**Enable Kerberos for Kylo**

The Kylo applications contain features that leverage the thrift server connection to communicate with the cluster. In order for them to work in a Kerberos cluster, some configuration is required. Some examples are:

* Profiling statistics
* Tables page
* Wrangler

**Prerequisites**

Below are the list of prerequisites for enabling Kerberos for the Kylo data lake platform.

1. Running Hadoop cluster
2. Kerberos should be enabled
3. Running Kylo 0.4.0 or higher

**Configuration Steps**

1. Create a Headless Keytab File for the Hive and Kylo User.

**Note**

Perform the following as root. Replace “sandbox.hortonworks.com” with your domain.

[root]$ kadmin.local

kadmin.local: addprinc -randkey "kylo@sandbox.hortonworks.com"

kadmin.local: xst -norandkey -k /etc/security/keytabs/kylo.headless.keytab kylo@sandbox.hortonworks.com

kadmin.local: xst -norandkey -k /etc/security/keytabs/hive-kylo.headless.keytab hive/sandbox.hortonworks.com@sandbox.hortonworks.com

kadmin.local: exit

[root]$ chown kylo:hadoop /etc/security/keytabs/kylo.headless.keytab

[root]$ chmod 440 /etc/security/keytabs/kylo.headless.keytab

[root]$ chown kylo:hadoop /etc/security/keytabs/hive-kylo.headless.keytab

[root]$ chmod 440 /etc/security/keytabs/hive-kylo.headless.keytab

1. Validate that the Keytabs Work.

[root]$ su – kylo

[kylo]$ kinit -kt /etc/security/keytabs/kylo.headless.keytab kylo

[kylo]$ klist

[root]$ su – hive

[hive]$ kinit -kt /etc/security/keytabs/hive-kylo.headless.keytab hive/sandbox.hortonworks.com

[hive]$ klist

1. Modify the kylo-spark-shell configuration. If the *spark.shell.server* properties are set in *spark.properties* then the *run-kylo-spark-shell.sh* script will also need to be modified.

[root]$ vi /opt/kylo/kylo-services/conf/spark.properties

kerberos.spark.kerberosEnabled = true

kerberos.spark.keytabLocation = /etc/security/keytabs/kylo.headless.keytab

kerberos.spark.kerberosPrincipal = kylo@sandbox.hortonworks.com

[root]$ vi /opt/kylo/kylo-services/bin/run-kylo-spark-shell.sh

spark-submit --principal 'kylo@sandbox.hortonworks.com' --keytab /etc/security/keytabs/kylo.headless.keytab ...

1. Modify the kylo-services configuration.

**Tip**

Replace “sandbox.hortonworks.com” with your domain.

To add Kerberos support to kylo-services, you must enable the feature and update the Hive connection URL to support Kerberos.

[root]$ vi /opt/kylo/kylo-services/conf/application.properties

# This property is for the hive thrift connection used by kylo-services

hive.datasource.url=jdbc:hive2://localhost:10000/default;principal=hive/sandbox.hortonworks.com@sandbox.hortonworks.com

# This property will default the URL when importing a template using the thrift connection

nifi.service.hive\_thrift\_service.database\_connection\_url=jdbc:hive2://localhost:10000/default;principal=hive/sandbox.hortonworks.com@sandbox.hortonworks.com

# Set Kerberos to true for the kylo-services application and set the 3 required properties

kerberos.hive.kerberosEnabled=true

kerberos.hive.hadoopConfigurationResources=/etc/hadoop/conf/core-site.xml,/etc/hadoop/conf/hdfs-site.xml

kerberos.hive.kerberosPrincipal=hive/sandbox.hortonworks.com

kerberos.hive.keytabLocation=/etc/security/keytabs/hive-kylo.headless.keytab

# uncomment these 3 properties to default all NiFi processors that have these fields. Saves time when importing a template

nifi.all\_processors.kerberos\_principal=nifi

nifi.all\_processors.kerberos\_keytab=/etc/security/keytabs/nifi.headless.keytab

nifi.all\_processors.hadoop\_configuration\_resources=/etc/hadoop/conf/core-site.xml,/etc/hadoop/conf/hdfs-site.xml

1. Restart the kylo-services and kylo-spark-shell.

[root]$ service kylo-services restart

[root]$ service kylo-spark-shell restart

Kylo is now configured for a Kerberos cluster. You can test that it is configured correctly by looking at profile statistics (if applicable): go to the Tables page and drill down into a Hive table, and go to the Wrangler feature and test that it works.