

# Runbook/Rollback plan for JIRA Application version upgrade from v7.12.1 to v8.2.3

## About

- This page contains the steps to be performed on release day for up-gradation of Jira from v7.12.1 to v8.2.3 version.

## Prerequisite :

- Admin access to URL
- JIRA v8.2.3 updated binaries should be available on Artifactory
- Supported version add-ons should be uploaded to Artifactory
- Database access
- Check Space on all JIRA nodes and shared home for backup
- MCT/TCR Should be approve([MCR0685387](#))

## Release Team Contact Details:

Team	Contact Person	racf id	email id	direct contact number	escalation contact person	direct contact number
Platform Eng	Hemant Kumar	kumaant	<a href="mailto:Hemant.Kumar9@rbs.com">Hemant.Kumar9@rbs.com</a>	+91-9818679878	Pankaj Bisht	+91-9971089965
Platform Eng	jaya chandra Reddy	chandj	<a href="mailto:jaya.chandareddynellore@rbs.co.uk">jaya.chandareddynellore@rbs.co.uk</a>	+91-8008009400	Hemant Kumar Chourasia	+91-9818679878
Ops Team	Gupta, Akash	guptaqf	<a href="mailto:Akash.Gupta4@rbs.co.uk">Akash.Gupta4@rbs.co.uk</a>	+91-8093928880	Amit khurana	+91-9958912248
DBA Team	SHIVA V		<a href="mailto:Sivanagaraju.Vutukuri@rbs.co.uk">Sivanagaraju.Vutukuri@rbs.co.uk</a>			

## Timeline:

Steps	Description	Completion Date
1.	OAT SignOff	17 Sep 2019
2.	UAT SignOff	17 Sep 2019
3.	Production Release	21 Sep 2019
4.	GoLive for end user	21 Sep 2019

## Runbook:

	Task	Owner	Execution Date	Status	Time	Details/Steps	Comments
1	Raise Cyber ark access request for implementation of JIRA-DTS	Eng Team	20 Sep 2019	<span style="background-color: #2e7131; color: white; padding: 2px 5px;">DONE</span>	10 mins	<ol style="list-style-type: none"><li>Login to <a href="#">Cybearark</a> portal and raise a request</li><li>Send an email to get credentials for available cyberark account for prod implementation</li></ol>	

2	Bring down Apache for all JIRA instances	Eng Team	20 Sep 2019	<b>DONE</b>	10 mins	<ol style="list-style-type: none"> <li>1. Login to current JIRA server (<b>LONRS10884</b>)</li> <li>2. cd /opt/app/dts/atlassian/jira</li> <li>3. Bring down Apache service: ./jira-apache.sh stop</li> <li>4. Repeat steps for (<b>LONRS10885, LONRS13991 and LONRS13992</b>)</li> <li>5. Ensure all the apache processes have been stopped on all JIRA nodes</li> </ol>	
3	Capture data before upgrade	Eng Team	20 Sep 2019	<b>DONE</b>	10 mins	<ol style="list-style-type: none"> <li>1. Login into production http URL :<a href="http://lonsr10884:8080/secure/Dashboard.jspa">http://lonsr10884:8080/secure/</a> <a href="#">Dashboard.jspa</a></li> <li>a. Go to Administration console &gt; System &gt; System info --&gt;</li> <li>b. Capture the Server info, JIRA info and Database statistics on <a href="#">Confluence page</a></li> </ol>	
4	Bring down tomcat for all JIRA instance	Eng Team	20 Sep 2019	<b>DONE</b>	10 mins	<ol style="list-style-type: none"> <li>1. Login to JIRA server (<b>LONRS10884</b>) with proddts access</li> <li>2. cd /opt/app/dts/atlassian/jira</li> <li>a. Bring down tomcat service: ./jiractls stop</li> <li>3. Repeat steps for (<b>LONRS10885, LONRS13991 and LONRS13992</b>)</li> <li>4. Ensure all the tomcat processes have been stopped on all JIRA nodes</li> </ol>	
5	Communicate with DBA team to take the DB backup	Eng Team	20 Sep 2019	<b>DONE</b>	1 hour	<ol style="list-style-type: none"> <li>1. Send an email to DBA team to start DB backup activity.</li> <li>2. Follow up and work with DBA team for DB backup.</li> <li>3. Get confirmation from DBA team</li> </ol>	<b>Note:</b> Step 6 will start parallel with step 5
6	Backup files	Eng Team	20 Sep 2019	<b>DONE</b>	1 hour	<ol style="list-style-type: none"> <li>1. Take a backup of local home and shared home plugins folder b. cp -r /opt/app/dts/atlassian/jira/jira-dts_home_lonsr10884 /data/edcdtsjirasprd/jira_local_home_v7.12.1_bkp c. cp -r /data/dtsjiraprd/shared_jira-dts_home/plugins /data/dtsjiraprd/plugins_jira_v7.12.1.bkp</li> <li>2. Repeat the above step for local_home only for remaining all nodes(<b>LONRS10885, LONRS10886, LONRS13991, LONRS13992</b>)</li> </ol>	<b>Note:</b> Take the backup of LONRS10885,LONRS13991,LONRS13992 Local home backup as well
7	Setup JIRA v8.2.3 binaries	Eng Team	21 Sep 2019	<b>DONE</b>	30 min	<ol style="list-style-type: none"> <li>1. Login into : <b>LONRS10884</b></li> <li>2. Setup binaries <ol style="list-style-type: none"> <li>a. cd /opt/app/dts/atlassian/Jira</li> <li>3. wget --no-check-certificate <a href="https://artifactory-1.dts.fm.rbsgrp.net/artifactory/list/puppet-installer-packages-local/com/atlassian/atlassian-jira/jira%208.2.3-20software/atlassian-jira-software-8.2.3-standalone.zip">https://artifactory-1.dts.fm.rbsgrp.net/artifactory/list/puppet-installer-packages-local/com/atlassian/atlassian-jira/jira%208.2.3-20software/atlassian-jira-software-8.2.3-standalone.zip</a></li> </ol> </li> <li><b>Note:</b> Repeat steps for (<b>LONRS10885, LONRS13991 and LONRS13992</b>)</li> <li><b>Note:</b> In the above file all required config changes has been done and uploaded to artifactory</li> <li>4. copy jiract1 -&gt; cp /opt/app/dts/atlassian/jira/atlassian-jira-software-7.12.1-standalone/bin/jiract1 /opt/app/dts/atlassian/jira/atlassian-jira-software-8.2.3-standalone/bin/</li> <li>5. Create softlinks <ol style="list-style-type: none"> <li>a. ln -sfn /opt/app/dts/atlassian/jira/atlassian-jira-software-8.2.3-standalone/bin/jiract1 jiract1</li> </ol> </li> <li>6. Repeat the above steps for remaining all nodes – (<b>LONRS10885, LONRS10886, LONRS13991, LONRS13992</b>)</li> </ol>	

```
JIRA_HOME="/opt/app/dts/atlassian/jira/jira_home"
```

```
JVM_SUPPORT_RECOMMENDED_ARGS="-XX:+UseG1GC"  
ulimit -n 8192  
JVM_MINIMUM_MEMORY="32g"  
JVM_MAXIMUM_MEMORY="32g"
```

```
JVM_CODE_CACHE_ARGS="-XX:InitialCodeCacheSize=32m -  
XX:ReservedCodeCacheSize=1024m"
```

```
JVM_REQUIRED_ARGS="-Djava.awt.headless=true -Datlassian.  
standalone=JIRA -Dorg.apache.jasper.runtime.BodyContentImpl.  
LIMIT_BUFFER=true -Dmail.mime.decodeparameters=true -  
Dorg.dom4j.factory=com.atlassian.core.xml.  
InterningDocumentFactory -Datlassian.healthcheck.timeout-  
ms=20000"
```

```
JVM_EXTRA_ARGS="-XX:-OmitStackTraceInFastThrow -Djava.  
locale.providers=COMPAT -XX:+PrintGCDetails -XX:  
+PrintGCDateStamps -XX:+PrintGCTimeStamps -XX:  
+PrintGCCause -XX:+PrintTenuringDistribution -verbose:gc -  
Xloggc:/opt/app/dts/atlassian/jira/current/logs/atlassian-jira-gc-%t.  
log -XX:+UseGCLogFileRotation -XX:NumberOfGCLogFiles=5 -  
XX:GCLogFileSize=20M -XX:MaxPermSize=512m -Dcom.sun.  
management.jmxremote.port=27082 -Dcom.sun.management.  
jmxremote.authenticate=false -Dcom.sun.management.  
jmxremote.ssl=false -Djava.security.egd=file:/dev/urandom -  
Djira.autoexport=false -Datlassian.plugins.enable.wait=300"
```

**#Note:** Add below lines between JAVA\_OPTS=<arguments> and export JAVA\_OPTS

```
JIRA_MAX_PERM_SIZE=256m  
if [ -f "${PRGDIR}/permgen.sh" ]; then  
echo "Detecting JVM PermGen support..."  
"${PRGDIR}/permgen.sh"  
if [ ${JAVA_PERMGEN_SUPPORTED} = "true" ]; then  
echo "PermGen switch is supported. Setting to  
${JIRA_MAX_PERM_SIZE}"  
JAVA_OPTS="-XX:MaxPermSize=${JIRA_MAX_PERM_SIZE}  
${JAVA_OPTS}"  
else  
echo "PermGen switch is NOT supported and will NOT be set  
automatically."  
fi  
fi
```

**#Note:** Below steps for Appdynamics add as last lines of this file

```
GC_JVM_PARAMETERS=""  
GC_JVM_PARAMETERS="-XX:+PrintGCDetails -XX:  
+PrintGCDateStamps -XX:+PrintGCTimeStamps -XX:  
+PrintGCCause ${GC_JVM_PARAMETERS}"  
GC_JVM_PARAMETERS="-Xloggc:SLOGBASEABS/logs/  
atlassian-jira-gc-%t.log -XX:+UseGCLogFileRotation -XX:  
NumberOfGCLogFiles=5 -XX:GCLogFileSize=20M  
${GC_JVM_PARAMETERS}"  
  
CATALINA_OPTS="${GC_JVM_PARAMETERS}  
${CATALINA_OPTS}"  
  
export CATALINA_OPTS
```

```
<Connector acceptCount="150" connectionTimeout="20000"  
disableUploadTimeout="true" enableLookups="false"  
maxHttpHeaderSize="8192" maxThreads="200"  
minSpareThreads="25"  
redirectPort="8443"  
scheme="https"  
proxyPort="443"  
proxyName="jira-dts.fm.rbsgrp.net"  
port="8180" relaxedPathChars="[]]" relaxedQueryChars="[]]"  
^&#x25c;&#x60;"&gt;  
protocol="HTTP/1.1" secure="false"  
useBodyEncodingForURI="true"  
/>  
  
<!-- Standard HTTP Connector -->  
<Connector acceptCount="150" connectionTimeout="20000"  
disableUploadTimeout="true" enableLookups="false"  
maxHttpHeaderSize="8192" maxThreads="200"  
minSpareThreads="25" port="8080" relaxedPathChars="[]]"  
relaxedQueryChars="[]]"^&#x25c;&#x60;"&gt;  
protocol="HTTP/1.1" redirectPort="8443"  
useBodyEncodingForURI="true" bindOnInit="false" />
```

```
jira.home =/opt/app/dts/atlassian/jira/jira_home
```

```
#upgrade,reindex.allowed=false
```

- database driver has been downloaded to lib folder

8	Startup the JIRA tomcat Server on LONRS10884	Eng Team	21 Sep 2019	<b>DONE</b>	1 hour	<p>Once we will get the confirmation from DBA team for DB backup, we will proceed with below steps:</p> <ol style="list-style-type: none"> <li>1. Login into : <b>LONRS10884</b></li> <li>2. Start the JIRA DTS tomcat server           <ol style="list-style-type: none"> <li>a. cd /opt/app/dts/atlassian/jira/</li> <li>b. Run --&gt; ./jiractl start</li> <li>c. check the logs after server starts</li> <li>d. cd /opt/app/dts/atlassian/jira/jira_home/log/</li> <li>e. tail -f atlassian-jira.log</li> </ol> </li> </ol> <p><b>Note:</b> if tomcat start successfully then proceed to next step</p>	
9	Verify and Upgrade addons	Eng Team	21 Sep 2019	<b>DONE</b>	1 hour	<ol style="list-style-type: none"> <li>1. Login into http <a href="#">URL</a></li> <li>2. Go to Add-ons in admin section</li> <li>3. Click on upload add-ons and paste <a href="#">url</a> and click upload.(This is for Script runner add-on.)</li> <li>4. Repeat above steps for all add-ons listed in <a href="#">Supported add-ons</a> page (Copy appropriate add-on url by click on Yes and select Copy link address )</li> <li>5. Do the quick smoke testing.(Check the System info for Upgraded versions, DB statistics, Application Links and functional testing)</li> </ol>	
10	Re-Indexing	Eng Team	21 Sep 2019	<b>DONE</b>	4:30 hours	<ol style="list-style-type: none"> <li>1. Login to <a href="#">URL</a> With Admin rights</li> <li>2. Go to Administration console &gt; System -&gt; Click Indexing in advanced console and then start reindex(Foreground)</li> <li>3. Check the logs during the reindex           <ol style="list-style-type: none"> <li>a. cd /opt/app/dts/atlassian/jira/current/logs/</li> <li>b. tail -f catalina.log – check the logs</li> </ol> </li> <li>4. After completion of re-indexing, move to next step</li> </ol>	
11	Zephyr Re-index	Eng Team	21 Sep 2019	<b>DONE</b>	2:30 Hours	<ol style="list-style-type: none"> <li>1. Login into production URL : <a href="http://lonrs10884:8080">http://lonrs10884:8080</a></li> <li>2. Go to Administration console &gt; Add-ons &gt; general Configuration in Zephyr for JIRA &gt; Re-index</li> </ol>	
12	Startup the JIRA tomcat Server on remaining servers	Eng Team	21 Sep 2019	<b>DONE</b>	2 hours	<p><b>Note:</b> If the Steps 8 to 11 successfully completed then only start this step</p> <ol style="list-style-type: none"> <li>1. Login into : <b>LONRS10885</b></li> <li>2. Start the JIRA DTS tomcat server           <ol style="list-style-type: none"> <li>a. cd /opt/app/dts/atlassian/jira/</li> <li>b. Run --&gt; ./jiractl start</li> <li>c. check the logs after server starts</li> <li>d. cd /opt/app/dts/atlassian/jira/jira_home/log/</li> <li>e. tail -f atlassian-jira.log</li> </ol> </li> </ol> <p><b>Note:</b> if tomcat start successfully then proceed to next step</p> <p>3. Repeat the above steps for remaining all nodes – (<b>LONRS13991,LONRS13992</b>)</p>	
13	Start the Apache server	Eng Team	21 Sep 2019	<b>DONE</b>	10 min	<ol style="list-style-type: none"> <li>1. Login into <b>LONRS10884</b></li> <li>2. cd /opt/app/dts/atlassian/jira/</li> <li>3. ./apache_startup start (check the softlink)</li> <li>4. Repeat the above steps for (<b>LONR S10885</b>)</li> <li>5. Login to JIRA node - lonrs13991           <ol style="list-style-type: none"> <li>a. Bring Up Apache services</li> <li>b. cd /opt/app/dts/atlassian/jira/</li> <li>c. ./apache_startup start</li> </ol> </li> </ol> <p><b>Note:</b> Repeat the above steps for (<b>LONRS13992</b>)</p>	
14	Smoke Testing	Eng Team	21 Sep 2019	<b>DONE</b>	20 mins	Check the System info for Upgraded versions, DB statistics, Application Links and functional testing	
15	OAT Testing	Ops Team	21 Sep 2019	<b>DONE</b>	2 hours	<ol style="list-style-type: none"> <li>1. Send an email to Ops team for OAT testing</li> <li>2. Ops team will execute the test steps</li> </ol> <div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">  <b>ECL-1160</b> - Jira 8.2.3 OAT Testing <span style="border: 1px solid #ccc; padding: 2px;">DONE</span> </div>	

16	Go/No-Go call	Eng Team	21 Sep 2019	<b>DONE</b>	30 mins	1. Setup call with Ops team lead and PO and discuss if we can go live or not.	
17	Send notification to users	Ops Team	21 Sep 2019	<b>DONE</b>	30 mins	Send notification to all users that please start using JIRA application upgraded version 8.2.3- <a href="https://jira-dts.fim.rbsgrp.net/">https://jira-dts.fim.rbsgrp.net/</a>	
18	<b>DR Setup</b>  Setup JIRA v8.2.3 binaries on DR servers	Eng Team	21 Sep 2019	<b>DONE</b>	1 hour	<p>1. Login into : <b>LONRS13133</b>  2. Copy the binaries  a. cd opt/app/dts/atlassian/jira/  b. sync -avzh  prodts@lonrs10884\$ /opt/app/dts /atlassian/jira/atlassian-jira-software-8.2.3-standalone /opt/app /dts/atlassian/jira/  3. backup localhome  cp /opt/app/dts/atlassian/jira/jira-dts_home_lonrs13133 /data /dtsjiraprd/jira-dts_home_lonrs13133_v7.12.1.bkp  4. Copy local home  a. sync -avzh  prodts@lonrs10884\$ /opt/app/dts /atlassian/jira/jira-dts_home_lonrs10884 /opt/app/dts /atlassian/jira/jira-dts_home_lonrs13133  5. Create softlinks  a. ln -sfn /opt/app/dts/atlassian/jira/atlassian-jira-software-8.2.3-standalone current  b. ln -sfn /opt/app/dts/atlassian/jira/atlassian-jira-software-8.2.3-standalone bin/jiractl jiractl  6. change cluster.properties  a. vim /opt/app/dts/atlassian/jira/jira_home_cluster.properties  b. set <b>jira.node.id</b> = lonrs13133  7. Delete # from "#upgrade.reindex.allowed=false" like as mentioned below</p> <pre style="border: 1px solid black; padding: 5px;">upgrade.reindex. allowed=false</pre> <p><b>Note:</b>Repeat the above steps for remaining DR nodes(<b>LONRS13134,LONRS13135,LONRS13136</b>)</p>	Note: This Step will complete during re-indexing
19	Disable Automatic Re-indexing of JIRA	Eng Team	21 Sep 2019	<b>DONE</b>	2 hours	<p>1. Login to current JIRA server (<b>LONRS10884</b>)  2. cd /opt/app/dts/atlassian/jira  3. Bring down Apache service: ./jira-apache.sh stop  4. Bring down tomcat service: ./jiractls stop  5. Ensure all the apache processes have been stopped on all JIRA nodes  6. vim /opt/app/dts/atlassian/jira/atlassian-jira-software-8.2.3-standalone/atlassian-jira/WEB-INF/classes/jira-application.properties  7. Delete # from "#upgrade.reindex.allowed=false" like as mentioned below</p> <pre style="border: 1px solid black; padding: 5px;">upgrade.reindex. allowed=false</pre> <p>8. Bring Up tomcat service: ./jiractls start</p> <p><b>Note:</b> Once the server is up then proceed to next step  9. Bring up Apache server: ./jira-apache.sh start</p> <p><b>Note:</b>Repeat the above steps for remaining nodes(<b>LONRS10885,LONRS13991,LONRS13992</b>) by rolling restart method.</p>	Note: Follow the Rollback method

**Rollback Plan: If any of the steps 8 - 16 not executed successfully then execute the rollback plan.**

	task	Owner	Execution Date	Status	Time	Details/Steps	Comments
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1	Stop Apache and Tomcat	Eng Team	21 Sep 2019	<b>TODO</b>	10 min	<p><b>1.</b> Login to JIRA node - <b>lonrs10884</b>  <b>2.</b> Bring down Apache and tomact services  <b>a.</b> cd /opt/app/dts/atlassian/jira/  <b>b.</b> ./jira-apachectl.sh stop  <b>c.</b> ./jiractl stop</p> <p><b>Note:</b> Repeat the above steps for (<b>lonrs10885</b>)</p> <p><b>4.</b> Login to JIRA node - <b>lonrs13991</b></p> <p><b>5.</b> Bring down Apache and tomcat services</p> <p><b>a.</b> cd /opt/app/dts/atlassian/jira/  <b>b.</b> ./apache_startup stop  <b>c.</b> ./jiractl stop</p> <p><b>Note:</b> Repeat the above steps for <b>lonrs13992</b></p>	
2	DB backup import	Eng Team	21 Sep 2019	<b>TODO</b>	1:30 hours	<p><b>1.</b> Send email to DBA team to start DB import activity (backup should be same as DBA taken in runbook steps- 5)  <b>2.</b> Wait until DBA confirmation for DB backup import successfully completed.</p>	
3	Start Tomcat servers	Eng Team	21 Sep 2019	<b>TODO</b>	2 hours	<p><b>1.</b> Login to JIRA node - <b>lonrs10884</b>  <b>2.</b> Copy backup files  <b>a.</b> cp -r /data/edcdtsjirasdprd/jira-dts_home_&lt;lonrs10884&gt; /opt/app/dts/atlassian/jira/jira-dts_home_&lt;lonrs10884&gt;_v8.2.3  <b>b.</b> cp -r /data/dtsjiraprd/plugins /data/dtsjiraprd/shared_jira-dts_home /plugins.v8.2.3  <b>c.</b> cp -r /data/edcdtsjirasdprd/jira_local_home_v7.12.1_bkp /opt/app/dts/atlassian/jira/jira-dts_home_&lt;lonrs10884&gt;  <b>d.</b> cp -r /data/dtsjiraprd/plugins_jira_v7.12.1.bkp /data/dtsjiraprd/shared_jira-dts_home/plugins  <b>3.</b> Recreate Softlinks  <b>a.</b> ln -sfn /opt/app/dts/atlassian/jira/atlassian-jira-software-7.12.1-standalone/current  <b>b.</b> ln -sfn /opt/app/dts/atlassian/jira/atlassian-jira-software-7.12.1-standalone/bin/jiractl jiractl  <b>4.</b> Bring Up tomact services  <b>a.</b> cd /opt/app/dts/atlassian/jira/  <b>b.</b> ./jiractl start</p> <p><b>Note:</b> Repeat the above steps for (<b>lonrs10885,lonrs13991 and lonrs13992</b>)</p>	
4	Start Apache	Eng Team	21 Sep 2019	<b>TODO</b>	10 min	<p><b>1.</b> Login to JIRA node - <b>lonrs10884</b>  <b>2.</b> Bring Up Apache service  <b>a.</b> cd /opt/app/dts/atlassian/jira/  <b>b.</b> ./jira-apachectl.sh start</p> <p><b>Note:</b> Repeat the above steps for (<b>lonrs10885</b>)</p> <p><b>4.</b> Login to JIRA node - <b>lonrs13991</b></p> <p><b>5.</b> Bring Up Apache services</p> <p><b>a.</b> cd /opt/app/dts/atlassian/jira/  <b>b.</b> ./apache_startup start</p> <p><b>Note:</b> Repeat the above steps for <b>lonrs13992</b></p>	
5	OAT Testing	Ops Team	21 Sep 2019	<b>TODO</b>	2 hours	<p><b>1.</b> Execute the test steps</p> <p> <b>ECLT-1160</b> - Jira 8.2.3 OAT Testing <span style="border: 1px solid #ccc; padding: 2px;">DONE</span></p>	
6	Send notification to users	Ops Team	21 Sep 2019	<b>TODO</b>	10 min	<p>Send notification to all users that we rollback the changes and please continue to using existing JIRA 7.12.1 application version.</p> <p><a href="https://jira-dts.fm.rbsgrp.net/">https://jira-dts.fm.rbsgrp.net/</a></p>	