

Pivotal

A NEW PLATFORM FOR A NEW
ERA

PHD configuration, reporting, management via Ambari

- HDFS
 - MapReduce2
 - YARN
 - Tez
 - Nagios
 - Ganglia
 - Hive
 - Pig
 - Oozie
 - ZooKeeper
 - HAWQ
 - Knox
 - PXF
 - Spring XD
- Actions ▾

Metrics ▾

Heatmaps

Config History

Click here

HDFS Disk Usage



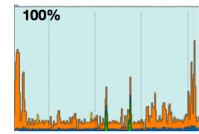
DataNodes Live

1/1

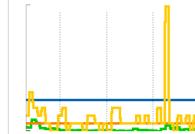
Secondary NameNode
1 DataNodes

More... ▾

CPU Usage



Cluster Load



NameNode Heap



NameNode RPC

0.14 ms

NameNode CPU WIO



NameNode Uptime

1.8 hr

ResourceManager
Heap



ResourceManager
Uptime

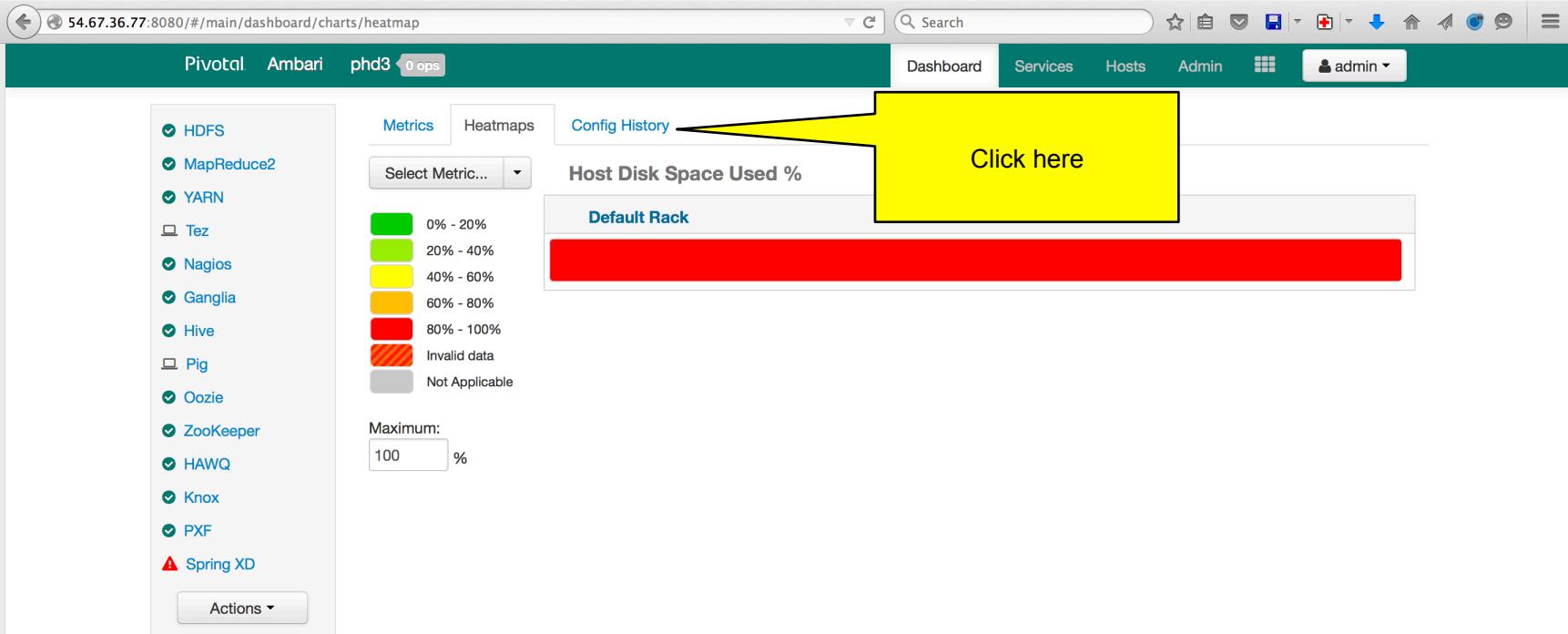
1.7 hr

NodeManagers Live

1/1

YARN Memory





54.67.36.77:8080/#/main/dashboard/config_history

Pivotal Ambari phd3 0 ops Dashboard Services Hosts Admin admin

Metrics Heatmaps Config History

Service Config Group Created Author Notes

All All Any Any Any

Service	Config Group	Created	Author	Notes
V6 Spring XD	Spring XD Default Current	Sat, Jun 27, 2015 20:14	admin	No notes
V5 Spring XD	Spring XD Default	Sat, Jun 27, 2015 20:02	admin	No notes
V4 Spring XD	Spring XD Default	Sat, Jun 27, 2015 19:32	admin	user
V3 Spring XD	Spring XD Default	Sat, Jun 27, 2015 19:27	admin	user
V2 Hive	Hive Default Current	Wed, Jun 24, 2015 09:51	admin	add hue config
V2 Oozie	Oozie Default Current	Wed, Jun 24, 2015 09:49	admin	add hue config
V5 HDFS	HDFS Default Current	Wed, Jun 24, 2015 09:48	admin	added hue config
V2 Spring XD	Spring XD Default	Tue, Jun 23, 2015 14:48	admin	No notes
V4 HDFS	HDFS Default	Tue, Jun 23, 2015 14:00	admin	No notes
V1 Spring XD	Spring XD Default	Tue, Jun 23, 2015 14:00	admin	Initial configurations for Spring XD

Click here

Ganglia
Hive
Pig
Oozie
ZooKeeper
HAWQ
Knox
PXF
Spring XD

Actions ▾

25 of 25 versions showing - clear filters Show: 10 1 - 10 of 25

- ✓ HDFS
- ✓ MapReduce2
- ✓ YARN
- ☐ Tez
- ✓ Nagios
- ✓ Ganglia
- ✓ Hive
- ☐ Pig
- ✓ Oozie
- ✓ ZooKeeper
- ✓ HAWQ
- ✓ Knox
- ✓ PXF
- ⚠ Spring XD

Actions ▾

Summary Configs Quick Links ▾ Service Actions ▾

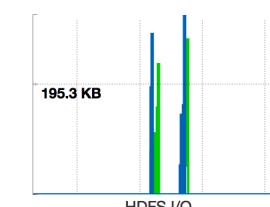
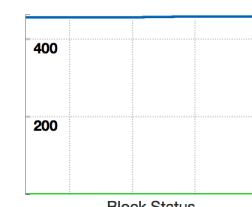
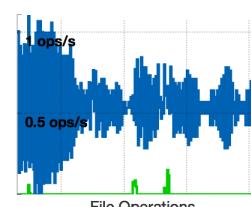
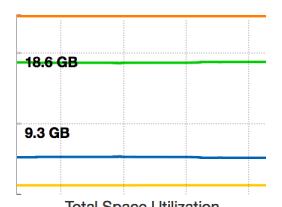
Summary

NameNode ✓ Started
SNameNode ✓ Started
DataNodes 1/1 DataNodes Live
NameNode Uptime 1.79 hours
NameNode Heap 54.3 MB / 1004.0 MB (5.4% used)
DataNodes Status 1 live / 0 dead / 0 decommissioning
Disk Usage (DFS Used) 1.2 GB / 23.5 GB (5.14%)
Disk Usage (Non DFS Used) 17.5 GB / 23.5 GB (74.33%)
Disk Usage (Remaining) 4.8 GB / 23.5 GB (20.53%)
Blocks (total) 459
Block Errors 0 corrupt / 0 missing / 459 under replicated
Total Files + Directories 20570
Upgrade Status No pending upgrade
Safe Mode Status Not in safe mode

Alerts and Health Checks

✓	Percent DataNodes with space available	OK for about a month
	OK: total:<1>, affected:<0>	
✓	Secondary NameNode process	OK for 2 months
	TCP OK - 0.000 second response time on port 50090	
✓	NameNode process on pivotal.hd	OK for 2 months
	TCP OK - 0.000 second response time on port 8020	
✓	NameNode host CPU utilization on pivotal.hd	OK for 2 months
	4 CPU, load 88.8% < 200% : OK	
✓	NameNode edit logs directory status on pivotal.hd	OK for 2 months
	OK: All NameNode directories are active	
✓	NameNode Web UI on pivotal.hd	OK for 2 months
	OK: Successfully accessed namenode Web UI	
✓	Last checkpoint time	OK for 2 months

HDFS Service Metrics



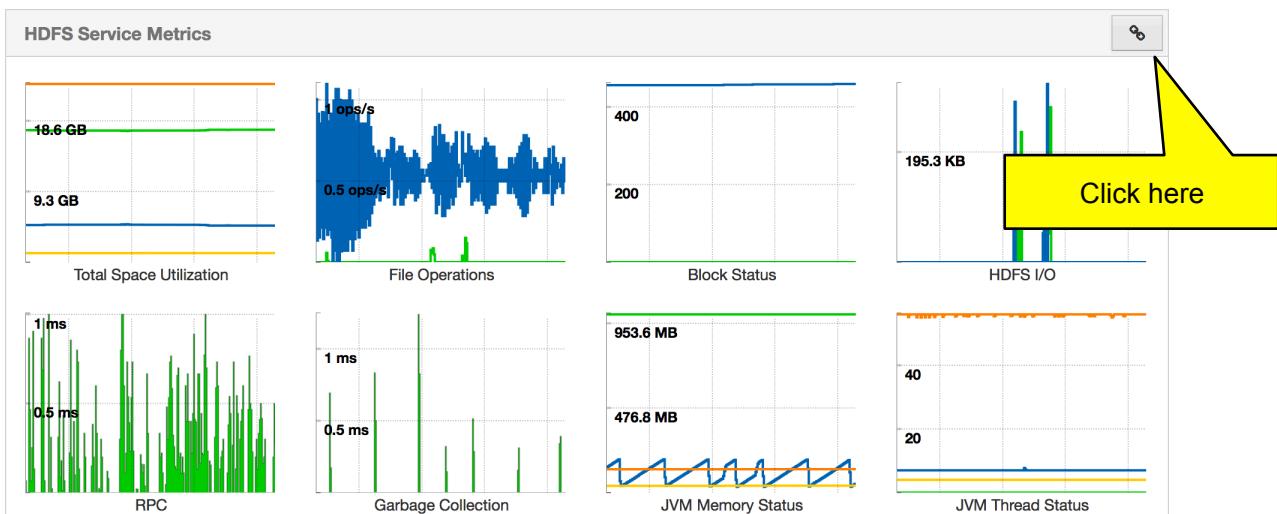
Scroll down

54.67.36.77:8080/#/main/services/HDFS/summary

Pig
Oozie
ZooKeeper
HAWQ
Knox
PXF
Spring XD

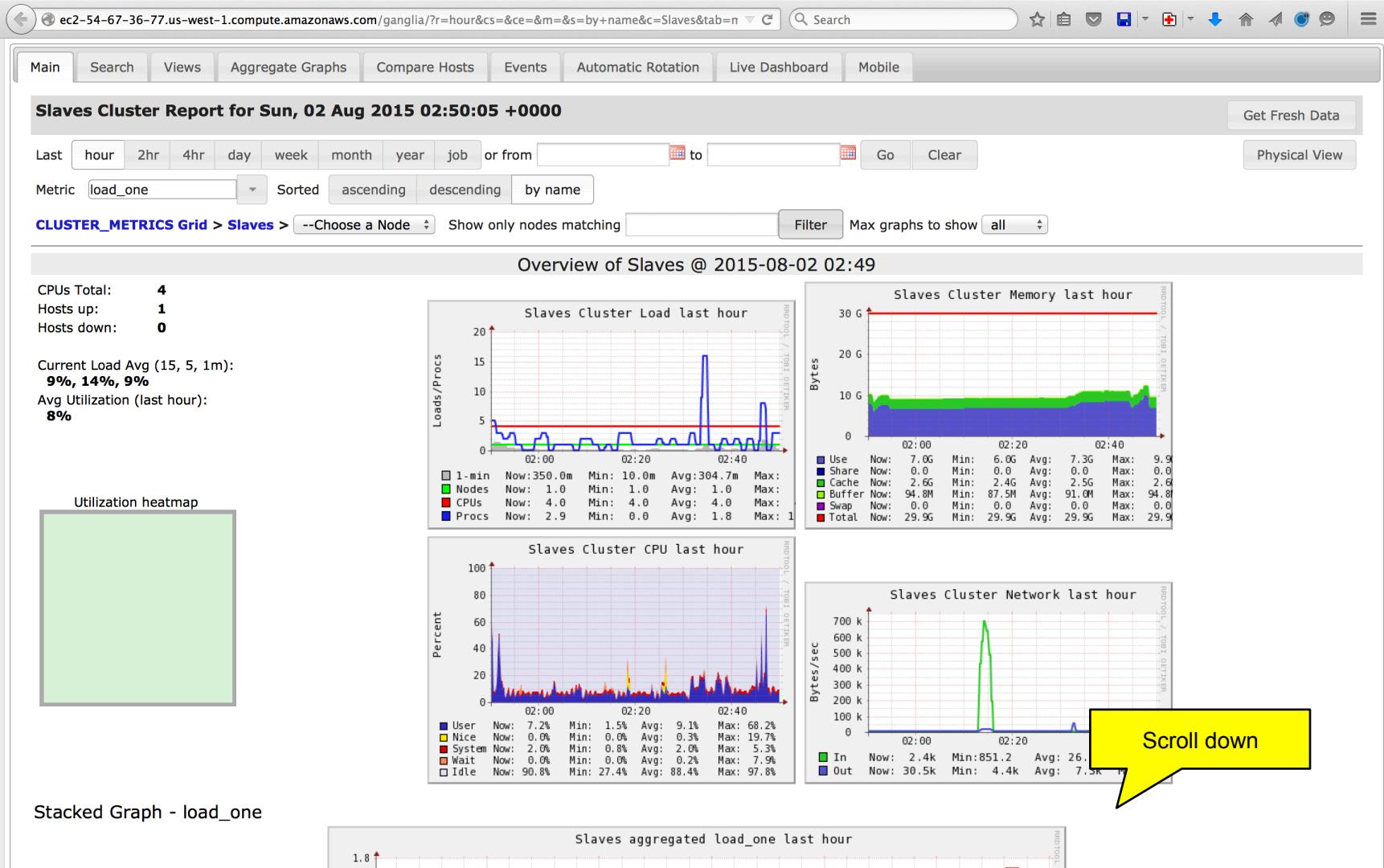
NameNode Heap 57.4 MB / 1004.0 MB (5.7% used)
DataNodes Status 1 live / 0 dead / 0 decommissioning
Disk Usage (DFS Used) 1.2 GB / 23.5 GB (5.14%)
Disk Usage (Non DFS Used) 17.5 GB / 23.5 GB (74.33%)
Disk Usage (Remaining) 4.8 GB / 23.5 GB (20.53%)
Blocks (total) 459
Block Errors 0 corrupt / 0 missing / 459 under replicated
Total Files + Directories 20570
Upgrade Status No pending upgrade
Safe Mode Status Not in safe mode

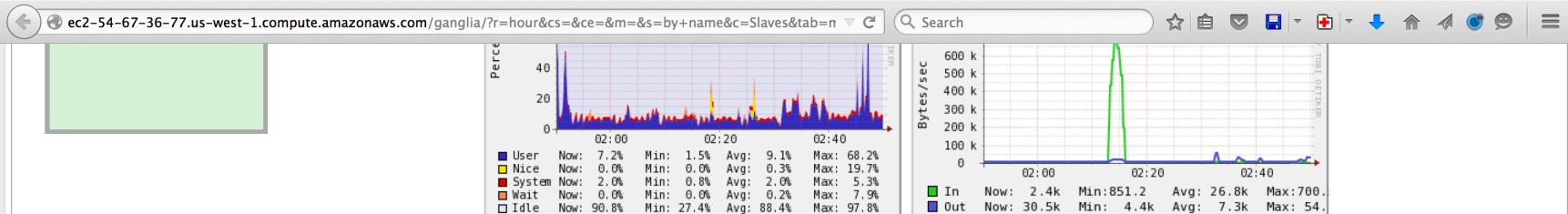
NameNode process on pivotal.hd OK for 2 months
TCP OK - 0.000 second response time on port 8020
NameNode host CPU utilization on pivotal.hd OK for 2 months
4 CPU, load 88.8% < 200% : OK
NameNode edit logs directory status on pivotal.hd OK for 2 months
OK: All NameNode directories are active
NameNode Web UI on pivotal.hd OK for 2 months
OK: Successfully accessed namenode Web UI
Last checkpoint time OK for 2 months



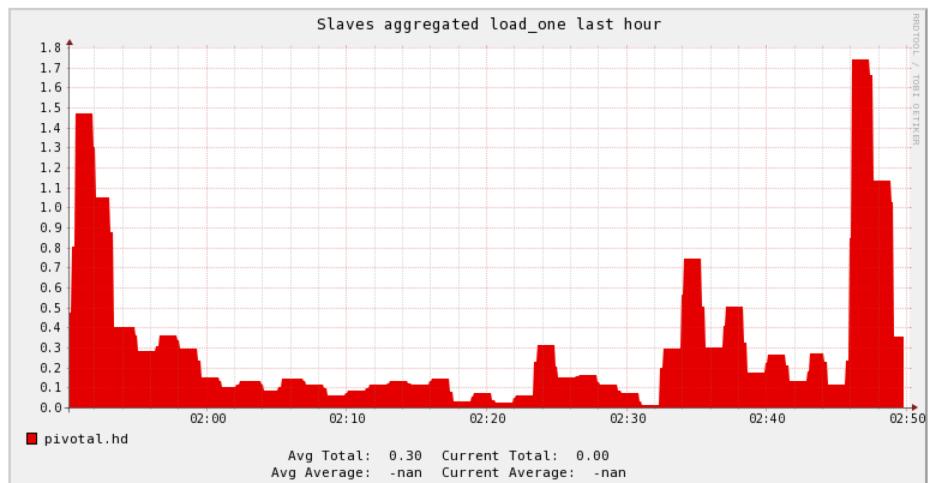
Licensed under the Apache License, Version 2.0.

See third-party tools/resources that Ambari uses and their respective authors



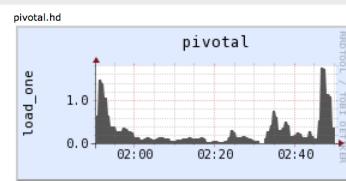


Stacked Graph - load_one



Scroll up

Show Hosts Scaled: Auto Same None | Slaves **load_one** last **hour** sorted **by name** | Size small Columns 4 (0 = metric + reports)



(Nodes colored by 1-minute load) | Legend

ec2-54-67-36-77.us-west-1.compute.amazonaws.com/ganglia/?r=hour&cs=&ce=&m=load_one&s=by+name&c=Slave

Search

Main Search Views Aggregate Graphs Compare Hosts Events Automatic Rotation Live Dashboard Mobile

Create aggregate graphs

Title:

Vertical (Y-Axis) label:

Limits Upper: Lower:

Host Regular expression e.g. web-[0,4], web or (web|db):

Metric Regular expression (not a report e.g. load_one, bytes_(in|out)):

Graph Type: Line Stacked

Legend options: Show legend Hide legend

Create Graph

You can create your own graphs. Close this window

Ganglia Web Frontend version 3.5.7 [Check for Updates](#).
Ganglia Web Backend (*gmetad*) version 3.5.0 [Check for Updates](#).
Downloading and parsing ganglia's XML tree took 0.0179s.
Images created with **RRDtool** version 1.4.5.
Powered by **Dwoo** 1.1.1.

HDFS

MapReduce2

YARN

Tez

Nagios

Ganglia

Hive

Pig

Oozie

ZooKeeper

HAWQ

Knox

PFX

Spring XD

Actions ▾

Summary **Configs** **Quick Links ▾** **Service Actions ▾**

Click here

Summary

NameNode
SNameNode **Started**
DataNodes **1/1 DataNodes Live**
NameNode Uptime 1.81 hours
NameNode Heap 78.8 MB / 1004.0 MB (7.9% used)
DataNodes Status 1 live / 0 dead / 0 decommissioning
Disk Usage (DFS Used) 1.2 GB / 23.5 GB (5.14%)
Disk Usage (Non DFS Used) 17.5 GB / 23.5 GB (74.33%)
Disk Usage (Remaining) 4.8 GB / 23.5 GB (20.53%)
Blocks (total) 459
Block Errors 0 corrupt / 0 missing / 459 under replicated
Total Files + Directories 20576
Upgrade Status No pending upgrade
Safe Mode Status Not in safe mode

Alerts and Health Checks

Percent DataNodes with space available	OK for about a month
Secondary NameNode process	OK for 2 months
NameNode process on pivotal.hd	OK for 2 months
NameNode host CPU utilization on pivotal.hd	OK for 2 months
NameNode edit logs directory status on pivotal.hd	OK for 2 months
NameNode Web UI on pivotal.hd	OK for 2 months
Last checkpoint time	OK for 2 months

HDFS Service Metrics

Total Space Utilization: 18.6 GB (9.3 GB)

File Operations: 1 ops/s (0.5 ops/s)

Block Status: 400

HDFS I/O: 195.3 KB

- HDFS
- MapReduce2
- YARN
- Tez
- Nagios
- Ganglia
- Hive
- Pig
- Oozie
- ZooKeeper
- HAWQ
- Knox
- PXF
- Spring XD

[Actions ▾](#)

[Summary](#)[Configs](#)[Quick Links ▾](#)[Service Actions ▾](#)

Group

HDFS Default (1)

Manage Config Groups

Filter...

**V5** admin
about a month ago
Current**V4** admin
about a month ago**V3** admin
about a month ago**V2** admin
2 months ago**V1** admin
2 months ago**V5** **Current**admin authored on **Wed, Jun 24, 2015 09:48**[Discard](#)[Save](#)**NameNode**

NameNode hosts

pivotal.hd

NameNode directories

/hadoop/hdfs/namenode



NameNode Java heap size

1024 MB

NameNode new generation size

200 MB

NameNode maximum new generation size

200 MB

NameNode permanent generation size

128 MB

NameNode maximum permanent generation size

256 MB


View and manage all configs here

NameNode maximum size 256 MB

V5 Current admin authored on **Wed, Jun 24, 2015 09:48**

Discard **Save**

▼ Secondary NameNode

SNameNode host pivotal.hd

SecondaryNameNode Checkpoint directories
/hadoop/hdfs/namesecondary



▼ DataNode

DataNode directories

/hadoop/hdfs/data



DataNode maximum Java heap size
1024 MB

MB



DataNode volumes failure toleration
0



File that stores mount point for each data dir
/etc/hadoop/conf/dfs_data_dir_mount.hist



DataNode directories permission
750



▼ General

WebHDFS enabled



Hadoop maximum Java heap size

1024

MB



permission



V5

Current admin authored on Wed, Jun 24, 2015 09:48

Discard

Save

General

WebHDFS enabled



Hadoop maximum Java heap size

1024 MB

Reserved space for HDFS

1073741824 bytes

HDFS Maximum Checkpoint Delay

21600 seconds

Block replication

3

Advanced core-site

hadoop.security.auth_to_local

```
RULE:[2:$1@$0|([rn]m@.*).*/yarn/  
RULE:[2:$1@$0|([hs@.]*)s/.*/mapred/  
RULE:[2:$1@$0|([nd]n@.*).*/hdfs/
```

fs.defaultFS

hdfs://pivotal.hd:8020

fs.trash.interval

360

hadoop.http.authentication.simple.anonymous.allowed

true

hadoop.security.authentication

simple

hadoop.security.authorization

false

in.compression.codecs

org.apache.hadoop.io.compress.GzipCodec org.apache.hadoop.io.compress.DefaultCo

Add a new service via Ambari

- HDFS
- MapReduce2
- YARN
- Tez
- Nagios
- Ganglia
- Hive
- Pig
- Oozie
- ZooKeeper
- HAWQ
- Knox
- PXF
- Spring XD

Metrics ▾ Heatmaps Config History

HDFS Disk Usage



DataNodes Live

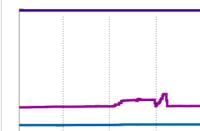
1/1

HDFS Links

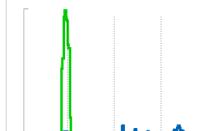
NameNode
Secondary NameNode
1 DataNodes

More... ▾

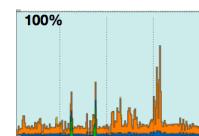
Memory Usage



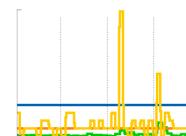
Network Usage



CPU Usage



Cluster Load



NameNode Heap



NameNode RPC

1.00 ms

NameNode CPU WIO



NameNode Uptime

2.0 hr

ResourceManager Heap



ResourceManager Uptime

1.9 hr

NodeManagers Live

1/1

YARN Memory



Actions ▾

+ Add Service

▶ Start All

■ Stop All

Add a new service

Add Service Wizard

Install, Start and Test

Summary

Select hbase and click next

<input checked="" type="checkbox"/> YARN + MapReduce2	2.6.0.2.2.0.0	Apache Hadoop NextGen MapReduce (YARN)
<input checked="" type="checkbox"/> Tez	0.5.2.2.2.0.0	Tez is the next generation Hadoop Query Processing framework written on top of YARN.
<input checked="" type="checkbox"/> Nagios	3.5.0	Nagios Monitoring and Alerting system
<input checked="" type="checkbox"/> Ganglia	3.5.0	Ganglia Metrics Collection system (RRDTool will be installed too)
<input checked="" type="checkbox"/> Hive	0.14.0.2.2.0.0	Data warehouse system for ad-hoc queries & analysis of large datasets and table & storage management service
<input checked="" type="checkbox"/> HBase	0.98.4.2.2.0.0	Non-relational distributed database and centralized service for configuration management & synchronization
<input checked="" type="checkbox"/> Pig	0.14.0.2.2.0.0	Scripting platform for analyzing large datasets
<input checked="" type="checkbox"/> Oozie	4.1.0.2.2.0.0	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.
<input checked="" type="checkbox"/> ZooKeeper	3.4.6.2.2.0.0	Centralized service which provides highly reliable distributed coordination
<input checked="" type="checkbox"/> HAWQ	1.3	Pivotal HAWQ - Hadoop SQL Engine
<input checked="" type="checkbox"/> Knox	0.5.0.2.2.0.0	Provides a single point of authentication and access for Apache Hadoop services in a cluster
<input checked="" type="checkbox"/> PXF	2.5	Pivotal Extension Framework
<input checked="" type="checkbox"/> Spring XD	1.2	Spring XD is a unified, distributed, and extensible system for data ingestion, real time analytics, batch processing, and data export.

Next →

54.67.36.77:8080/#/main/service/add/step2

Pivotal Ambari phd3 0 ops

Dashboard Services Hosts Admin admin

Add Service Wizard

HiveServer2: pivotal.hd (29.9 GB, 4 cores)

HBase Master: pivotal.hd (29.9 GB, 4 cores)

Oozie Server: pivotal.hd (29.9 GB, 4 cores)

ZooKeeper Server: pivotal.hd (29.9 GB, 4 cores)

HAWQ Master: pivotal.hd (29.9 GB, 4 cores)

Knox Gateway: pivotal.hd (29.9 GB, 4 cores)

Spring XD Admin: pivotal.hd (29.9 GB, 4 cores)

HAWQ Standby Master: pivotal.hd (29.9 GB, 4 cores)

Spring XD HSQL Database: pivotal.hd (29.9 GB, 4 cores)

← Back

Next →

Click here

54.67.36.77:8080/#/main/service/add/step3

Pivotal Ambari phd3 0 ops

Dashboard Services Hosts Admin admin

Add Service Wizard

ADD SERVICE WIZARD

- Choose Services
- Assign Masters
- Assign Slaves and Clients**
- Customize Services
- Review
- Install, Start and Test
- Summary

Assign Slaves and Clients

Assign slave and client components to hosts you want to run them on.
Hosts that are assigned master components are shown with *.
"Client" will install HBase Client

Host	all none	all none	all none	all none	all none	all none
pivotal.hd*	<input checked="" type="checkbox"/> DataNode	<input checked="" type="checkbox"/> NodeManager	<input checked="" type="checkbox"/> HAWQ Segment	<input checked="" type="checkbox"/> PXF	<input checked="" type="checkbox"/> Spring XD Container	<input checked="" type="checkbox"/> Regions

Show: 25 1 - 1 of 1

← Back **Next →**

Click here

54.67.36.77:8080/#/main/service/add/step4

Pivotal Ambari phd3 0 ops

Dashboard Services Hosts Admin admin

Add Service Wizard

Review
Install, Start and Test
Summary

HDFS MapReduce2 YARN Tez Nagios Ganglia Hive HBase Pig Oozie ZooKeeper HAWQ
Knox PXF Spring XD Misc

Group HBase Default (1) Manage Config Groups Filter...

HBase Master

HBase Master hosts pivotal.hd

HBase Master Maximum Java heap size 1024 MB +

RegionServer

RegionServer hosts pivotal.hd

RegionServers maximum Java heap size 1024 MB +

RegionServer Handler 60 +

HBase Region Major Compaction 604800000 ms +

Provide configuration for HBASE. Look for more values below

54.67.36.77:8080/#/main/service/add/step4

Pivotal Ambari phd3 0 ops

Dashboard Services Hosts Admin admin

Add Service Wizard

HBase Client Maximum key-value Size bytes

[Advanced hbase-env](#)

[Advanced hbase-log4j](#)

[Advanced hbase-policy](#)

[Advanced hbase-site](#)

[Custom hbase-policy](#)

[Add Property...](#)

[Custom hbase-site](#)

[Add Property...](#)

Back Next →

Click here

54.67.36.77:8080/#/main/service/add/step5

Pivotal Ambari phd3 0 ops

Dashboard Services Hosts Admin admin

Add Service Wizard

Please review the configuration before installation

Admin Name : admin

Cluster Name : phd3

Total Hosts : 1 (0 new)

Repositories:

- redhat5 (PHD-3.0):**
http://pivotal.hd/PHD-3.0.0.0
- redhat5 (PHD-UTILS-1.1.0.20):**
http://pivotal.hd/PHD-UTILS-1.1.0.20
- redhat6 (PADS):**
http://pivotal.hd/PADS
- redhat6 (PHD-3.0):**
http://pivotal.hd/PHD-3.0.0.0
- redhat6 (PHD-UTILS-1.1.0.20):**
http://pivotal.hd/PHD-UTILS-1.1.0.20
- redhat6 (Spring-XD-1.2):**
http://repo.spring.io/yum-release/spring-xd/1.2
- suse11 (PADS):**

[Print](#)

[← Back](#) [Deploy →](#)

Don't deploy.
Illustration purpose
only