PM
5/30/2016



If you get the above warning then go back to customize service and select Oozie → under Oozie server details Select " existing PostgreSQL database " and then create a oozie database on the server where it is pointing out. In this case we use impetus-i0161



Now follow the below process to create a psql database for oozie. Run the following command at a terminal prompt on impetus-i0161

PostgreSQL setup for use with Oozie:

Execute the following command:

```
#  ambari-server setup --jdbc-db=postgres --jdbc-driver=/usr/lib/ambari-server/postgresql-9.3-1101-jdbc4.jar
```

Create a user for Oozie and grant it permissions using the PostgreSQL database admin utility:

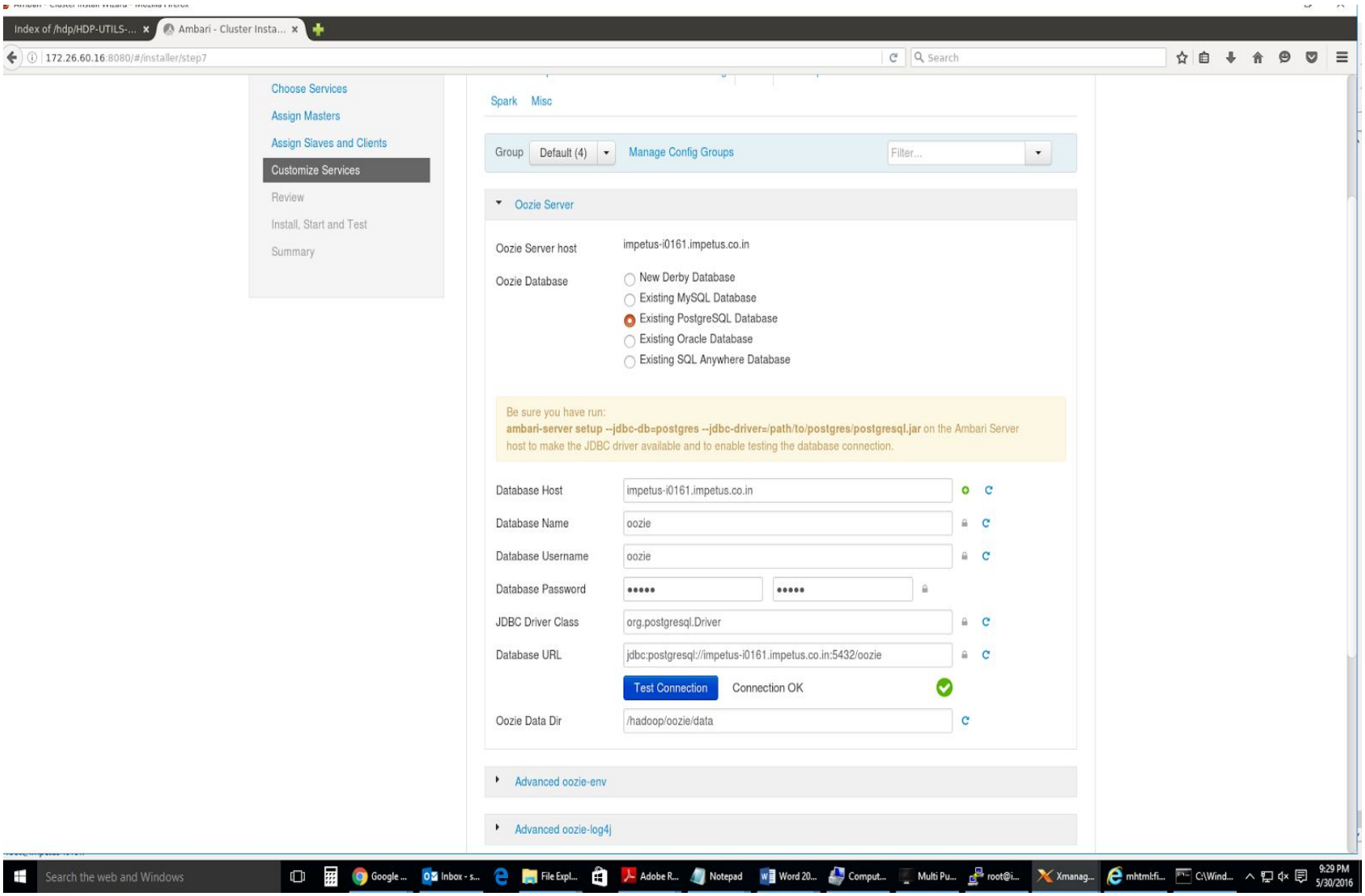
```
# sudo su - postgres

postgres@impetus-i0161:~$ echo "CREATE DATABASE oozie"| psql -U postgres
postgres@impetus-i0161:~$ echo "CREATE USER oozie WITH PASSWORD 'oozie';" | psql -U postgres
postgres@impetus-i0161:~$ echo "GRANT ALL PRIVILEGES ON DATABASE oozie TO oozie;" | psql -U postgres
```

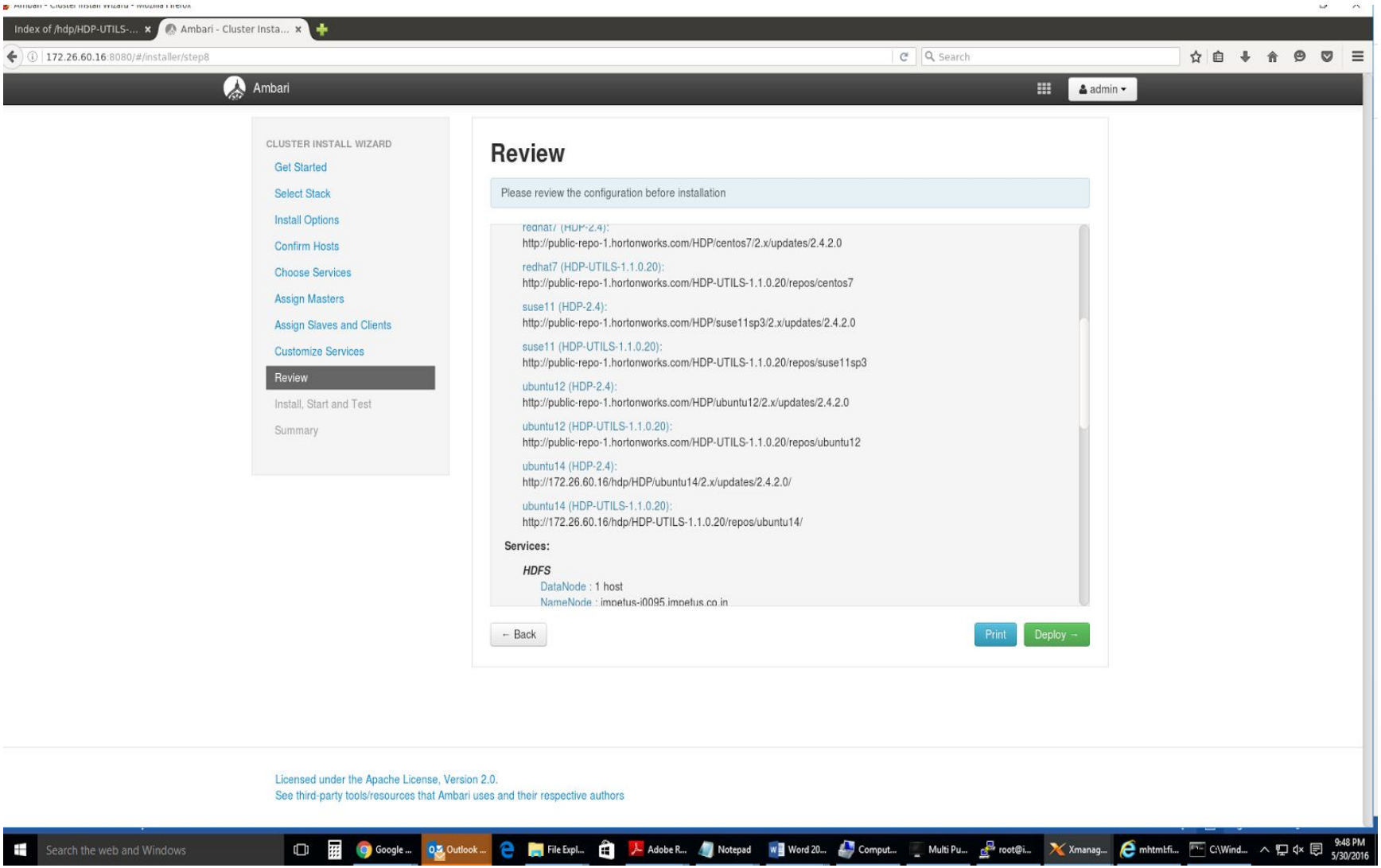
To test this connection run the below command on terminal. It should prompt for oozie password and should connect to database.

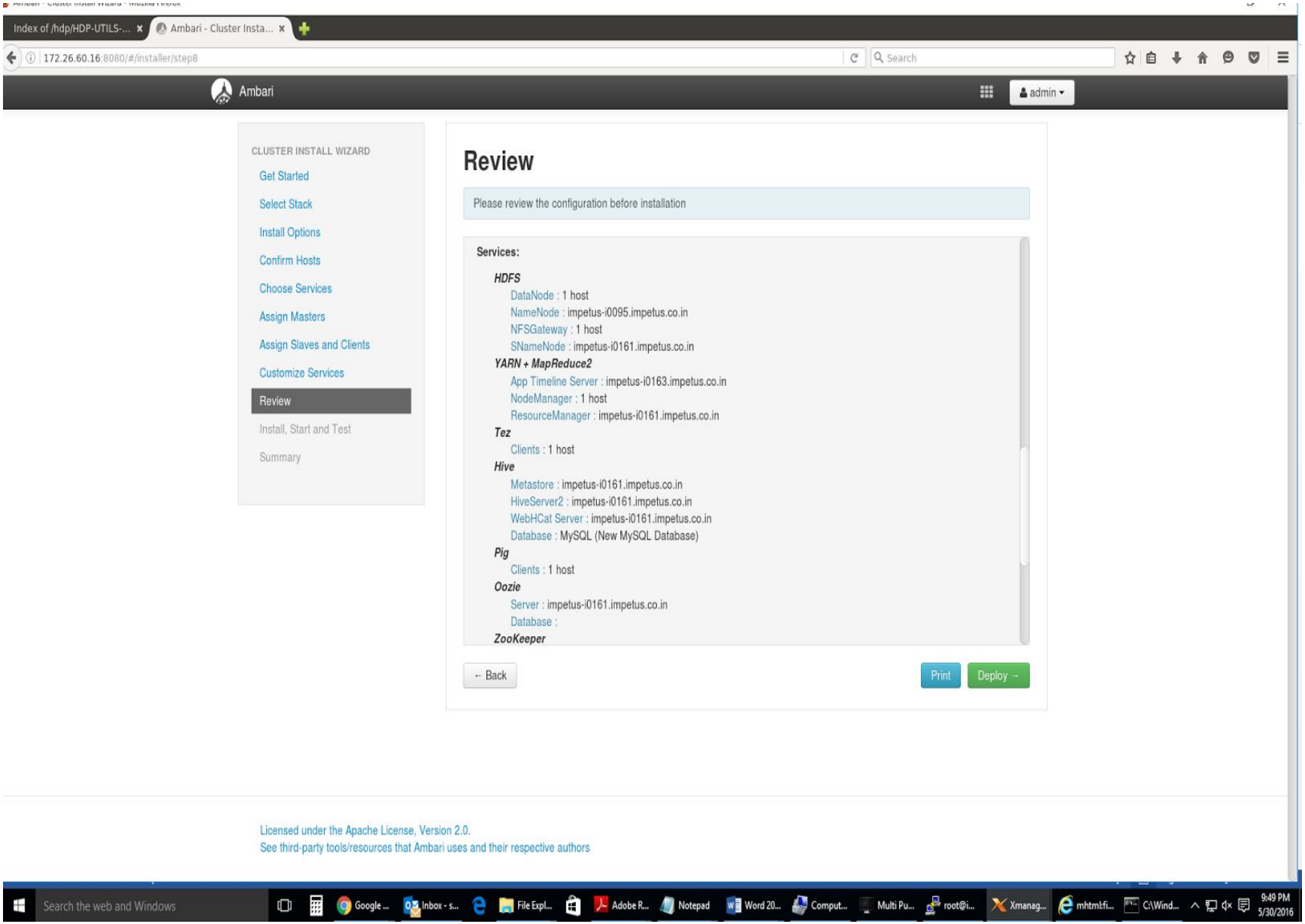
```
postgres@impetus-i0161:~$ psql -h impetus-i0161.impetus.co.in -d oozie -U oozie -p 5432
```

Test it again on ambari GUI



After Review click on Deploy


Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step8
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Review
Please review the configuration before installation
redhat7 (HDP-2.4):
http://public-repo-1.hortonworks.com/HDP/centos7/2.x/updates/2.4.2.0
redhat7 (HDP-UTILS-1.1.0.20):
http://public-repo-1.hortonworks.com/HDP-UTILS-1.1.0.20/repos/centos7
suse11 (HDP-2.4):
http://public-repo-1.hortonworks.com/HDP/suse11sp3/2.x/updates/2.4.2.0
suse11 (HDP-UTILS-1.1.0.20):
http://public-repo-1.hortonworks.com/HDP-UTILS-1.1.0.20/repos/suse11sp3
ubuntu12 (HDP-2.4):
http://public-repo-1.hortonworks.com/HDP/ubuntu12/2.x/updates/2.4.2.0
ubuntu12 (HDP-UTILS-1.1.0.20):
http://public-repo-1.hortonworks.com/HDP-UTILS-1.1.0.20/repos/ubuntu12
ubuntu14 (HDP-2.4):
http://172.26.60.16/hdp/HDP/ubuntu14/2.x/updates/2.4.2.0/
ubuntu14 (HDP-UTILS-1.1.0.20):
http://172.26.60.16/hdp/HDP-UTILS-1.1.0.20/repos/ubuntu14/
Services:
HDFS
DataNode : 1 host
NameNode : impetus-i0095.impetus.co.in
← Back
Print
Deploy →
Licensed under the Apache License, Version 2.0.
See third-party tools/resources that Ambari uses and their respective authors
Search the web and Windows
9:48 PM
5/30/2016


Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step8
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Review
Please review the configuration before installation
Services:
HDFS
DataNode : 1 host
NameNode : impetus-i0095.impetus.co.in
NFSGateway : 1 host
SNameNode : impetus-i0161.impetus.co.in
YARN + MapReduce2
App Timeline Server : impetus-i0163.impetus.co.in
NodeManager : 1 host
ResourceManager : impetus-i0161.impetus.co.in
Tez
Clients : 1 host
Hive
Metastore : impetus-i0161.impetus.co.in
HiveServer2 : impetus-i0161.impetus.co.in
WebHCat Server : impetus-i0161.impetus.co.in
Database : MySQL (New MySQL Database)
Pig
Clients : 1 host
Oozie
Server : impetus-i0161.impetus.co.in
Database :
ZooKeeper
← Back
Print
Deploy →
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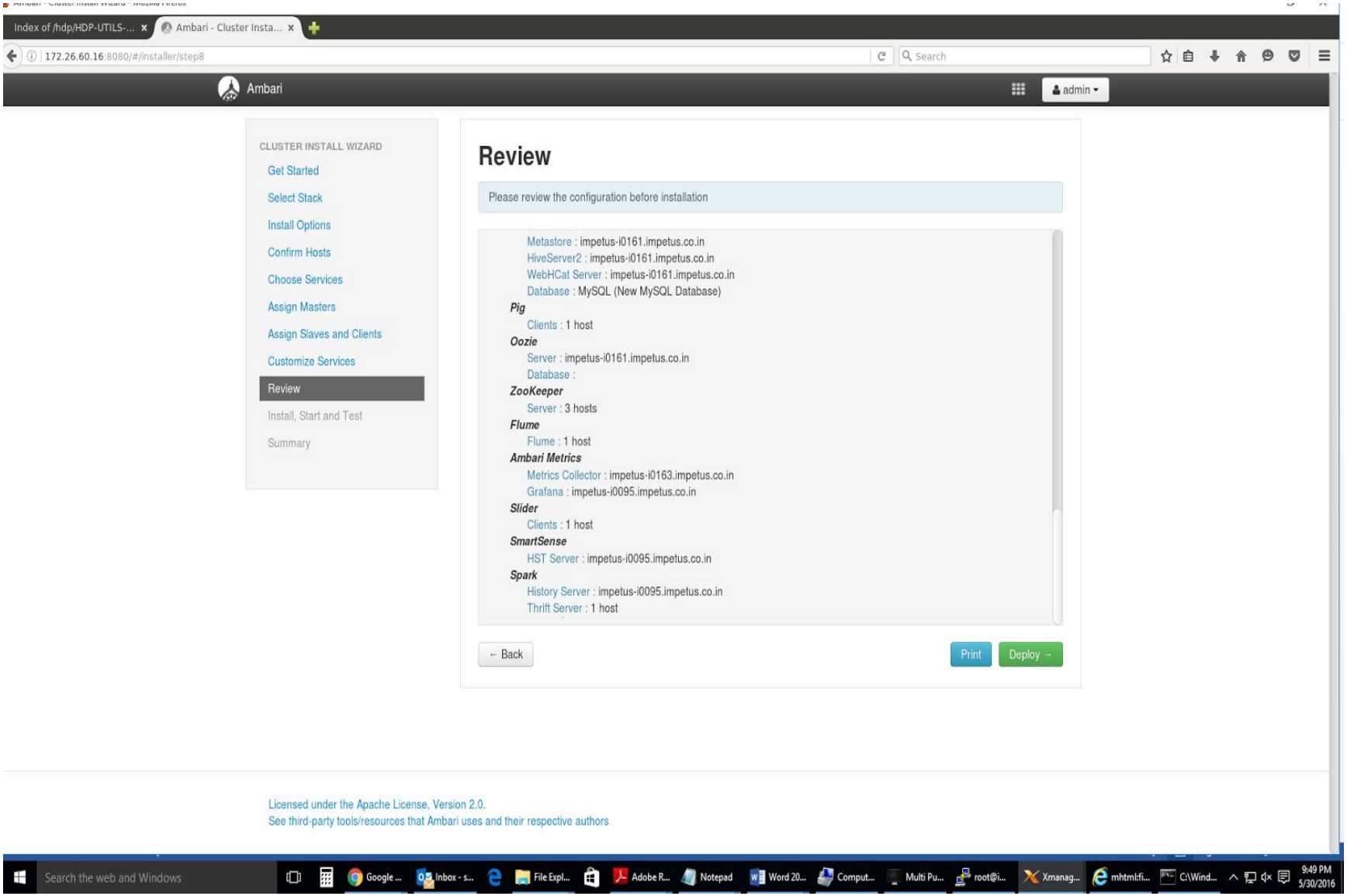
Search the web and Windows
9:49 PM
5/30/2016


Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step8
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Review
Please review the configuration before installation
Metastore : impetus-i0161.impetus.co.in
HiveServer2 : impetus-i0161.impetus.co.in
WebHCat Server : impetus-i0161.impetus.co.in
Database : MySQL (New MySQL Database)
Pig
Clients : 1 host
Oozie
Server : impetus-i0161.impetus.co.in
Database :
ZooKeeper
Server : 3 hosts
Flume
Flume : 1 host
Ambari Metrics
Metrics Collector : impetus-i0163.impetus.co.in
Grafana : impetus-i0095.impetus.co.in
Slider
Clients : 1 host
SmartSense
HST Server : impetus-i0095.impetus.co.in
Spark
History Server : impetus-i0095.impetus.co.in
Thrift Server : 1 host
← Back
Print
Deploy →
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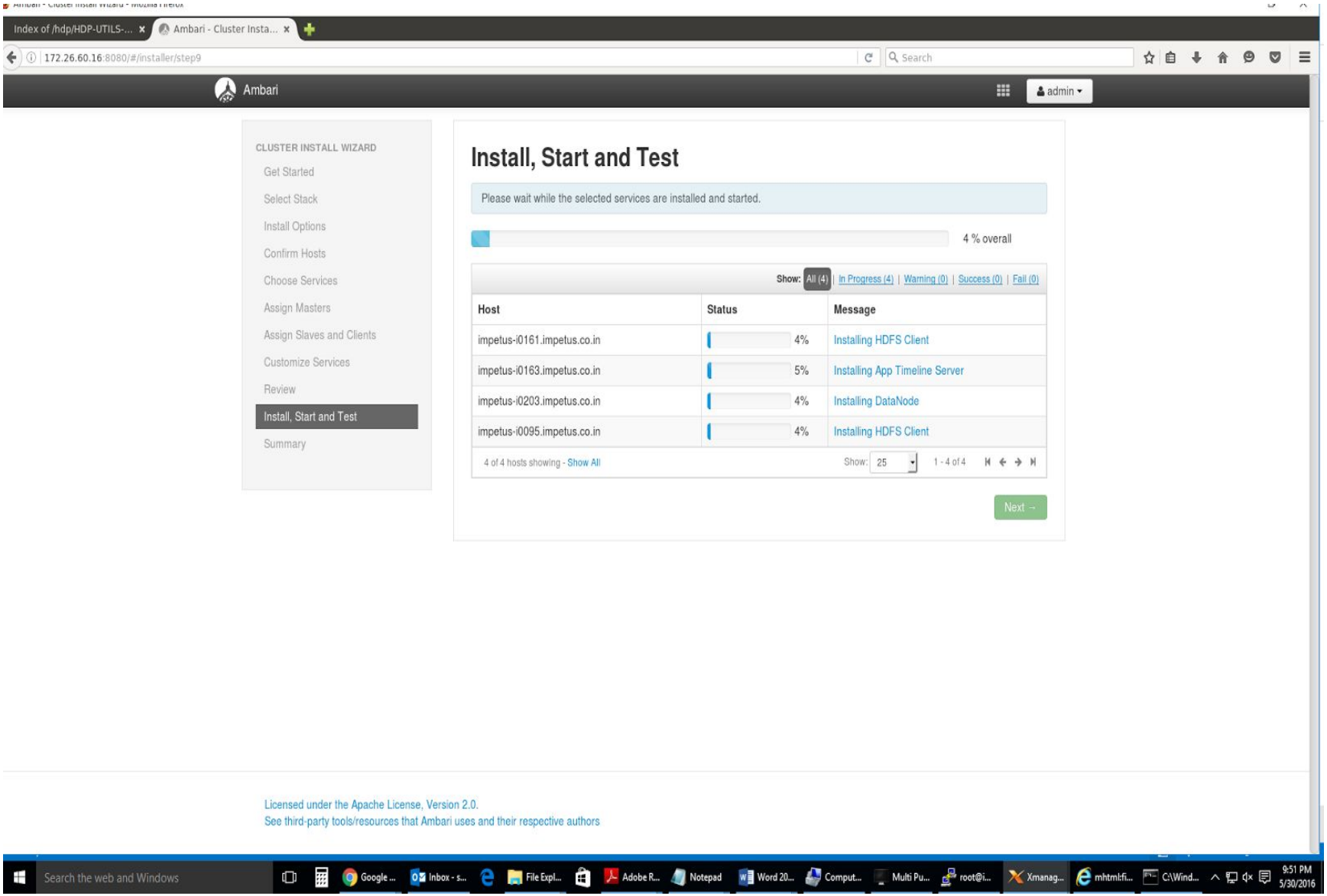
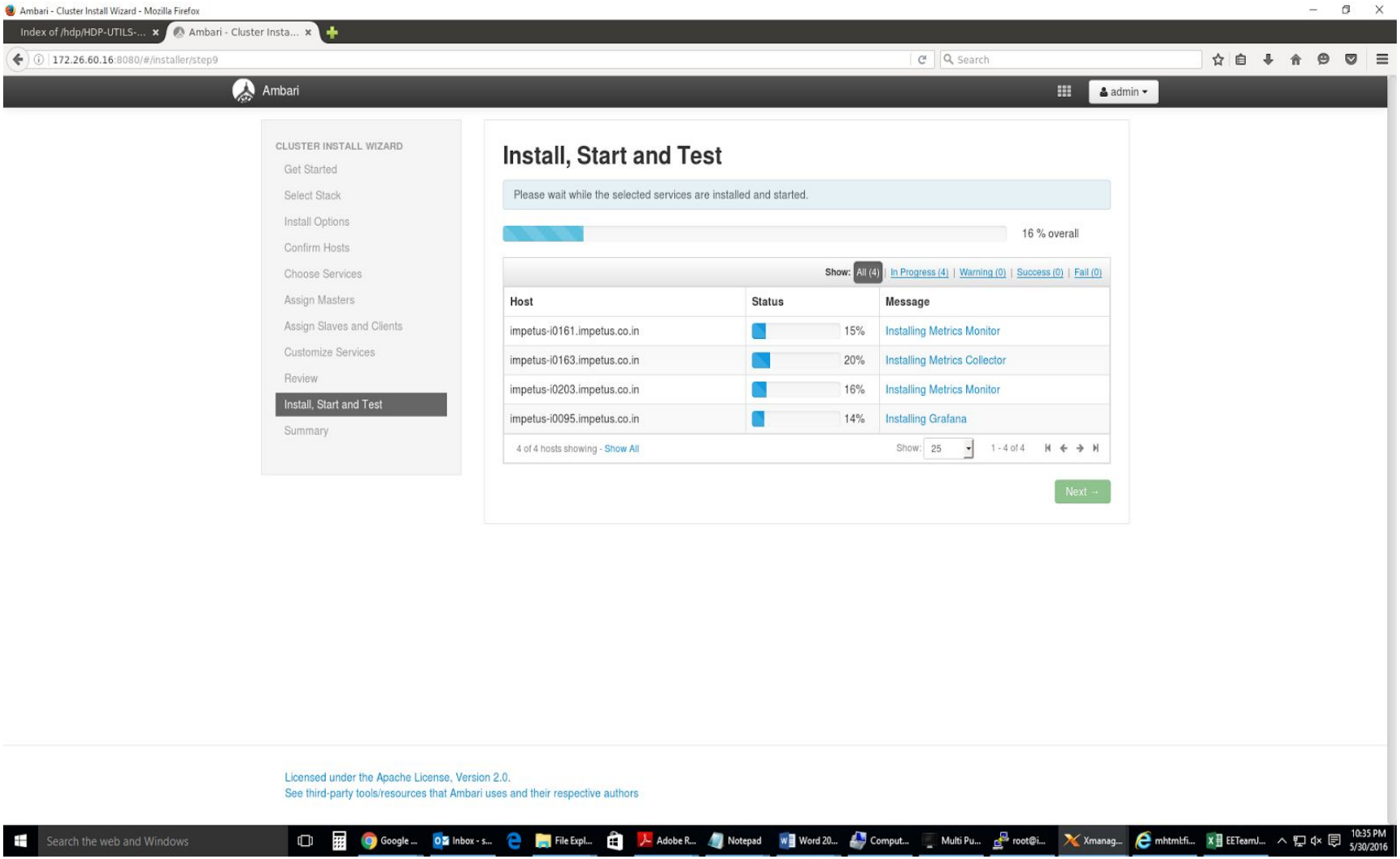
Deployment in progress




Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step9
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Install, Start and Test
Please wait while the selected services are installed and started.
16 % overall
Show: All (4) | In Progress (4) | Warning (0) | Success (0) | Fail (0)
Host
Status
Message
impetus-i0161.impetus.co.in
15%
Installing Metrics Monitor
impetus-i0163.impetus.co.in
20%
Installing Metrics Collector
impetus-i0203.impetus.co.in
16%
Installing Metrics Monitor
impetus-i0095.impetus.co.in
14%
Installing Grafana
4 of 4 hosts showing - Show All
Show: 25
1 - 4 of 4
Next →
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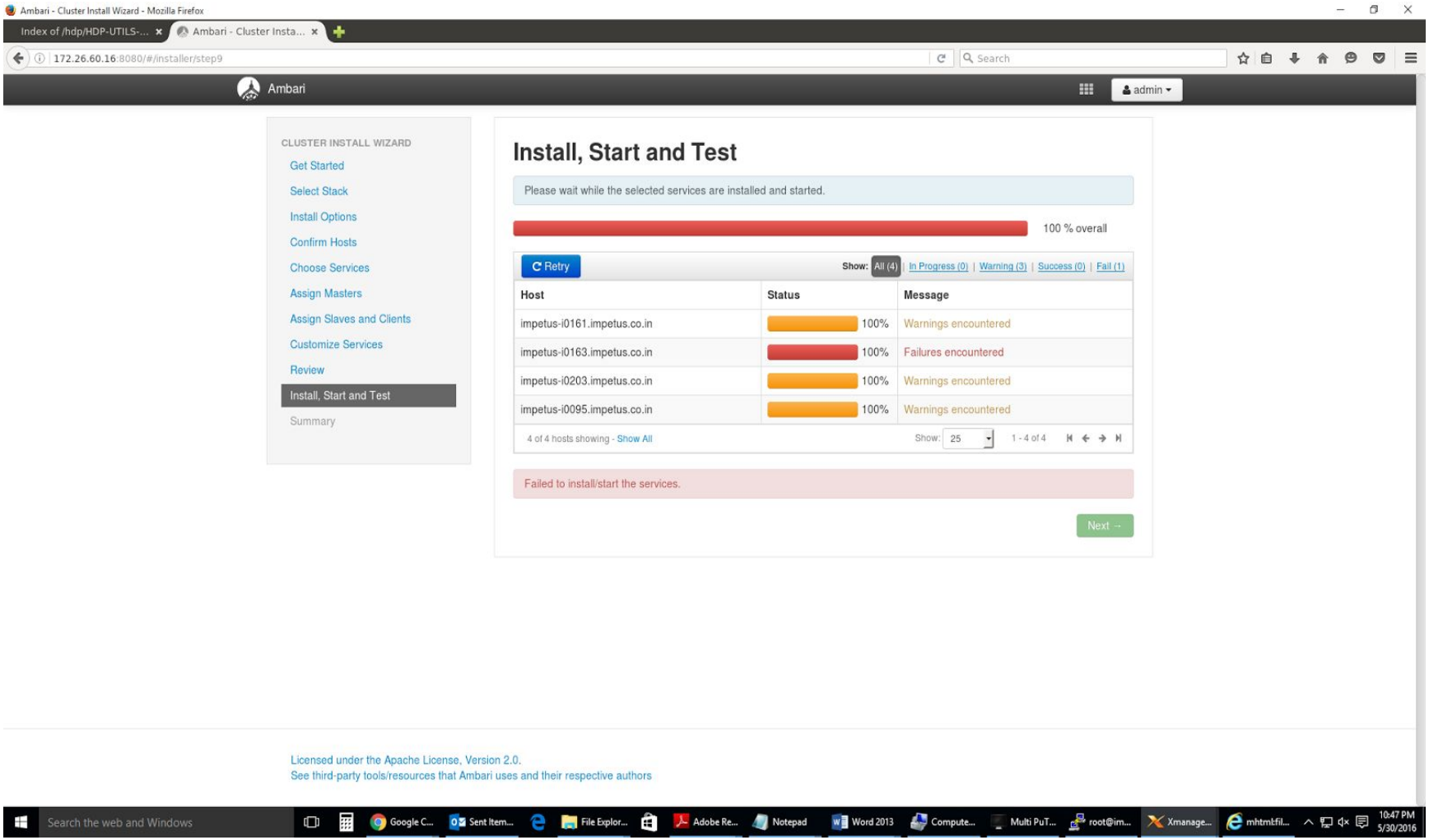
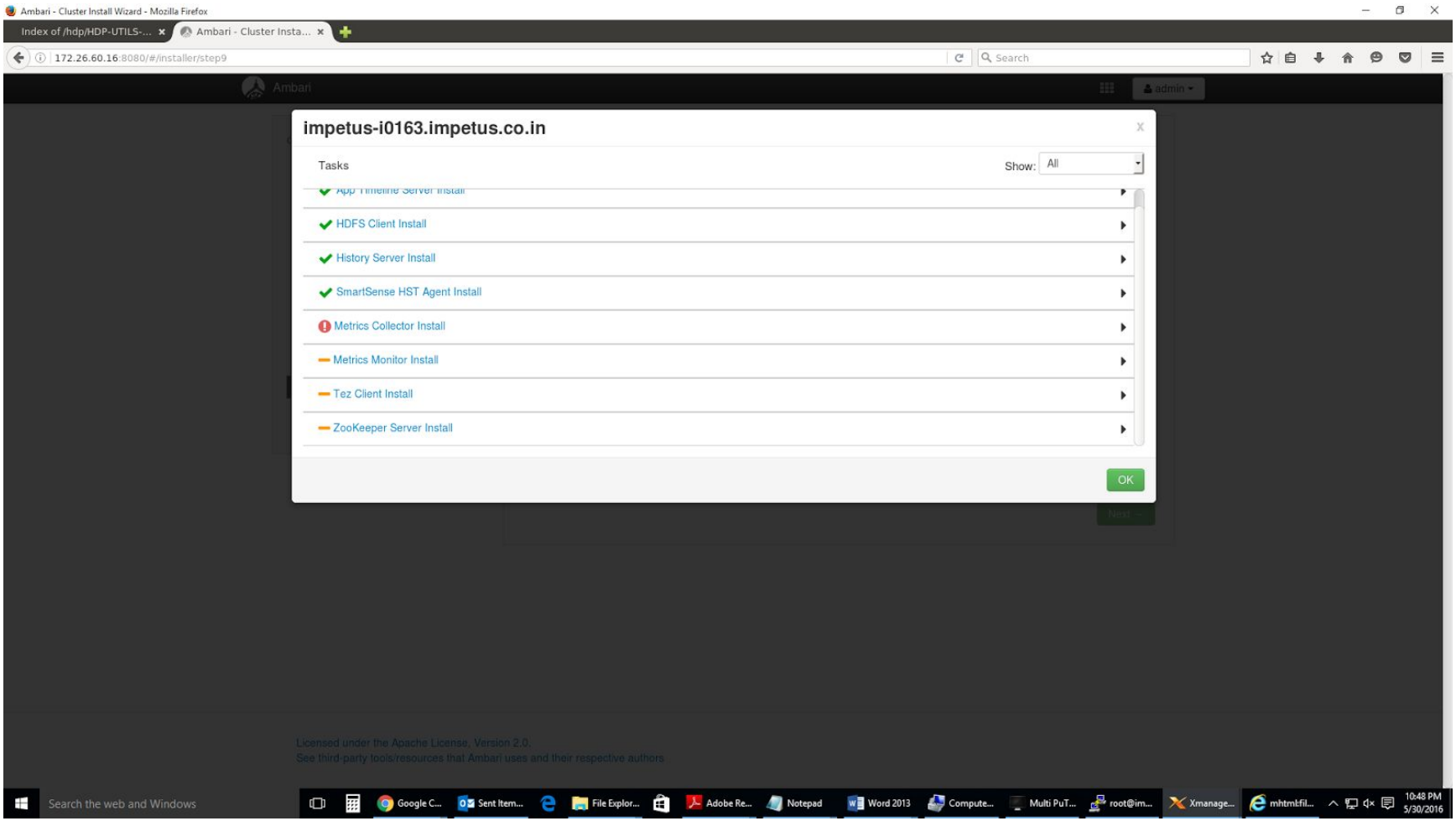
Search the web and Windows
10:35 PM
5/30/2016



Click on the failure and resolve the issue. In my case installation of one of the component has failed due to timeout. So I just re-tried again.


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
172.26.60.16:8080/#/installer/step9
Search
Ambari
admin
impetus-i0163.impetus.co.in
Tasks
Show:
All
HDFS Client Install
History Server Install
SmartSense HST Agent Install
Metrics Collector Install
Metrics Monitor Install
Tez Client Install
ZooKeeper Server Install
OK
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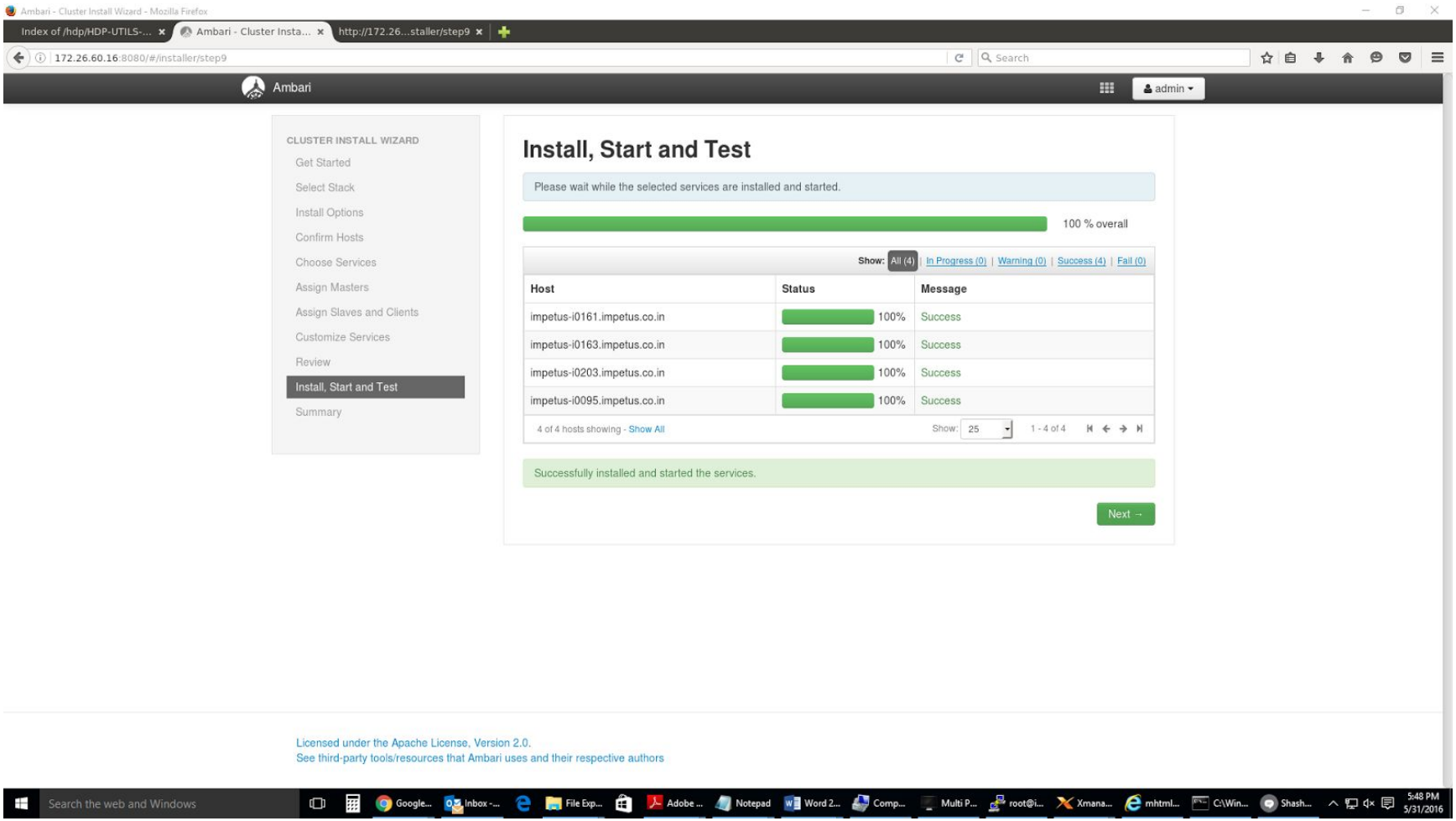
Search the web and Windows
10:48 PM
5/30/2016


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
http://172.26...staller/step9
172.26.60.16:8080/#/installer/step9
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Install, Start and Test
Please wait while the selected services are installed and started.
100 % overall
Show: All (4) | In Progress (0) | Warning (0) | Success (4) | Fail (0)
Host
Status
Message
impetus-i0161.impetus.co.in
100%
Success
impetus-i0163.impetus.co.in
100%
Success
impetus-i0203.impetus.co.in
100%
Success
impetus-i0095.impetus.co.in
100%
Success
4 of 4 hosts showing - Show All
Show: 25
1 - 4 of 4
Successfully installed and started the services.
Next →
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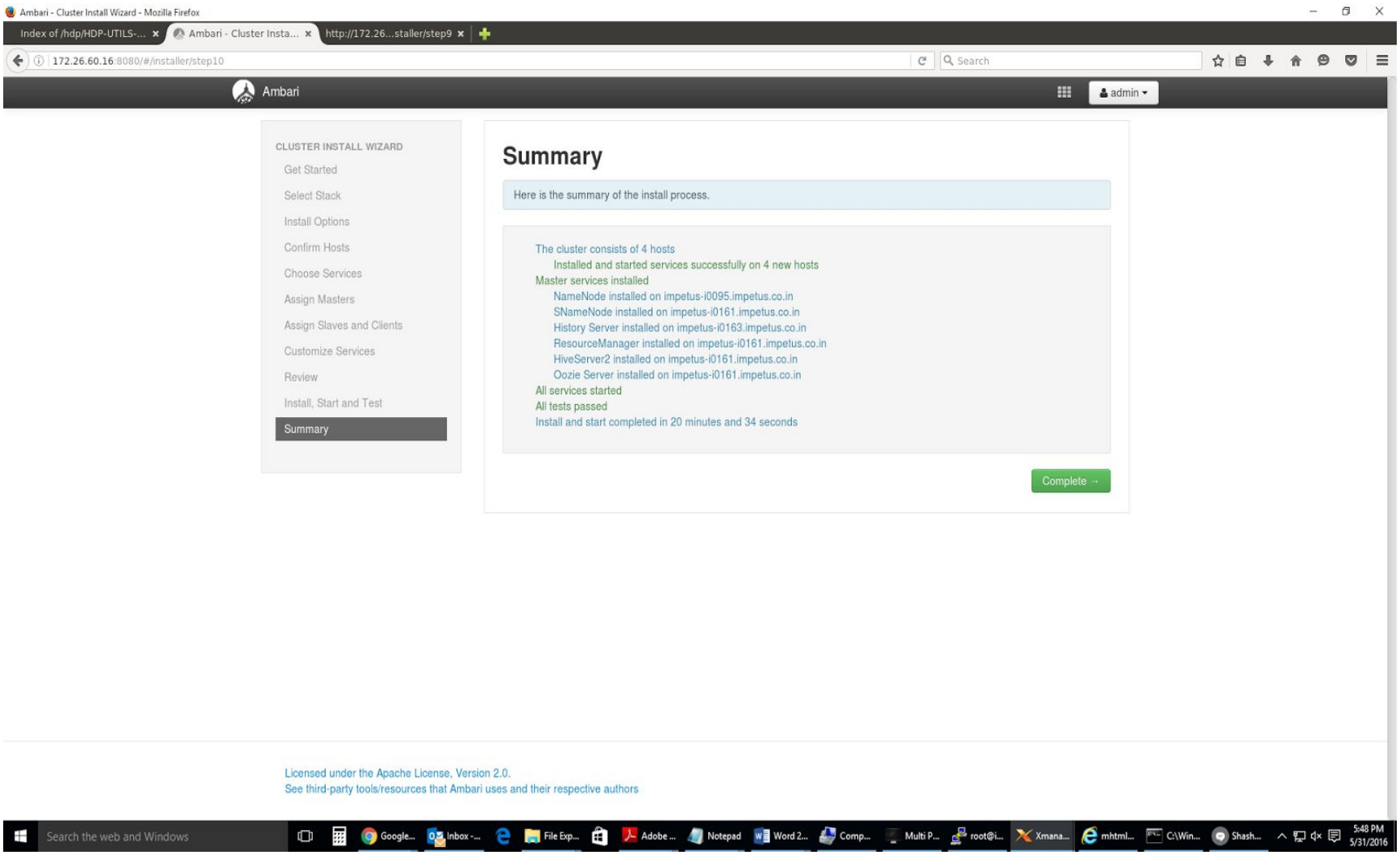
Search the web and Windows
5:48 PM
5/31/2016


Ambari - Cluster Install Wizard - Mozilla Firefox
Index of /hdp/HDP-UTILS-...
Ambari - Cluster Insta...
http://172.26...staller/step9
172.26.60.16:8080/#/installer/step10
Search
Ambari
admin
CLUSTER INSTALL WIZARD
Get Started
Select Stack
Install Options
Confirm Hosts
Choose Services
Assign Masters
Assign Slaves and Clients
Customize Services
Review
Install, Start and Test
Summary
Summary
Here is the summary of the install process.
The cluster consists of 4 hosts
Installed and started services successfully on 4 new hosts
Master services installed
NameNode installed on impetus-i0095.impetus.co.in
SNameNode installed on impetus-i0161.impetus.co.in
History Server installed on impetus-i0163.impetus.co.in
ResourceManager installed on impetus-i0161.impetus.co.in
HiveServer2 installed on impetus-i0161.impetus.co.in
Oozie Server installed on impetus-i0161.impetus.co.in
All services started
All tests passed
Install and start completed in 20 minutes and 34 seconds
Complete →
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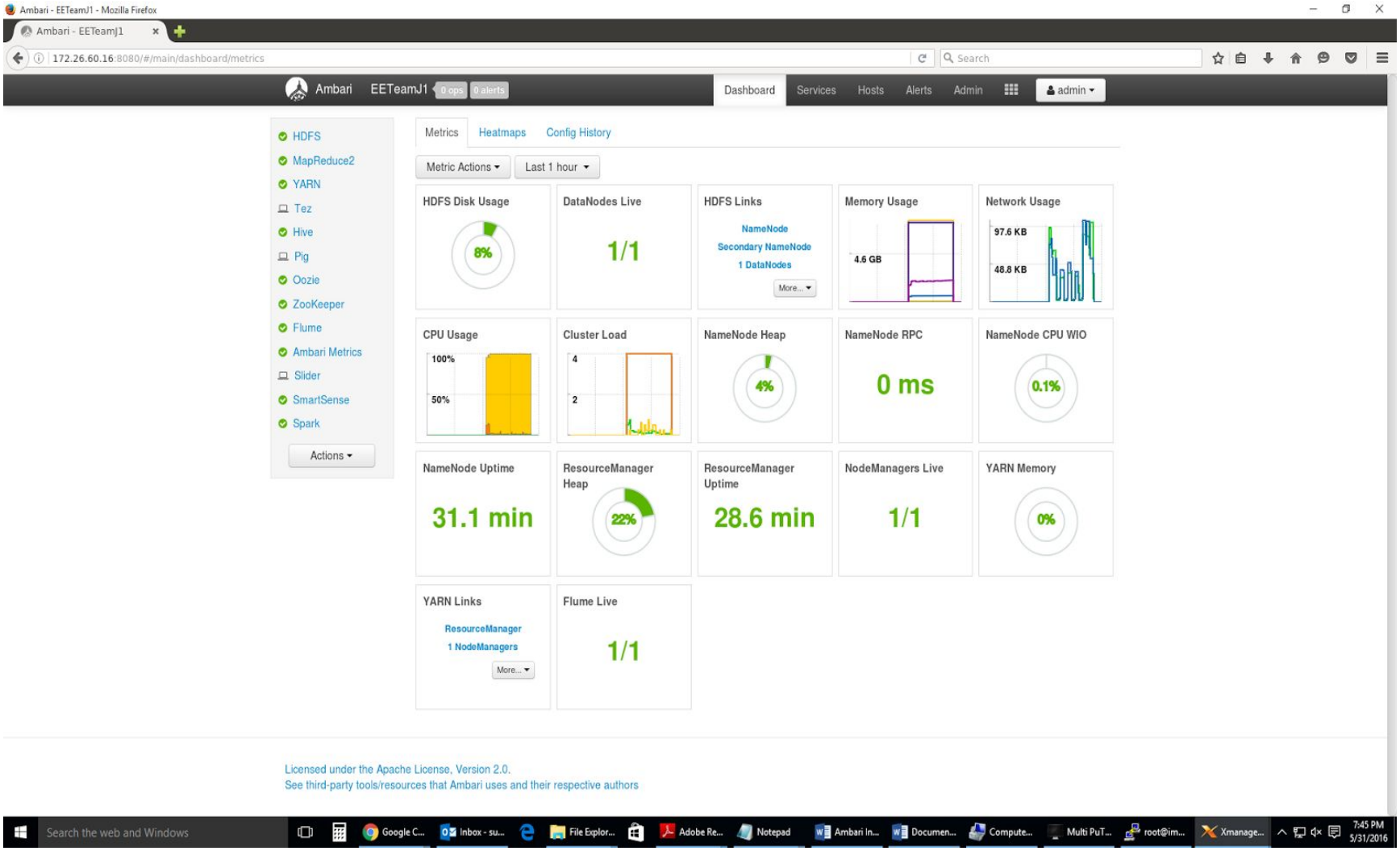
Search the web and Windows
5:48 PM
5/31/2016


Ambari - EETeamJ1 - Mozilla Firefox
Ambari - EETeamJ1
172.26.60.16:8080/#/main/dashboard/metrics
Search
Ambari
EETeamJ1
0 ops
0 alerts
Dashboard
Services
Hosts
Alerts
Admin
admin
HDFS
MapReduce2
YARN
Tez
Hive
Pig
Oozie
ZooKeeper
Flume
Ambari Metrics
Slider
SmartSense
Spark
Actions
Metrics
Heatmaps
Config History
Metric Actions
Last 1 hour
HDFS Disk Usage
8%
DataNodes Live
1/1
HDFS Links
NameNode
Secondary NameNode
1 DataNodes
More...
Memory Usage
4.6 GB
Network Usage
97.6 KB
48.8 KB
CPU Usage
100%
50%
Cluster Load
4
2
NameNode Heap
4%
NameNode RPC
0 ms
NameNode CPU WIO
0.1%
NameNode Uptime
31.1 min
ResourceManager Heap
22%
ResourceManager Uptime
28.6 min
NodeManagers Live
1/1
YARN Memory
0%
YARN Links
ResourceManager
1 NodeManagers
More...
Flume Live
1/1
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7:45 PM
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