Release Notes

Product Name: RealAnalytics

Track/Build Number: UMG 8.1

Project Type: Minor Enhancements

|  |  |  |
| --- | --- | --- |
| **Document Classification** | Internal Use Only | |
| **Department Name** | Consumer Analytics | |
| **Document Number** | **Version** | **Document Owner** |
| UMG- Release Notes 8.1 | 8.1 | Udaya Kiran SS |
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| **Prepared by** | **Reviewed by** | **Approved by** |
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**Note: All the sections and fields in this document should be updated**

# Summary

The document covers the implementation / rollback process for RA 8.1 release.

# Description of the change

Please provide following details.

Business features for release 8.1

|  |  |
| --- | --- |
| User Story | Feature |
|  |  |

* Release Requester name: Product Management
* Urgency: High
* Release Risk Analysis: Medium.
  1. No major analytics releases clashing with the release
  2. Changes limited to admin capabilities
* Affected Users: **Analytics Team.**
* Unaffected User: **None**

# Release Management Approvals

Please provide Release Management Team approvals

|  |  |
| --- | --- |
| Expected Release Date |  |
| Release # |  |
| Product |  |
| Environment: | PROD |
| Project Manager to confirm if final package is uploaded to SVN |  |
| Is Release communication sent to BU |  |
| Is BU Approval procured and attached? |  |
| IS IT head Approval procured and attached? |  |
| Is DMC approval procured and attached? |  |
| Any additional approvals |  |

# Environment Information

Please provide Production environment specific details so that Release can be installed.

|  |  |
| --- | --- |
| Expected Release Date |  |
| Release # |  |
| Product |  |
| Environment: | Production |
| Release Implementation Duration |  |
| Production Server Names/ IPs |  |
| Impact |  |
| Is the Change replicated in disaster recovery Environment to sync production and disaster recovery? |  |

# Data Fix Information (Tenant On boarding)

|  |  |
| --- | --- |
| Is Data fix involved |  |
| Is Data fix a SQL Statement/SQL script |  |
| QA sign off for above Data Fix(prod Data) |  |
| Does Data fix disable any triggers |  |
| Does Data fix disable any audit trails |  |
| List the fields and tables the data fix updates |  |
| Code reviewed by (Developer Name) |  |
| Code review approved by (Dev Manager) |  |
| Approved by Development Sr. Manager (Name) |  |
| Code reviewed by (QE Engineer Name) |  |
| Code review approved by (QE Manager) |  |
| Data Fix signed off by BU head |  |

# Syndicate Data Information

|  |  |
| --- | --- |
| Is Syndicate data update involved? |  |
| QA sign off for Syndicate data update (prod Data) |  |
| Pre-prod sign off for Syndicate data update (prod Data) |  |
| Approved by Analytics team Manager |  |
| Syndicate data in UAT/Preprod reviewed by (Analytics Team member name) |  |

# Model Fix Information

|  |  |
| --- | --- |
| Is Model fix involved |  |
| Is Model fix a SQL Statement/SQL script |  |
| QA sign off for above Model Fix(prod Data) |  |
| Code reviewed by (Developer Name) |  |
| Code review approved by (Dev Manager) |  |
| Approved by Development Sr. Manager (Name) |  |
| Code reviewed by (QE Engineer Name) |  |
| Code review approved by (QE Manager) |  |
| Model Fix signed off by BU head |  |

# Implementation

# Pre-Implementation

Please follow the below steps

* **Back Up the existing WAR of all the components.**
  1. umg-admin.war
  2. umg-runtime.war
  3. modelet.one-jar.jar
  4. umg-scheduler.one-jar.jar
* ***Back Up below existing schema of MySQL DB***
  1. *umg\_admin*
  2. *Ocwen*
* ***Back up of modelet scripts***

# Implementation

Follow the below steps during deployment process

**Shutdown all servers**

Shutdown all UMG modules in PROD, before starting deploying any Module

*If any component doesn’t shuts down normally, Please use Kill -9 to kill the process.*

**Clean up of Tomcat Servers**

Removing wars, extracted folders and work folders from Tomcat servers (Admin, Runtime).

War Extracted Location: /opt/tomcat/webapp

War Location: /opt/tomcat/webapps

Work Folder Location: /opt/tomcat/work/Catalina/localhost

**DB Backup of following tables:**

NA

**Hazelcast configuration changes:**

NA

**Mysql DB Scripts execution**

Obtain the scripts zip file from the following link and extract the files.

<http://atlas.altidev.net/artifactory/realanalytics/com/ca/umg/umg-db/develop-SNAPSHOT-1511/umg-db-develop-SNAPSHOT-1511.zip>

* run the scripts under the **UMG-8.1-admin\_schema\_common-ddl.sql** file in umg\_admin schema
* run the scripts under the **UMG-8.1-admin\_schema\_common-dml.sql** file in umg\_admin schema
* run the scripts under the **UMG-8.1-ocwen\_schema\_ddl.sql** file in Ocwen schema

**Update RA version:**

* Update “umg-ver” parameter to 8.1 in externalized umg.properties file.

**MySQL Configuration Changes:**

NA  
Mongo Changes:

NA

Sanpath changes

Login to one of the umg servers where /sanpath is mounted and execute following commands

* cd /sanpath/supportpackage/R
* mkdir 3.3.2
* create following sub directories
  + cd 3.3.2
  + mkdir Linux
  + mkdir Windows
* copy all existing support packages from /sanpath/supportpackage/R/3.2.1/Linux to /sanpath/supportpackage/R/3.3.2/Linux

**Security Configuration Changes:**

NA

Update applicationContextSecurity.properties file:

NA

Tomcat Changes

NA

Scheduler externalised application.properties files changes:

NA

modelet start up script changes:

1. Add new argument -DrMode=rJava in modelet script

Sample rJava modelet Script is :

-Druntime=R -Dlogroot=7815 -Dport=7815 -DserverType=SOCKET -DsanPath=D:\usr\umg\data -Dworkspace=D:\usr\umg\data -DrTempPath=D:\usr\umg\data -Dloglevel=info -Djava.library.path="D:\Softwares\R\rJava\_0.9-8\jri\x64;" -Dlog4j.configurationFile="file:\\C:\Softwares\apache-tomcat-7.0.55\modelet\ra-conf\log4j2.xml" -Dhazelcast.config="C:\Softwares\apache-tomcat-7.0.55\umg-admin\ra-conf\hazelcast-config.xml" -DhttpConnectionPooling.properties="file:\C:\Softwares\apache-tomcat-7.0.55\modelet\ra-conf\httpConnectionPooling.properties" -DexecutionLanguage=R -DwriteROutput=true -DexecutionEnvironment=Linux -DrServePort=6311 -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:CMSInitiatingOccupancyFraction=70 -XX:+UseCMSInitiatingOccupancyOnly -XX:MaxPermSize=256m -Xms1024m -Xmx3072m -DrServePort=6300 –DrMode=rJava

Note: Do not copy the above scrip.

2. Create copy of all modelet startup scripts for starting modelet in rServe mode.

3. Add new argument "rServePort " and assign value depends on the modelet. (sample :

-DrServePort =6300)

Sample Rserve modelet Script is :

export LD\_LIBRARY\_PATH=/usr/lib64/R/library/rJava/jri:/usr/lib64/R/lib:/usr/lib/jvm/java-1.7.0-openjdk-1.7.0.85.x86\_64/jre/lib/amd64/server;export JAVA\_HOME=/usr/bin/java;export R\_HOME=/usr/lib64/R;

tar -zcvf /opt/ra-modelet/umg/log\_backup/#rServePort#\_Rserve\_`date +%Y%m%d\_%H%M%S`.tar.gz /opt/ra-modelet/umg/#rServePort#\_Rserve.log

R CMD Rserve --RS-port #rServePort# --vanilla> # rServePort#\_Rserve.log;

sleep 5s;

nohup java -XX:MaxPermSize=256m -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:CMSInitiatingOccupancyFraction=70 -XX:+UseCMSInitiatingOccupancyOnly -Xmx3072m -Dlogroot=#port# -Dloglevel=debug -Dport=#port# -DrServePort=#rServePort# -DrMode=#rMode# -DserverType=#serverType# -DsanPath=/sanpath -Dworkspace=/opt/umg/matlab\_workspace -DLog4jContextSelector=org.apache.logging.log4j.core.async.AsyncLoggerContextSelector -DisThreadContextMapInheritable=true -Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.port=#JMX\_PORT# -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.authenticate=false -Dlog4j.configurationFile=file:/opt/raconf/log4j2.xml -Dhazelcast.config=/opt/raconf/hazelcast-config.xml -DhttpConnectionPooling.properties=file:/opt/raconf/httpConnectionPooling.properties -DexecutionLanguage=R -DexecutionEnvironment=Linux -jar /opt/umg/modelet.one-jar.jar > /opt/umg/#port#.out 2>&1 &

Note: Do not copy the above scrip. Replace rServePort port with unique ports in all modelet startup scripts.

Installation of RServe package:

Open rConsole and run the command install.packages("Rserve")

Select closest mirror to USA and continue with the installation.

Runtime log4j2.xml changes:

NA

Modelet LOG4j changes:

NA

Password Encryption:

NA

System Parameter changes in Admin:

NA

**Creation of Basepackages in Mysql db**

**Go to any server which is having java**

**Insertion of Base Support Packages in umg\_admin schema:**

* + - 1. **compile below class in any server which is having java with the command javac InsertScriptCreator.java**

****

* + - 1. **Run the below program with the command :**

java InsertScriptCreator

After successful creation of java program file insertQuery.txt will be present in the folder

**/opt**

* + - 1. **Rename the extension as .sql and runt run the file in mysql server in umg\_admin schema**

**WAR and JAR Locations**

Runtime:

<http://atlas.altidev.net/artifactory/realanalytics/com/ca/umg/umg-runtime/develop-SNAPSHOT-1511/umg-runtime-develop-SNAPSHOT-1511.war>

Modelet:

<http://atlas.altidev.net/artifactory/realanalytics/com/ca/umg/modelet/develop-SNAPSHOT-1511/modelet-develop-SNAPSHOT-1511-onejar.jar>

Admin:

<http://atlas.altidev.net/artifactory/realanalytics/com/ca/umg/web-ui/develop-SNAPSHOT-1511/web-ui-develop-SNAPSHOT-1511.war>

Scheduler:

<http://atlas.altidev.net/artifactory/realanalytics/com/ca/umg/umg-scheduler/develop-SNAPSHOT-1511/umg-scheduler-develop-SNAPSHOT-1511-onejar.jar>

**Restart all the components**

* 1. Start deploying modules in this order
* Runtime
* Modelet Processes
* Admin
* UMG Scheduler
  1. Please don’t start all Modules together.
  2. Start one module and wait until that process completely up.
  3. There should be 10-15 seconds sleep time between each Modelet process.

Note: Please refer to **Modelet Restart Steps** section in this document)

# Post-Implementation

* Update value of R\_MODELET\_STARTUP\_SCRIPT\_RJAVA and R\_MODELET\_STARTUP\_SCRIPT\_RServe as per environment. (Please verify the R library and Java paths mentioned are as per environment).
* Perform the sanity test suite for the build.
* Once the sanity test results are verified without any issues, send a mail to all stake holders on success of the release.

# Rollback

If the system is not working as intended,

Please follow the below steps for Rollback.

**Shutdown all servers**

Please shut down all UMG modules, before starting deploying any Module

*If any component doesn’t shuts down normally, Please use Kill -9 to kill the process.*

**Clean up of Tomcat Servers**

Removing wars, extracted folders and work folders from Tomcat servers (Admin, Runtime and ME2).

War Extracted Location: /opt/tomcat/webapps

War Location: /opt/tomcat/webapps

Work Folder Location: /opt/tomcat/work/Catalina/localhost

**Revert hazelcast configuration changes**

NA

**Rollback Sanpath changes:**

Login to one of the umg servers where /sanpath is mounted and execute following commands

* cd /sanpath/supportpackage/R
* rm -rf 3.3.2

Revert DB changes:

Run following db script

* UMG-8.1-admin\_schema\_common-ddl
* UMG-8.1-Ocwen\_schema-dml-rollback.sql
* UMG-8.1-admin\_schema-dml-rollback.sql

**Update RA version:**

Update “umg-ver” parameter to 8.0.1 in externalized umg.properties file.

**MySQL Configuration Changes:**

NA

Password Encryption:

NA

**WAR and JAR Locations**

Copy the backed up WARs to the appropriate <TOMCAT-WEBAPPS> of all the components respectively.

**Modelet Scripts**

Copy the modelet scripts which was taken as backup

**Restart all the components**

* 1. Start deploying modules in this order

Runtime

Modelet Process

Admin

Scheduler

* 1. Please don’t start all Modules together.
  2. Start one module and wait until that process completely up.
  3. There should be 1 min sleep time between each Modelet process.

Note: Please refer to Modelet Restart Steps(Rollback) section in this document)

# Known Issues

# Release Implementation Team

Details of the Implementation team members who will be participating in the Release. This includes Dev, QE, UAT, Product Management and Support teams.

# Appendix

GIT References

GIT URL for RA : ssh://git@inf-hub.altidev.net:7999/ra/umg.git

Please referrer to below WIKI page for setting up GIT repository in local system.

<http://wiki.altisource.com/display/CA/Local+GIT+Set+Up+and+Help+Commands>

# Modelet Restart Steps

Please follow below order for starting R and Matlab Modelets.

Below steps are specific to Production, change appropriately based on the environment.



# Modelet Restart Steps (Rollback)

Below steps are specific to Production, change appropriately based on the environment.

Please find attached file which has actual startup order of Modelets



# Notification

Release notification List.

|  |  |  |
| --- | --- | --- |
| S No. | Team Notification details | |
| 1 | Name | Dev Team |
| Email | Dev Team DL |
| 2 | Name | QE Team |
| Email | QE Team DL |
| 3 | Name | Support Team |
| Email | Support Team DL |
| 4 | Name | Product Management |
| Email | Product Management DL |
| 5 | Name | Client |
| Email | Client DL |