NASTEL
Driving Business Transaction Performance ®

NASTEL XRay

Upgrade Guide
Nastel XRay v1.2 to v1.3

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Prerequisites

The following are requirements before upgrading from version 1.2 to 1.3:

- SU31
- Nastel XRay version 1.2 (you cannot upgrade from version 1.1 to 1.3)
- JobScheduler 0.1.12
    - Requires PostgreSQL or MySQL database
    - Requirements deployment of Job Scheduler expert
- Create backups of the following tables:
    - AccessTokens
    - Organization
    - Teams
    - Repositories
    - Users
    - Volumes
    - Dictionaries
- The upgrade removes jKoolAdmin from the ACL entries for the tables below. Currently, they have to be backed up on a per-repo basis using Query Browser.
    - Actions
    - InputDataRules
    - Providers
    - Sets
    - Triggers

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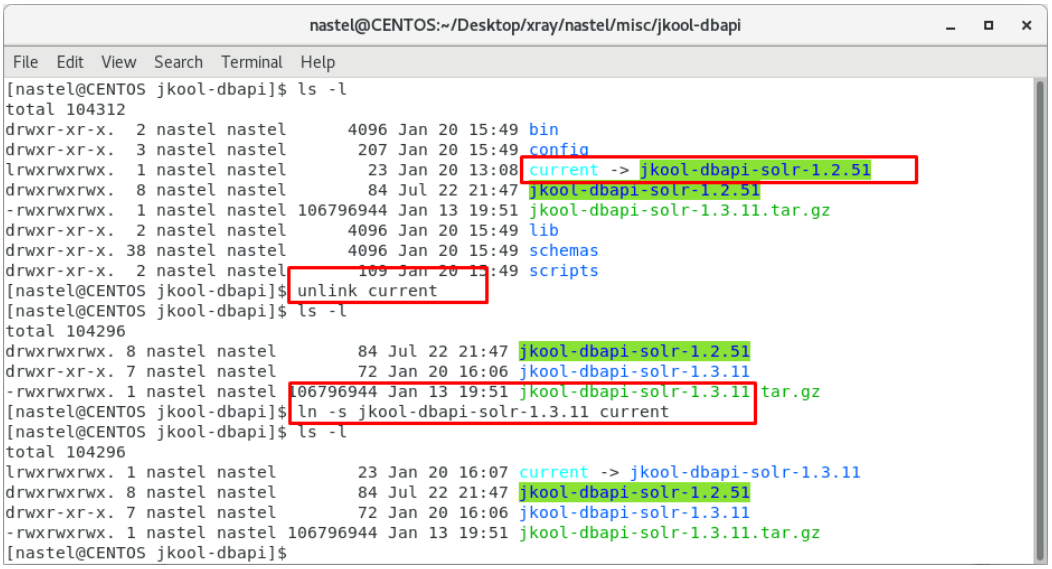
Upgrade Steps

1. Log into Nastel Enterprise Manager and change the default Administrator user password.
2. Stop the Tomcat and Nastel services.
3. Transfer **jkool-dbapi-solr-1.3.x.tar.gz** to **/opt/nastel/misc/jkool-dbapi**
4. Untar jkool-dbapi-solr-1.3.x.tar.gz:

```
>cd /opt/nastel/misc/jkool-dbapi

>tar -zxvf jkool-dbapi-solr-1.3.x.tar.gz
```

5. Modify the link **/opt/nastel/misc/jkool-dbapi/current**
   to
   /opt/nastel/misc/jkool-dbapi/jkool-dbapi-solr-1.3.x



6. Run the database upgrade as seen below:

> **NOTE** Both ZooKeeper and solr must be running. Confirm that your solr home location is pointing to the solr directory, for example, `/installation/nastel/solr`. If it is not set, by default the system will use `/opt/nastel/solr/solr`.

```
>cd /opt/nastel/misc/jkool-dbapi/current

>bin/jkool-db-upgrade.sh -version 1.2 -pwd <dbAdminPassword>
-sh <solrhost> -zh <zookeeperhost> -zr solr
```

The following new tables are created after the database upgrade completes:

jkool.scripts
jkoolref.extfunctions
jkoolref.extprovidertypes
jkool.views
jkoolref.extitemfields
jkoolref.extfields
jkoolref.extitems
jkoolref.extdatasrctypes

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Upgrade Nastel AutoPilot and XRay Services by installing the below packages from Package Manager:

NOTE

After installing a package start the domain and CEP servers, then log into Nastel AutoPilot Enterprise Manager to confirm that the service has been installed successfully. Once confirmed, log out. Repeat this for each package.

```
>cd /opt/nastel/AutoPilotM6/updates

>/opt/nastel/AutoPilotM6/bin/pkgman
/opt/nastel/AutoPilotM6/updates/AP60_SU31.pkg

>/opt/nastel/AutoPilotM6/bin/pkgman
/opt/nastel/AutoPilotM6/updates/JOB_SCHEDULER-0.1.12.pkg

>/opt/nastel/AutoPilotM6/bin/pkgman
/opt/nastel/AutoPilotM6/updates/JKOOL_SERVICE-1.3.X.pkg
```

7. This step enables the Nastel AutoPilot external data source. Please note, this step should only be done **after** the database is upgrade (step #6 above). Run the following commands from the jkool-dbapi-solr package:

```
>cd /opt/nastel/misc/jkool-dbapi/current

>bin/jkool-load-ext-data-src.sh -f config/ext-data-src/config-
autopilot.xml -pwd <jkql-admin-pwd> [-solr <solr-home>] [-sh
<solr-host>] [-sp <solr-port>] [-zh <zookeeper-host>] [-zp
<zookeeper-port>] [-zr <zookeeper-root>]
```

   Where **-pwd** is the same value used for the upgrade script. Please note, this script will only need to be run if/when there are changes to this configuration.

   The Nastel AutoPilot external data source requires external authorization. The only users who can log in are users that are defined in Natel AutoPilot. To enable external authorization, add the following to **global.properties**:

```
Property jkool.auth.service.class=com.nastel.jkool.auth.DomainAuthService
```

8. Modify the script, **catalina.sh**:

```
JAVA_OPTS="$JAVA_OPTS -
Dtnt4j.default.event.factory=com.jkoolcloud.tnt4j.sink.impl.slf4j
.SLF4JEventSinkFactory"

JAVA_OPTS="$JAVA_OPTS -DjKoolUserId=Administrator"
```

9. Add the following to **global.properties** before the definition of `job.sched.kafka.server`:

```
property jkool.kafka.server=<kafka-host>:9092
```

10. Place the **xray.war**, **jKoolAdmin.war** and **jkool-service.war** to **/opt/nastel/AutoPilotM6/apache-tomcat/webapps**.

11. Delete the folders **xray**, **jKoolAdmin** and **jkool-service** located in **/opt/nastel/AutoPilotM6/apache-tomcat/webapps**.

12. In the Tomcat **server.xml** file there are two contexts, xray.war and jkool-service, which send requests to Active MQ. Within these two contexts there are four resource name stanzas that will need to be updated:

    a. For the following four stanzas of xray.war:

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```
<Context path="/xray"
            reloadable="true"
            docBase="xray.war">
      <Resource name="jms/queue/ClientRequests"
      <Resource name="jms/queue/AdminRequests"
      <Resource name="jms/queue/UpdateRequests"
      <Resource name="jms/topic/StatusRequests"
</Context>
```

Update them to the following:

```
<Context path="/xray"
            reloadable="true"
            docBase="xray.war">
      <Resource name="jms/queue/client-requests"
      <Resource name="jms/queue/admin-requests"
      <Resource name="jms/queue/update-requests"
      <Resource name="jms/topic/status-requests"
 </Context>
```

b. For the following four stanzas of jkool-service:

```
<Context path="/jkool-service"
            reloadable="true"
            docBase="jkool-service.war">
      <Resource name="jms/queue/ClientRequests "
      <Resource name="jms/queue/AdminRequests "
      <Resource name="jms/queue/UpdateRequests "
      <Resource name="jms/topic/ StatusRequests "
</Context>
```

Update them to the following:

```
<Context path="/jkool-service"
            reloadable="true"
            docBase="jkool-service.war">
      <Resource name="jms/queue/client-requests"
      <Resource name="jms/queue/admin-requests"
      <Resource name="jms/queue/update-requests"
      <Resource name="jms/topic/status-requests"
</Context>
```

13. Create new Kafka topics introduced in this version (will also update configurations for existing topics if required). This procedure uses scripts provided by Kafka installation, so must be done on (one of) the server(s) containing Kafka (can use Gold Image, even if Kafka is not actually running on the server, just need the scripts):

    a) Transfer **/opt/nastel/AutoPilotM6/jkool/scripts/create-kafka-*.sh** to a server containing Kafka installation if server on which `JKOOL_SERVICE-1.3.X.pkg` was installed does not contain Kafka installation.

    b) Execute the create script in the directory containing the Xray Kafka scripts:

        i. `>cd /opt/nastel/AutoPilotM6/jkool/scripts`

        ii. `>./create-kafka-topics.sh -zh <zookeeperhost>`

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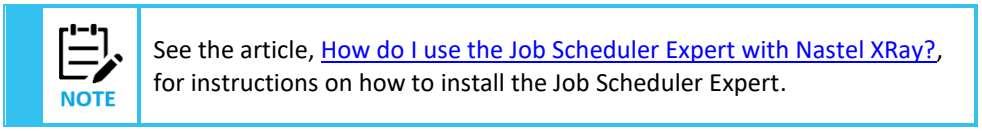
After Upgrade

Perform the below steps once 1.3 is installed.

1. Deploy new Job Scheduler expert if not already deployed. Nastel XRay uses the Job Scheduler Expert in the background for scheduling.
    a. Go to **Deploy Expert** > **Job Scheduler** > **Job Scheduler Service**



2. Deploy the new jKool experts, Query and Scheduler services. In the CEP Enterprise Manager:
    a. Go to **Deploy Expert** > **jKool** > **Query Service**. Previously this was part of Client Service, but has been moved to its own expert.
    b. Go to **Deploy Expert** > **jKool** > **Scheduler Service**. This is needed for using Views.
3. The upgrade will define a new property, **fatpipes.infinispan.tag**, in the **global.properties** file. It is used to identify which Infinispan cluster to join. Each independent installation needs a unique value for this, otherwise distributed caches will conflict. The recommended value is **jKool-<host>**, where <*host*> represents the name of the host that is running the domain server.

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