

# Security Fix for Hive

## Security Settings

Out of the box, the virtual environment setup causes some of the commands of the form “set hive.xxx=xxx” give a security error when run.

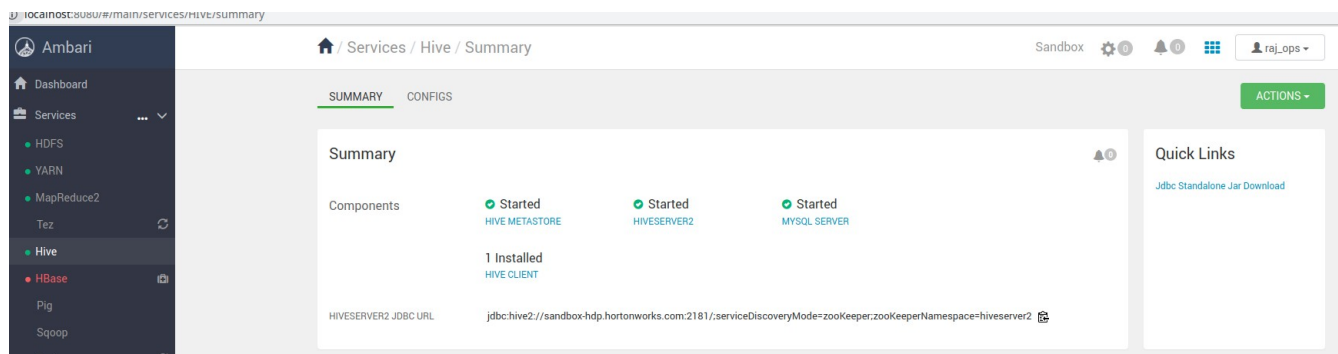
This is because the most recent version of Hive introduced a new security model which blocks the user’s ability to set certain Hive environment variables

To fix this issue so that your labs work properly, the simplest solution is to disable the Hive security feature that blocks these commands from running. *Note that this is NOT recommended in any operational environment!! This is a solution ONLY in your Nuvelab sandbox.*

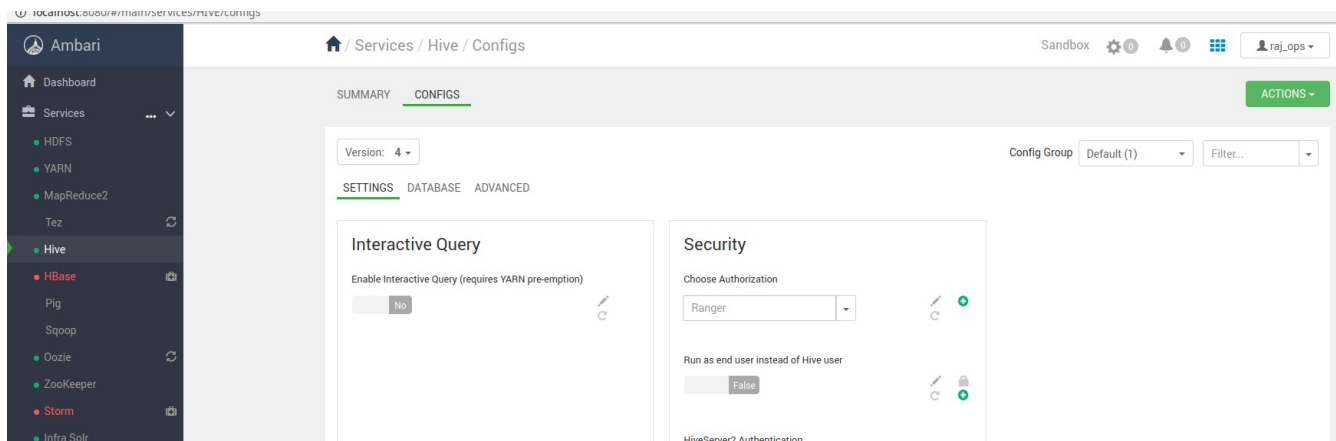
With security on, you will see the error messages that look something like this:

```
Beeline version 3.1.0.3.0.1.0-187 by Apache Hive
0: jdbc:hive2://sandbox-hdp.hortonworks.com:2> set hive.cli.print.header=true;
Error: Error while processing statement: Cannot modify hive.cli.print.header at runtime. It is not in list of params that are allowed to be modified at runtime (state=42000,code=1)
0: jdbc:hive2://sandbox-hdp.hortonworks.com:2>
```

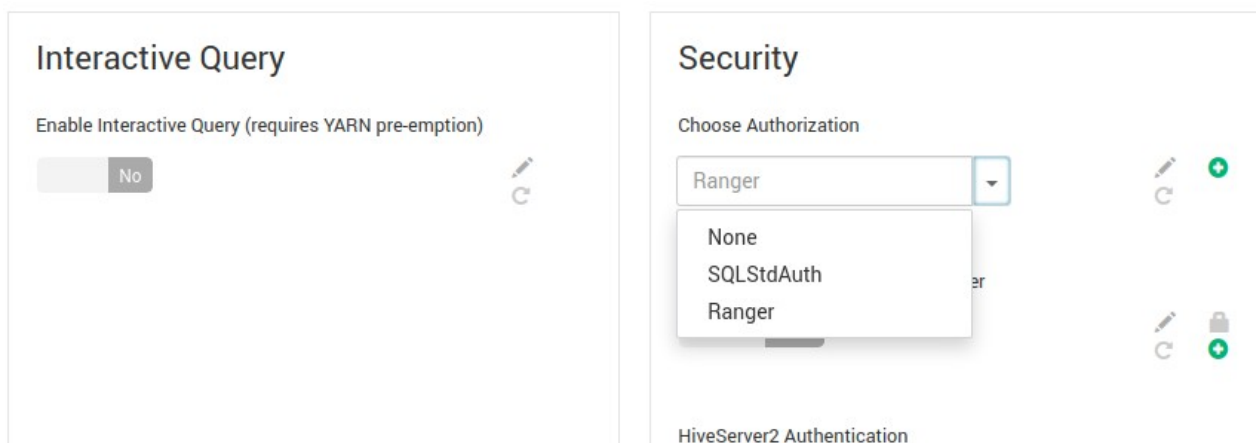
In order to disable the security, go into the Ambari control center as raj\_ops and select “Hive” from the services on the left. You should see a screen that looks like the one below.



Select the CONFIG tab next to the SUMMARY tab. You should see the screen shown on the next page



By default the security is set to Ranger. Using the drop down arrow shows other options.



The security we want is “None”. After choosing None, select “FINISH” at the bottom of the screen as shown on the next page.


Version: 4 ▾ Config Group: Default (1) ▾ Filter...

There are 6 configuration changes in 1 service [Show Details](#)

**SETTINGS** DATABASE ADVANCED



### Interactive Query

Enable Interactive Query (requires YARN pre-emption)



☐ No 

### Security

Choose Authorization

None ▾  

Run as end user instead of Hive user

☒ True  

DISCARD SAVE

When the dialog box comes up, you can just click save again. This is used to document changes made by administrators so can just click “SAVE”.

Home / Services / Hive / Configs


SUMMARY

Version: 4 ▾

There are 6 configuration changes in 1 service [Show Details](#)

**SETTINGS** DATABASE ADVANCED

### Save Configuration

Notes: What did you change? 

CANCEL DISCARD SAVE

This will bring up a screen of recommended changes. Just click on “OK”

Ambari

/ Services / Hive / Configs

Sandbox

Dependent Configurations

Recommended Changes

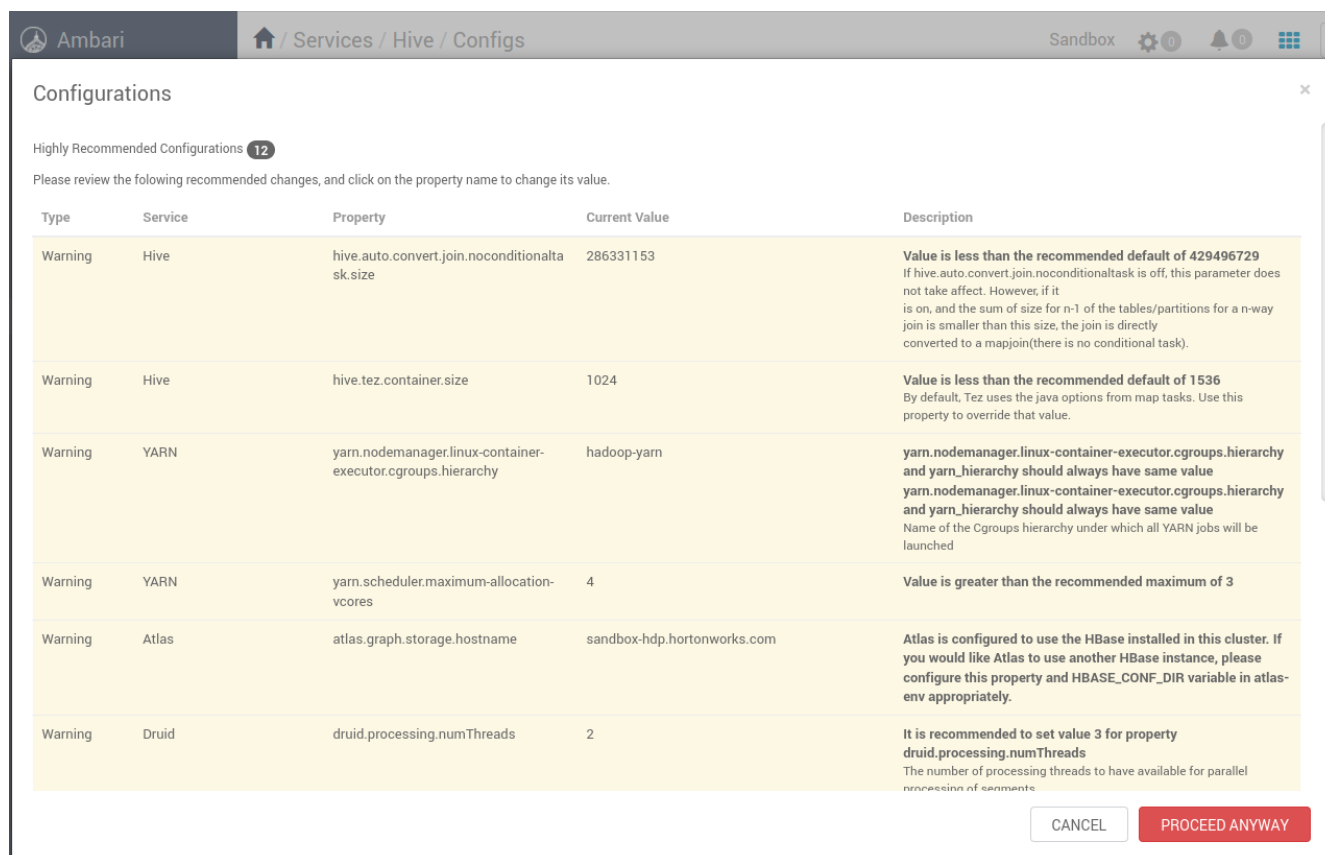
Based on your configuration changes, Ambari is recommending the following dependent configuration changes.  
Ambari will update all checked configuration changes to the **Recommended Value**. Uncheck any configuration to retain the **Current Value**.

<input checked="" type="checkbox"/>	Property	Service	Config Group	File Name	Original Value	Recommended Value
<input checked="" type="checkbox"/>	hive.security.authorization.enabled	Hive	Default	hiveserver2-site	true	false
<input checked="" type="checkbox"/>	hive.security.authorization.enabled	Hive	Default	hive-site	true	false
<input checked="" type="checkbox"/>	hive.server2.enable.doAs	Hive	Default	hive-site	false	true
<input checked="" type="checkbox"/>	hive.conf.restricted.list	Hive	Default	hiveserver2-site	hive.security.authenticator.manager, hive.security.authorization.manager, hive.security.metastore.authorization.manager, hive.security.metastore.authenticator.manager, hive.users.in.admin.role, hive.server2.xsrf.filter.enabled, hive.security.authorization.enabled	Property removed
<input checked="" type="checkbox"/>	hive.security.authenticator.manager	Hive	Default	hiveserver2-site	org.apache.hadoop.hive.ql.security.SessionStateUserAuthenticator	Property removed
<input checked="" type="checkbox"/>	hive.security.authorization.manager	Hive	Default	hiveserver2-site	org.apache.ranger.authorization.hive.authorizer.RangerHiveAuthorizerFactory	Property removed

CANCEL

OK

There will be a list of configuration warnings, most about default settings. For now, you can just select the red “PROCEED ANYWAY” Option.

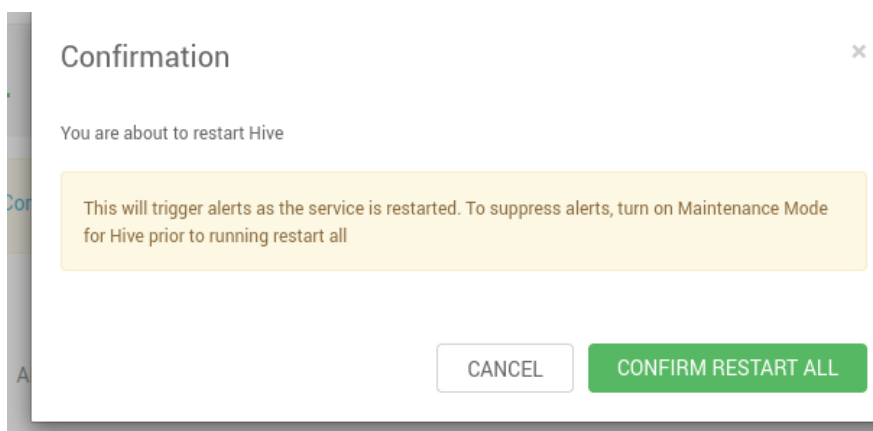


The screenshot shows the Ambari web interface for the 'Services / Hive / Configs' page. It displays a list of configuration warnings. The table below summarizes the warnings shown:

Type	Service	Property	Current Value	Description
Warning	Hive	hive.auto.convert.join.noconditionaltask.size	286331153	Value is less than the recommended default of 429496729. If hive.auto.convert.join.noconditionaltask is off, this parameter does not take affect. However, if it is on, and the sum of size for n-1 of the tables/partitions for a n-way join is smaller than this size, the join is directly converted to a mapjoin(there is no conditional task).
Warning	Hive	hive.tez.container.size	1024	Value is less than the recommended default of 1536. By default, Tez uses the java options from map tasks. Use this property to override that value.
Warning	YARN	yarn.nodemanager.linux-container-executor.cgroups.hierarchy	hadoop-yarn	yarn.nodemanager.linux-container-executor.cgroups.hierarchy and yarn_hierarchy should always have same value. yarn.nodemanager.linux-container-executor.cgroups.hierarchy and yarn_hierarchy should always have same value. Name of the Cgroups hierarchy under which all YARN jobs will be launched
Warning	YARN	yarn.scheduler.maximum-allocation-vcores	4	Value is greater than the recommended maximum of 3
Warning	Atlas	atlas.graph.storage.hostname	sandbox-hdp.hortonworks.com	Atlas is configured to use the HBase installed in this cluster. If you would like Atlas to use another HBase instance, please configure this property and HBASE_CONF_DIR variable in atlas-env appropriately.
Warning	Druid	druid.processing.numThreads	2	It is recommended to set value 3 for property druid.processing.numThreads. The number of processing threads to have available for parallel processing of segments

At the bottom of the table, there are two buttons: 'CANCEL' and 'PROCEED ANYWAY'.

After clicking OK on the confirmation dialog box, the Hive server needs to be restarted for the changes to take effect. Select the orange RESTART button to restart all. Ambari asks you to confirm.






The screenshot shows a 'Confirmation' dialog box with the title 'Confirmation'. The text inside says 'You are about to restart Hive'. Below this, there is a yellow warning box that reads: 'This will trigger alerts as the service is restarted. To suppress alerts, turn on Maintenance Mode for Hive prior to running restart all'. At the bottom of the dialog, there are two buttons: 'CANCEL' and 'CONFIRM RESTART ALL'.

Select “CONFIRM RESTART ALL” and you should see the services restarting.

Background Operations

1 Background Operation Running

Operations	Status	User	Start T
 Restart all components with Stale Configs for Hive	<div><div></div></div> 61%	raj_ops	Today
 Restart all components with Stale Configs for Hive	<div><div></div></div> 100%	raj_ops	Today
 Restart all components with Stale Configs for Hive	<div><div></div></div> 100%	raj_ops	Mon 14

Once all the services have been restarted, open a new hive shell and confirm that you can now set the configuration variable you could not set previously.

```
0: jdbc:hive2://sandbox-hdp.hortonworks.com:2> set hive.cli.print.header=true;
No rows affected (0.008 seconds)
0: jdbc:hive2://sandbox-hdp.hortonworks.com:2> █
```