HCP Upgrade Guide 1

Hortonworks Cybersecurity Platform

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Contents

Preparing to Upgrade

Prior to upgrading Hortonworks Cybersecurity Platform (HCP), you must back up your configuration and stop all Metron services.

Back up Your Configuration

The Hortonworks Cybersecurity Platform (HCP) upgrade uses the default configuration for the new Metron version. If you made any changes to the Metron configuration in the previous version, you must back up your old configuration so you can incorporate those changes into the new Metron configuration. You will also need to re-enter values for the Metron properties in Ambari.

Procedure

1. Create a backup directory.

```
mkdir /$HCP_BACKUP_DIRECTORY
```

2. Back up your configuration information in ZooKeeper to your backup directory:

```
${METRON_HOME}/bin/zk_load_configs.sh -m DUMP -z $ZOOKEEPER >
/$HCP_BACKUP_DIRECTORY/$BACKUP_CONFIG.txt
```

3. Back up the following property files in the $METRON_HOME/config directory to your backup directory:

   - elasticsearch.properties
   - enrichment.properties
   - pcap.properties

   For example:

```
cp elasticsearch.properties /$HCP_BACKUP/elasticsearch.properties
```

4. Copy the zookeeper directory to your backup directory:

```
cp -R zookeeper/ /$HCP_BACKUP/zookeeper
```

5. Back up your Metron configuration.

   The easiest way to do this is to take a screenshot of each of the Metron configuration pages that you modifed in Ambari. At a minimum, take a screen shot of the following configuration pages:

   - Index Settings
   - Parsers
   - REST

Stop All Metron Services

You need to stop all Metron services prior to uninstalling Metron.

Procedure

1. Stop all Metron services in Ambari.

   Stop each Metron service in the following order:

   - Metron Alerts UI

- Metron Management UI
- Metron REST

2. Stop Storm:
   a) From the Storm node, list all of the Storm topologies that are currently running:

```
storm list
```

   b) Kill each of the running Storm topologies in the following order:
      - all parsers such as bro and snort
      - enrichment
      - indexing
      - profiler

```
storm kill bro
```

   c) Return to the Storm UI and verifiy that all topologies are killed.
   d) In Ambari, stop Storm by selecting Storm and clicking **Stop All** in the **Actions** menu.
3. Ensure that the UIs are shut down.

   If the Metron Alerts Ui or Metron Management UI status in Ambari is "running," shut down the UIs by entering the following from $METRON_HOME/var/log/metron/metron:

```
service metron-alerts-ui status
service metron-alerts-ui stop

service metron-management-ui status
service metron-management-ui stop
```

Upgrade Metron

After you shut down Metron and all of its services, you must uninstall Metron and then reinstall the newest version of Metron.

Before you begin

- Back up your Metron configuration.
- Stop all Metron services

Procedure

1. Uninstall Metron.

   In Ambari, select **Metron**, then under the **Service Actions** menu, click **Delete Service**.

   When prompted, enter "delete" to confirm deleting the service.
2. Remove all of the rpms from the old Metron version.

   CentOS

   a) From the Ambari node, enter the following to list all of the Metron packages:

```
rpm -qa | grep metron
```

   You should see input similar to the following:

```
metron_1_4_2_0_23-config-0.4.1.1.4.2.0-23.noarch
```

b) Enter the following to list all of the Metron packages:

```
sudo rpm -q --scripts  metron_1_4_2_0_23-config-0.4.1.1.4.2.0-23.noarch
```

You should see output similar to the following:

```
chkconfig --add metron-management-ui
chkconfig --add metron-alerts-ui
preuninstall scriptlet (using /bin/sh):
chkconfig --del metron-management-ui
chkconfig --del metron-alerts-ui
```

c) Remove each of the package:

```
rmp remove $PACKAGE_NAME
```

For example:

```
sudo chkconfig --del metron-management-ui
```

Ubuntu

From the Ambari node, enter the following to delete all of the Metron packages:

```
sudo aptitude purge $PACKAGE_NAME
```

3. Modify the /etc/yum.repos.d/HCP.repo file with the updated repo version:

```
vi /etc/yum.repos.d/HCP.repo
```

4. Update the HCP.repo file.

CentOS

```
yum update
```

Ubuntu

```
apt-get update
```

5. Install the current HCP mpack repo from Release Notes.

```
wget http://public-repo-1.hortonworks.com/HCP/centos7/1.x/updates/1.5.1.0/
tars/metron/hcp-ambari-mpack-1.5.1.0-18.tar.gz
ambari-server install-mpack --force --mpack=/${MPACK_DOWNLOAD_DIRECTORY}/
hcp-ambari-mpack-1.5.1.0-18.tar.gz --verbose
```

> **Note:** There is currently no mechanism provided for multi-version or backwards compatibility. If you upgrade a service, such as Elasticsearch 2.x to 5.x, that is the only version that will be supported by Ambari via MPack.

6. Restart the Ambari server.

```
ambari-server restart
```

7. Re-open Ambari and add back the updated Metron version.

From the **Actions** menu, click **Add Service**, then click Metron from the **Choose Services** page. Ensure Metron is the updated version.

Ambari lists each service on which Metron is dependent.

8. Click yes to add each dependency.
9. In Ambari, add back your Metron configuration information in the **Property** fields.

Do not copy and paste into the Metron property fields. You can inadvertently add a special character.

10. Click **Deploy** to start the Metron set up.

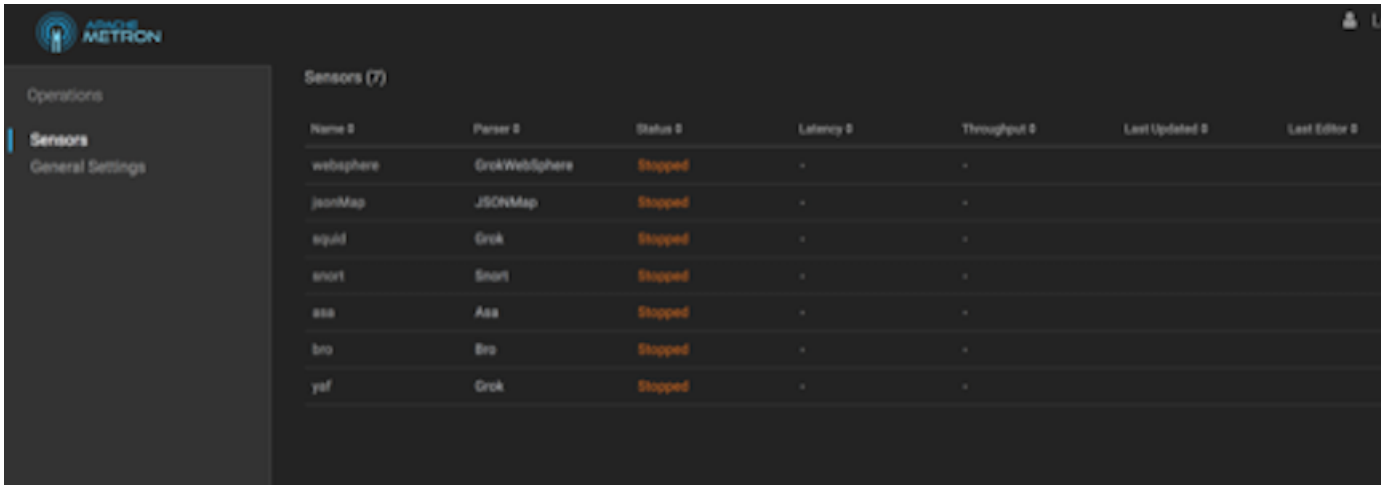
    The process to install, start, and test Metron will take a while.

11. Restart the Metron services:

    - Metron REST
    - Metron Management UI
    - Metron Alerts UI
    - Indexing

12. In the Management UI, restart the Metron Parsers including Enrichment, Bro, Snort, Yaf, and any other parsers you added previously.

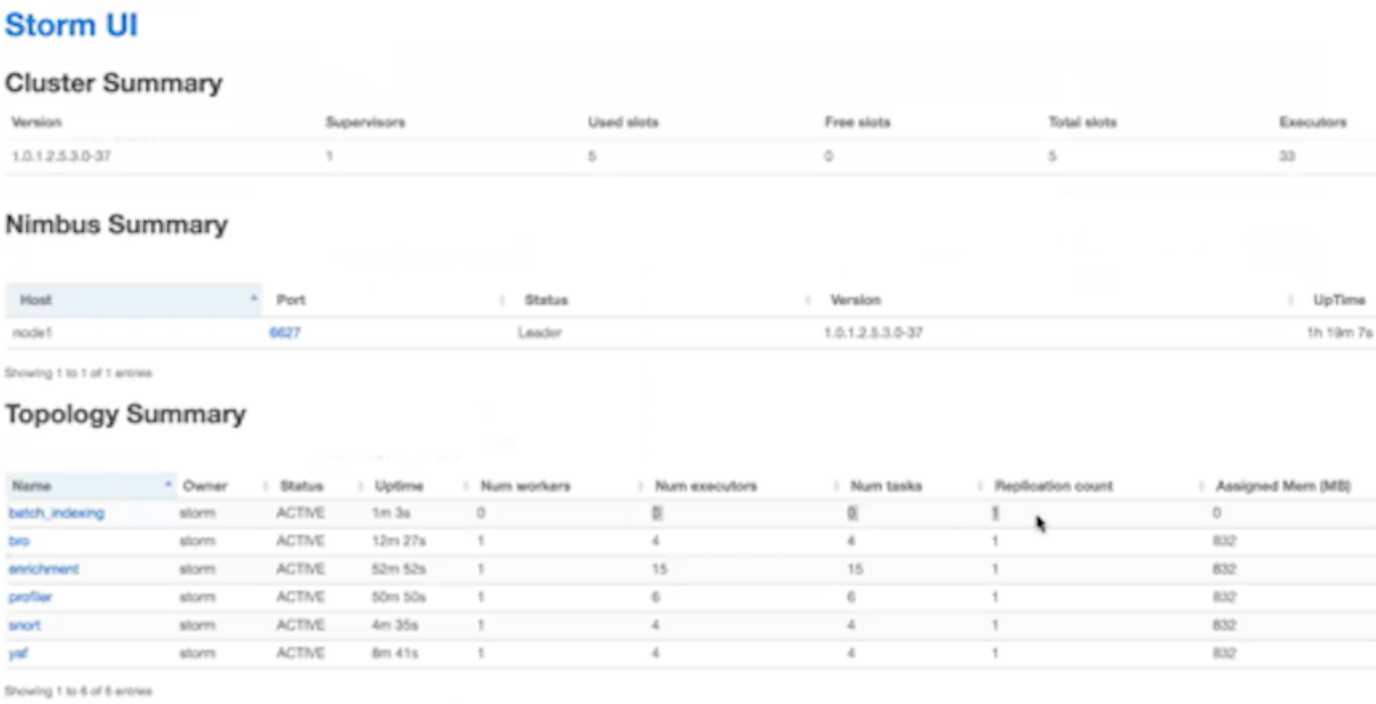
    Management UI



    Note: Starting the Metron parsers might take a while.

13. Check the status of the parsers in the Storm UI.

    Storm UI



Mandatory Post-Upgrade Tasks

After you finish updating the Ambari M-Pack, depending on your configuration, you need to update the various features in your cluster.

Upgrading Your Configuration

Hortonworks Cybersecurity Platform (HCP) upgrade uses the default configuration for the new Metron version. If you made any changes to the Metron configuration in the previous version, you must incorporate those changes into the new Metron configuration.

Changes to the Metron configuration can effect the following:

- Metron properties in Ambari
- ZooKeeper

  Incorporate changes from the ZooKeeper file you backed up earlier.
- Flux files

  Incorporate changes from the Flux files you backed up earlier.

Changes to STELLAR Language

Hortonworks Cybersecurity Platform (HCP) adds additional Stellar keywords to each new HCP version. These new keywords might cause compatablity issues where these reserved words and symbols are used in existing scripts.

Check the Stellar Language Quick Reference for new and changed Stellar keywords.

HCP 1.5.1 adds match to the Stellar lanaguage which introduces the following new reserved keywords and symbols:

match, default, {, }, ‘=>’

You must modify any Stellar expressions that use these keywords not in quotes.

Troubleshooting

If you run into issues with your upgrade use the following troubleshooting tips to identify and resolve those issues.

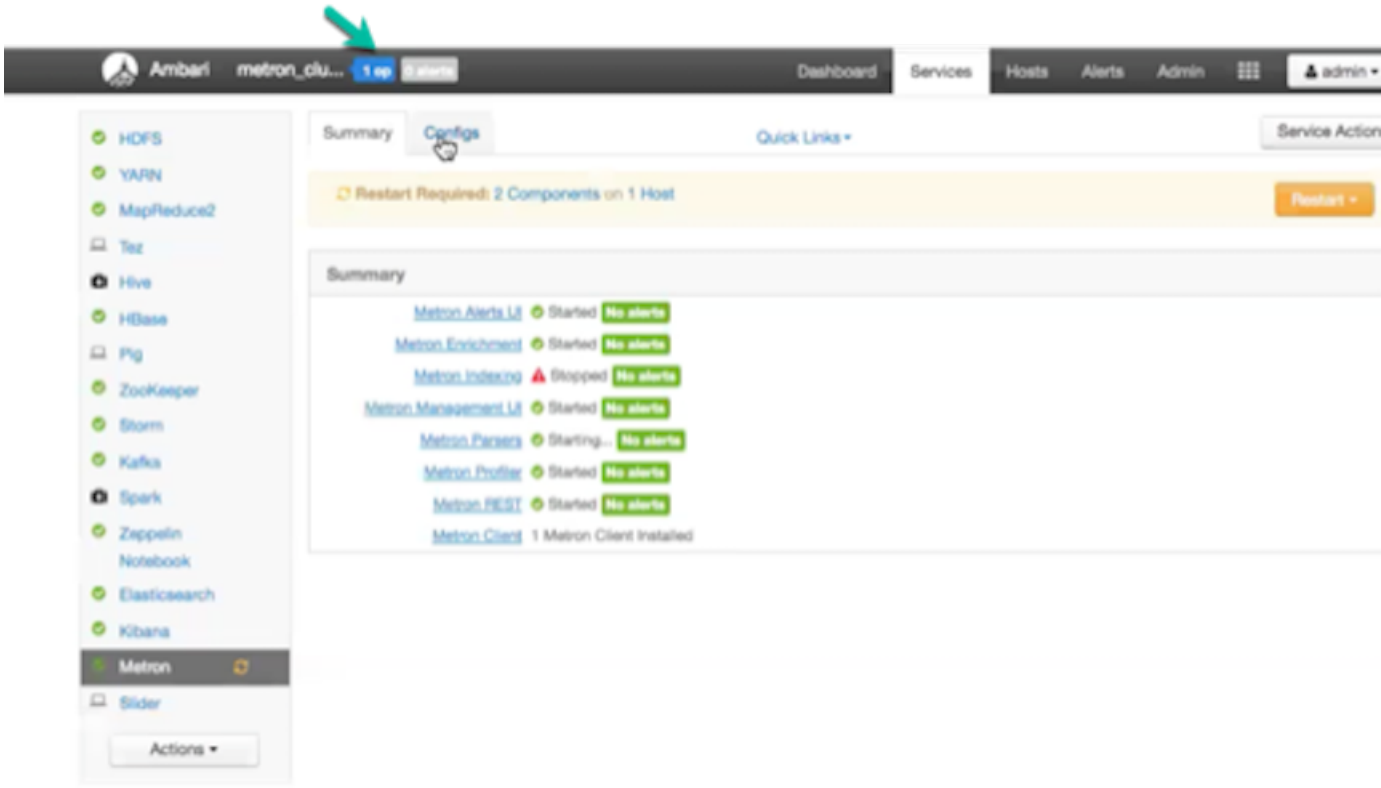
Checking the Status of the Parsers

If your parsers do not restart, you can use Ambari to check the status of the parsers and restart them.

Procedure

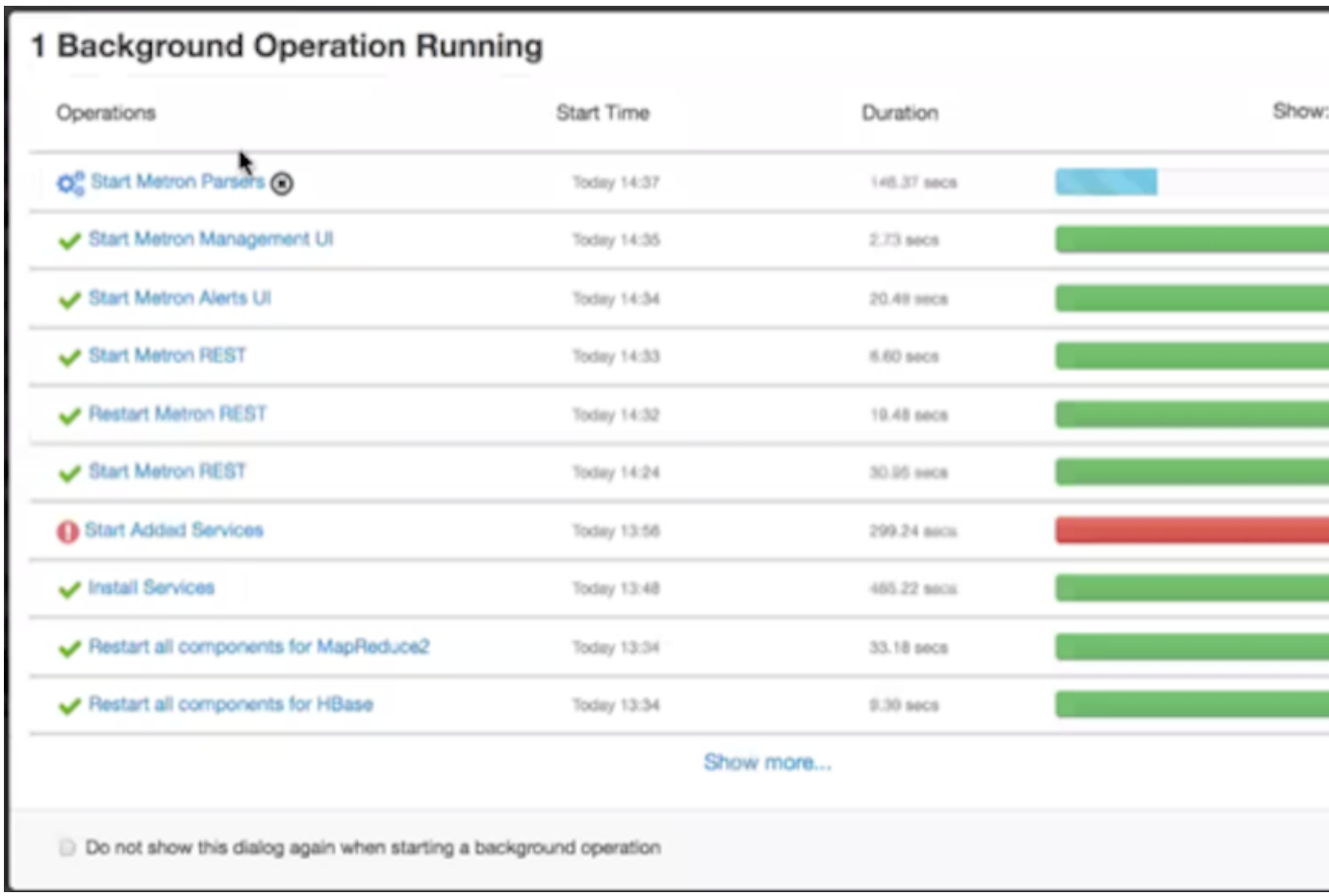
1. Click the operation status tab at the top of the Ambari window.

   Ambari Summary Tab



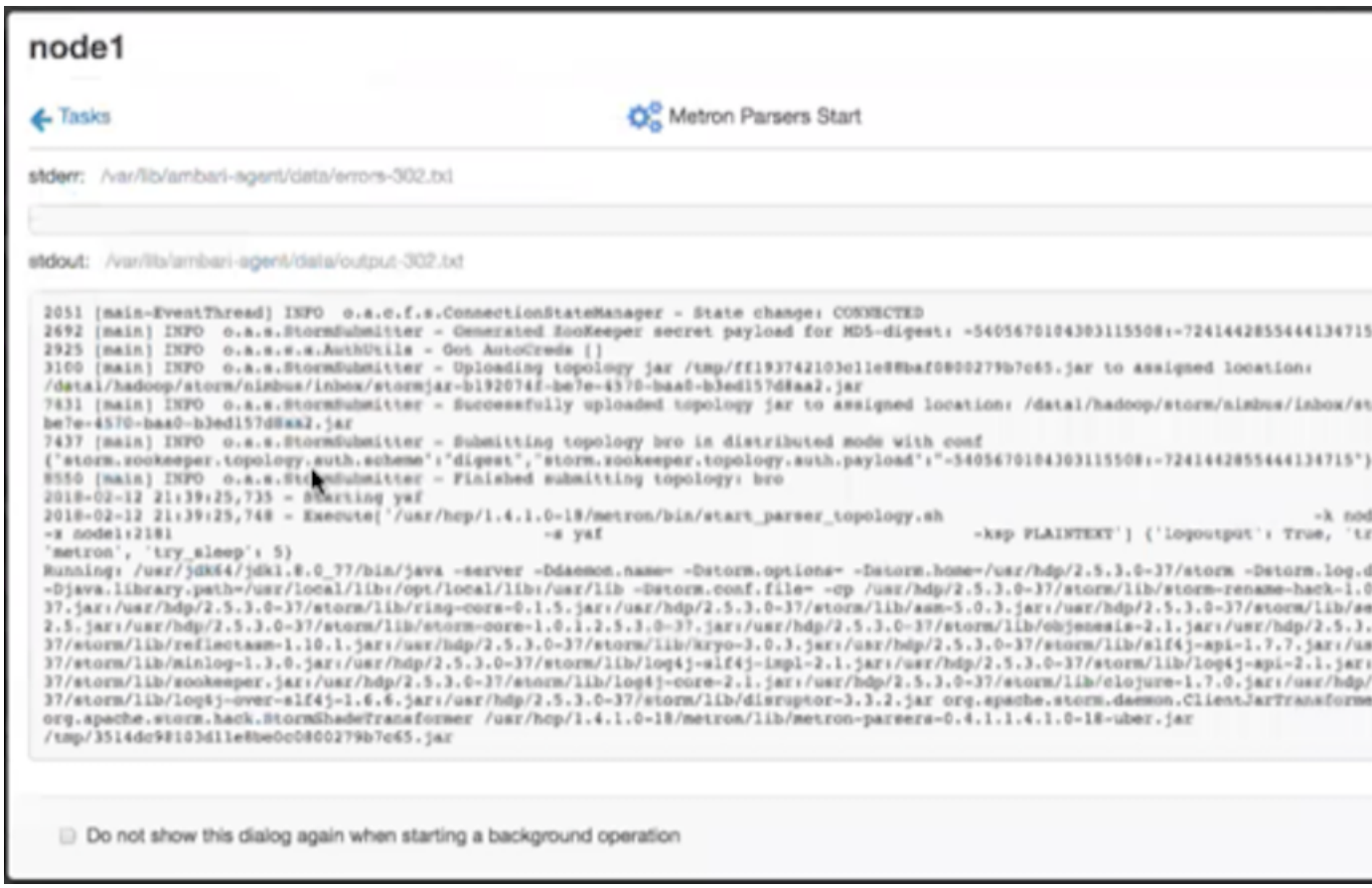
   Ambari displays the Operations Running Status window.

   Ambari Background Operation Page



2. Click **Start Metron Parsers**.
   Ambari displays the **Start Metron Parsers** window.
3. Click the parser node you want to check, then click **Metron Parsers Start**.
   Ambari displays information on the status of the parser.

   Metron Parsers Start Page



4. Review the information in this window to determine the status of your parsers.