

Process Automation Manager: Upgrade Procedure 7.3 -> 7.7.1

For Posteltaliane SpA

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Document Scope

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Revision History

V 0.1 – First write

V 0.2 – Added post-upgrade steps for Poste Environment

Upgrade Flow

Common Steps

Prerequisites

download the additional scripts and patches from <https://github.com/fceresol/PAMUpgrade>

the document will reference the base directory as `${PATCH_DIR}/`

on the machines jq, zip, gz, base64 and an oc client must be present

Environment Backup

in order to backup all the openshift objects related to the project the following command can be used:

```
for object in secret configmap deploymentconfig buildconfig imagestream
service route serviceaccount ; do mkdir ${object}; for item in $(oc get $
${object}s | awk -F " " '{print $1}' | grep -v NAME) ; do oc get ${object} $
${item} --export -o yaml > ${object}/${item}.yaml; done; done
```

SmartRouter disposal

In order to remove the smart router component the following steps must be performed:

- Scale smartrouter deployment config to 0
- Unset kie-server system properties
 - KIE_SERVER_ROUTER_SERVICE
 - KIE_SERVER_ROUTER_HOST
 - KIE_SERVER_ROUTER_PORT
 - KIE_SERVER_ROUTER_PROTOCOL
- Remove smartrouter routes
- Remove smartouter services
- Remove smartrouter deployment config
- Remove smartrouter persistent volume

Preparing the environment

Since the actual configuration is not aligned with the original 7.3 templates, some steps are required before starting the upgrade:

- missing objects creation
- deployment configs alignment

the actual customizations to the services will be left in place.

Business Central alignment

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep rhpamcentrmon | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing service account

create the missing objects for business central

```
oc new-app -f ${PATCH_DIR}/pre-7.3/missing_objects_rhpamcentrmon.yaml --param APPLICATION_NAME=${APPLICATION_NAME}
```

the command will create

- Service Account: \${APPLICATION_NAME}-rhpamsvc
- Role Binding: \${APPLICATION_NAME}-rhpamsvc-edit

Deployment config alignment

before starting the deployment config alignment is suggested to pause dc rollouts in order to avoid multiple restarts

```
oc rollout pause dc/${APPLICATION_NAME}-rhpamcentrmon
```

the following env variables should be added to the deployment config:

- MAVEN_REPOS
- RHPAMCENTR_MAVEN_REPO_ID
- RHPAMCENTR_MAVEN_REPO_SERVICE
- RHPAMCENTR_MAVEN_REPO_PATH
- RHPAMCENTR_MAVEN_REPO_USERNAME
- RHPAMCENTR_MAVEN_REPO_PASSWORD
- EXTERNAL_MAVEN_REPO_ID
- EXTERNAL_MAVEN_REPO_URL
- EXTERNAL_MAVEN_REPO_USERNAME
- EXTERNAL_MAVEN_REPO_PASSWORD
- KIE_SERVER_CONTROLLER_OPENSIFT_PREFER_KIESERVER_SERVICE
- KIE_SERVER_CONTROLLER_TEMPLATE_CACHE_TTL
- KIE_WORKBENCH_CONTROLLER_OPENSIFT_ENABLED
- KIE_SERVER_CONTROLLER_TOKEN
- SSO_PRINCIPAL_ATTRIBUTE
- AUTH_LDAP_URL
- AUTH_LDAP_BIND_DN
- AUTH_LDAP_BIND_CREDENTIAL
- AUTH_LDAP_JAAS_SECURITY_DOMAIN
- AUTH_LDAP_BASE_CTX_DN
- AUTH_LDAP_BASE_FILTER
- AUTH_LDAP_SEARCH_SCOPE
- AUTH_LDAP_SEARCH_TIME_LIMIT
- AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE
- AUTH_LDAP_PARSE_USERNAME
- AUTH_LDAP_USERNAME_BEGIN_STRING
- AUTH_LDAP_USERNAME_END_STRING
- AUTH_LDAP_ROLE_ATTRIBUTE_ID
- AUTH_LDAP_ROLES_CTX_DN
- AUTH_LDAP_ROLE_FILTER
- AUTH_LDAP_ROLE_RECURSION
- AUTH_LDAP_DEFAULT_ROLE
- AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID
- AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN
- AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN
- AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK
- AUTH_ROLE_MAPPER_ROLES_PROPERTIES
- AUTH_ROLE_MAPPER_REPLACE_ROLE

setting them at their default values

```
oc patch dc ${APPLICATION_NAME}-rhpamcentrmon --type=json -p "$(cat ${PATCH_DIR}/pre-7.3/env_variables_rhpamcentrmon.json)"
```

and the following environment should be removed:

- PROBE_IMPL
- PROBE_DISABLE_BOOT_ERRORS_CHECK
- MAVEN_REPO_URL
- MAVEN_REPO_USERNAME
- MAVEN_REPO_PASSWORD
- ADMIN_USERNAME
- ADMIN_PASSWORD

using the following command

```
oc set env dc/${APPLICATION_NAME}-rhpamcentrmon PROBE_IMPL-  
PROBE_DISABLE_BOOT_ERRORS_CHECK- MAVEN_REPO_URL- MAVEN_REPO_USERNAME-  
MAVEN_REPO_PASSWORD- ADMIN_USERNAME- ADMIN_PASSWORD-
```

the business central data mount path has to be changed:

from /opt/eap/standalone/data/**bpmsuite** to /opt/eap/standalone/data/**kie**

```
oc set volume dc/${APPLICATION_NAME}-rhpamcentrmon --add --name=$  
{APPLICATION_NAME}-rhpamcentr-pvol -m /opt/eap/standalone/data/kie --  
overwrite
```

and the rhpam-rhpamsvc service account has to be configured

```
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon --patch "{\"spec\":  
{\"template\": {\"spec\": {\"serviceName\": \"${APPLICATION_NAME}-  
rhpamsvc\", \"serviceAccount\": \"${APPLICATION_NAME}-rhpamsvc\"}}}}"
```

Patching route annotations

```
oc patch route ${APPLICATION_NAME}-rhpamcentrmon -p '{"metadata":  
{"annotations": {"haproxy.router.openshift.io/timeout": "60s"}}}'
```

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print  
$1}'); do oc label ${obj} --overwrite rhpam=1.1; done  
  
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\":{\"template\":  
{\"metadata\":{\"labels\": {\"rhpam\": \"1.1\"}}}}}"  
  
for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " "
```



```
'{print $1}') ; do oc label serviceaccount/${obj} --overwrite rhpam=1.1; done
```

once executed these steps the rollouts for businesscentral components can be resumed.

```
oc rollout resume dc/${APPLICATION_NAME}-rhpamcentrmon
```

Kie Server

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep kieserver | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing service account

create the missing objects by applying the template

```
oc new-app -f ${PATCH_DIR}/pre-7.3/missing_objects_kie-server.yaml --param APPLICATION_NAME=${APPLICATION_NAME}
```

the command will create

- Service Account: \${APPLICATION_NAME}-kieserver
- Role Binding: \${APPLICATION_NAME}-kieserver-edit

Deployment config alignment

the following env variables should be added to the deployment config

- KIE_SERVER_MODE
- KIE_SERVER_CONTROLLER_TOKEN
- KIE_SERVER_CONTROLLER_PROTOCOL
- KIE_SERVER_ROUTE_NAME

- KIE_SERVER_USE_SECURE_ROUTE_NAME
- MAVEN_MIRROR_URL
- MAVEN_MIRROR_OF
- MAVEN_REPOS
- RHPAMCENTR_MAVEN_REPO_ID
- RHPAMCENTR_MAVEN_REPO_SERVICE
- RHPAMCENTR_MAVEN_REPO_PATH
- RHPAMCENTR_MAVEN_REPO_USERNAME
- RHPAMCENTR_MAVEN_REPO_PASSWORD
- EXTERNAL_MAVEN_REPO_ID
- EXTERNAL_MAVEN_REPO_URL
- EXTERNAL_MAVEN_REPO_USERNAME
- EXTERNAL_MAVEN_REPO_PASSWORD
- SSO_URL
- SSO_OPENIDCONNECT_DEPLOYMENTS
- SSO_REALM
- SSO_SECRET
- SSO_CLIENT
- SSO_USERNAME
- SSO_PASSWORD
- SSO_DISABLE_SSL_CERTIFICATE_VALIDATION
- SSO_PRINCIPAL_ATTRIBUTE
- HOSTNAME_HTTP
- HOSTNAME_HTTPS
- AUTH_LDAP_URL
- AUTH_LDAP_BIND_DN
- AUTH_LDAP_BIND_CREDENTIAL
- AUTH_LDAP_JAAS_SECURITY_DOMAIN
- AUTH_LDAP_BASE_CTX_DN
- AUTH_LDAP_BASE_FILTER
- AUTH_LDAP_SEARCH_SCOPE
- AUTH_LDAP_SEARCH_TIME_LIMIT
- AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE
- AUTH_LDAP_PARSE_USERNAME
- AUTH_LDAP_USERNAME_BEGIN_STRING
- AUTH_LDAP_USERNAME_END_STRING
- AUTH_LDAP_ROLE_ATTRIBUTE_ID
- AUTH_LDAP_ROLES_CTX_DN
- AUTH_LDAP_ROLE_FILTER
- AUTH_LDAP_ROLE_RECURSION
- AUTH_LDAP_DEFAULT_ROLE
- AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID
- AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN

- AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN
- AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK
- AUTH_ROLE_MAPPER_ROLES_PROPERTIES
- AUTH_ROLE_MAPPER_REPLACE_ROLE

setting them at their default values

```
oc patch dc ${APPLICATION_NAME}-kieserver --type=json -p "$(cat ${PATCH_DIR}/pre-7.3/env_variables_kie-server.json)"
```

add an additional env pointing to the route name

```
oc set env dc/${APPLICATION_NAME}-kieserver -e KIE_SERVER_ROUTE_NAME=${APPLICATION_NAME}-kieserver
```

the following env should be updated with their default values

- KIE_SERVER_ROUTE_NAME
- KIE_SERVER_ID

```
oc set env dc/${APPLICATION_NAME}-kieserver -e KIE_SERVER_ROUTE_NAME=${APPLICATION_NAME}-kieserver  
oc set env dc/${APPLICATION_NAME}-kieserver -e KIE_SERVER_ID=${APPLICATION_NAME}-kieserver
```

and the following should be removed

- ADMIN_USERNAME
- ADMIN_PASSWORD
- MAVEN_REPO_URL
- MAVEN_REPO_USERNAME
- MAVEN_REPO_PASSWORD
- MAVEN_REPO_SERVICE
- MAVEN_REPO_PATH

```
oc set env dc/${APPLICATION_NAME}-kieserver ADMIN_USERNAME- ADMIN_PASSWORD-  
MAVEN_REPO_URL- MAVEN_REPO_USERNAME- MAVEN_REPO_PASSWORD-  
MAVEN_REPO_SERVICE- MAVEN_REPO_PATH- KIE_SERVER_HOST-
```

Fix missing service account

the rhpam-kieserver service account will be added

```
oc patch dc/${APPLICATION_NAME}-kieserver --patch "{\"spec\":{\"template\":{\"spec\":{\"serviceAccountName\": \"${APPLICATION_NAME}-kieserver\"}}}}"
```

Add the missing liveness and readiness checks

the missing checks can be added with the following commands:

```
#retrieve adminUser for health check configuration
ADMIN_USER=$(oc set env dc digital-app-kie-kieserver --list | grep KIE_ADMIN_USER | awk -F "=" '{print $NF}')

#retrieve adminPassword for health check configuration
ADMIN_PASSWORD=$(oc set env dc digital-app-kie-kieserver --list | grep KIE_ADMIN_PWD | awk -F "=" '{print $NF}')

# add the liveness and readiness checks to kie-server dc

oc patch dc/${APPLICATION_NAME}-kieserver --patch "{\"spec\":{\"template\":{\"spec\":{\"containers\": [{\"name\": \"${APPLICATION_NAME}-kieserver\", \"readinessProbe\": { \"exec\": { \"command\": [ \"/bin/bash\", \"-c\", \"curl --fail --silent -u '${ADMIN_USER}:${ADMIN_PASSWORD}' http://localhost:8080/services/rest/server/readycheck\" ] }, \"failureThreshold\": 6, \"initialDelaySeconds\": 60, \"periodSeconds\": 30, \"successThreshold\": 1, \"timeoutSeconds\": 2 }, \"livenessProbe\": { \"exec\": { \"command\": [ \"/bin/bash\", \"-c\", \"curl --fail --silent -u '${ADMIN_USER}:${ADMIN_PASSWORD}' http://localhost:8080/services/rest/server/healthcheck\" ] }, \"failureThreshold\": 3, \"initialDelaySeconds\": 180, \"periodSeconds\": 15, \"successThreshold\": 1, \"timeoutSeconds\": 2 } ]}}}}"
```

Patching route annotations

```
oc patch route ${APPLICATION_NAME}-kieserver -p '{"metadata":{"annotations":{"haproxy.router.openshift.io/balance": "source"}}}'
```

Patch kieserver service session affinity

```
oc patch svc ${APPLICATION_NAME}-kieserver -p '{"spec":{"sessionAffinity": "ClientIP","sessionAffinityConfig":{"clientIP":{"timeoutSeconds": 3600 }}}}'
```

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=1.1; done

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"1.1\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=1.1; done
```

Upgrade 7.3 to 7.4

Business Central upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep rhpamcentrmon | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade

Configuration Alignment

update \${APPLICATION_NAME}-rhpamcentr-pvol persistent volume mountpoint to /opt/kie/data

```
oc set volume dc/${APPLICATION_NAME}-rhpamcentrmon --add --name=${APPLICATION_NAME}-rhpamcentr-pvol -m /opt/kie/data --overwrite
```

On this release the liveness and readiness probes changed from command based to http based:

```
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon --patch "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-rhpamcentrmon\", \"livenessProbe\": {\"exec\": null, \"httpGet\": {\"path\": \"/rest/healthy\", \"port\": 8080, \"scheme\": \"HTTP\"}, \"initialDelaySeconds\": 180, \"timeoutSeconds\": 2, \"periodSeconds\": 15}, \"readinessProbe\": {\"exec\": null, \"httpGet\": {\"path\": \"/rest/ready\", \"port\": 8080, \"scheme\": \"HTTP\"}, \"initialDelaySeconds\": 60, \"timeoutSeconds\": 2, \"periodSeconds\": 30, \"failureThreshold\": 6}}}}}}"
```

the following environment variables will be added

- KIE_SERVER_CONTROLLER_OPENSIFT_GLOBAL_DISCOVERY_ENABLED
- KIE_WORKBENCH_CONTROLLER_OPENSIFT_ENABLED
- KIE_SERVER_CONTROLLER_OPENSIFT_PREFER_KIESERVER_SERVICE

```
oc set env dc/${APPLICATION_NAME}-rhpamcentrmon -e
KIE_SERVER_CONTROLLER_OPENSIFT_GLOBAL_DISCOVERY_ENABLED=false --
overwrite=true

oc set env dc/${APPLICATION_NAME}-rhpamcentrmon -e
KIE_SERVER_CONTROLLER_OPENSIFT_PREFER_KIESERVER_SERVICE=true --
overwrite=true

oc set env dc/${APPLICATION_NAME}-rhpamcentrmon -e
KIE_WORKBENCH_CONTROLLER_OPENSIFT_ENABLED=true --overwrite=true
```

Update image stream

the default image is:

registry.redhat.io/rhpam-7/rhpam74-businesscentral-monitoring-openshift:1.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=1.1; done

oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"1.1\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=1.1; done
```

Kie-server upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep kieserver | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

Add missing **services.server.kie.org/kie-server-id** label

```
oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"services.server.kie.org/kie-server-id\": \"${APPLICATION_NAME}-kieserver\"}}}}}"

oc label dc/${APPLICATION_NAME}-kieserver services.server.kie.org/kie-server-id=${APPLICATION_NAME}-kieserver
```

add missing revisionHistoryLimit to dc spec

```
oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"revisionHistoryLimit\":10}}"
```

add terminationGracePeriodSeconds to dc template spec

```
oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"spec\":{\"terminationGracePeriodSeconds\":90}}}}"
```

added new lifecycle hook commands at container boot and shutdown

```
oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"spec\":{\"containers\":[{\"name\":\"${APPLICATION_NAME}-kieserver\",\"lifecycle\":{\"postStart\":{\"exec\":{\"command\":[\"/bin/sh\",\"/opt/eap/bin/launch/jboss-kie-kieserver-hooks.sh\"]}},\"preStop\":{\"exec\":{\"command\":[\"/bin/sh\",\"/opt/eap/bin/launch/jboss-kie-kieserver-hooks.sh\"]}}}}}}}}}"
```

liveness and readiness probes changed from script to HTTP

```
oc patch dc/${APPLICATION_NAME}-kieserver --patch "{\"spec\":{\"template\":{\"spec\":{\"containers\":[{\"name\":\"${APPLICATION_NAME}-
```



```
kieserver\", \"livenessProbe\": {\"exec\": null, \"httpGet\": {\"path\":  
  \"/services/rest/server/healthcheck\", \"port\":  
  8080, \"scheme\": \"HTTP\"}, \"initialDelaySeconds\": 180, \"timeoutSeconds\":  
  2, \"periodSeconds\": 15, \"failureThreshold\": 3}, \"readinessProbe\":  
  {\"exec\": null, \"httpGet\": {\"path\":  
    \"/services/rest/server/readycheck\", \"port\":  
    8080, \"scheme\": \"HTTP\"}, \"initialDelaySeconds\": 60, \"timeoutSeconds\":  
    2, \"periodSeconds\": 30, \"failureThreshold\": 6}}}}}}}"
```

new environments added

- WORKBENCH_SERVICE_NAME
- PROMETHEUS_SERVER_EXT_DISABLED

```
KIE_SERVER_CONTROLLER_SERVICE=$(oc set env dc/${APPLICATION_NAME}-kieserver  
--list --all | grep KIE_SERVER_CONTROLLER_SERVICE | awk -F "=" '{print  
$NF}')  
  
oc set env dc/${APPLICATION_NAME}-kieserver WORKBENCH_SERVICE_NAME=$  
{KIE_SERVER_CONTROLLER_SERVICE}  
  
oc set env dc/${APPLICATION_NAME}-kieserver  
PROMETHEUS_SERVER_EXT_DISABLED=false
```

change KIE_SERVER_ID in order to reference the new annotation value

```
oc patch dc/${APPLICATION_NAME}-kieserver --patch "{\"spec\":  
{\"template\": {\"spec\": {\"containers\": [{\"name\": \"$  
{APPLICATION_NAME}-kieserver\", \"env\":  
[ {\"name\": \"KIE_SERVER_ID\", \"value\": null, \"valueFrom\": {\"fieldRef\":  
{\"fieldPath\": \"metadata.labels['services.server.kie.org/kie-server-  
id']\"}}}}}}}}}"
```

update KIE_SERVER_STARTUP_STRATEGY with value: "OpenShiftStartupStrategy"

```
oc set env dc/${APPLICATION_NAME}-kieserver  
KIE_SERVER_STARTUP_STRATEGY=OpenShiftStartupStrategy --overwrite=true
```

Update image stream

the default image for building the new kie-server is:

registry.redhat.io/rhpam-7/rhpam74-kieserver-openshift:1.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=1.1; done

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"1.1\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=1.1; done
```

Upgrade 7.4 to 7.5

Business Central upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep rhpamcentrmon | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

the following missing environment variables should be added:

- APPLICATION_USERS_PROPERTIES
- APPLICATION_ROLES_PROPERTIES

```
oc set env dc/${APPLICATION_NAME}-rhpamcentrmon
APPLICATION_USERS_PROPERTIES=/opt/kie/data/configuration/application-
users.properties

oc set env dc/${APPLICATION_NAME}-rhpamcentrmon
APPLICATION_ROLES_PROPERTIES=/opt/kie/data/configuration/application-
roles.properties
```

the readiness probe check frequency and treshold changed

```
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon --patch "{\"spec\":
{\"template\": {\"spec\": {\"containers\": [{\"name\": \"$
{APPLICATION_NAME}-rhpamcentrmon\", \"readinessProbe\":
{\"initialDelaySeconds\": 30, \"timeoutSeconds\": 2, \"periodSeconds\":
5, \"failureThreshold\": 36}}}}}}}"
```

Update image stream

the default image is:

registry.redhat.io/rhpam-7/rhpam-businesscentral-monitoring-rhel8:7.5.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=7.5; done

oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"7.5\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.5; done
```

Kie-server upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep kieserver | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

the readiness probe check frequency and treshold changed

```
oc patch dc/${APPLICATION_NAME}-kieserver --patch "{\"spec\":{\"template\":{\"spec\":{\"containers\":[{\"name\":\"${APPLICATION_NAME}-kieserver\",\"readinessProbe\":{\"initialDelaySeconds\":30,\"timeoutSeconds\": 2,\"periodSeconds\": 5,\"failureThreshold\":
```

```
36}}]}}}}"
```

Update image stream

the default image for building the new kie-server is:

registry.redhat.io/rhpam-7/rhpam-kieserver-rhel8:7.5.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=7.5; done

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"7.5\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.5; done
```

Upgrade 7.5 to 7.6

Business Central upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep rhpamcentrmon | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

Deployment strategy changes from recreate to rolling

```
oc patch dc ${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\": {\"strategy\": {\"recreateParams\": null, \"type\": \"Rolling\", \"rollingParams\": {\"maxSurge\": \"100%\", \"maxUnavailable\": 0}}}}"
```

Fix routes timeout

in this release the route timeout for business central changed from 60 seconds to 1hr

```
for route in $(oc get routes | grep rhpamcentrmon | awk -F " " '{print $1}'); do oc patch route ${route} -p '{"metadata": {"annotations": {"haproxy.router.openshift.io/timeout": "1h"}}}'; done
```

Update image stream

the default image is:

registry.redhat.io/rhpam-7/rhpam-businesscentral-monitoring-rhel8:7.6.0

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=7.6; done

oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"7.6\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.6; done
```

Kie-server upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep kieserver | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

there are no missing configurations for this upgrade step

Update image stream

the default image for building the new kie-server is:

registry.redhat.io/rhpam-7/rhpam-kieserver-rhel8:7.6.0

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=7.6; done

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"7.6\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.6; done
```


Upgrade 7.6 to 7.7

Business Central upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep rhpamcentrmon | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

a new secret containing KIE_ADMIN_USER and KIE_ADMIN_PASSWORD has to be created

```
KIE_ADMIN_USER="$(oc set env dc digital-app-pam-rhpamcentrmon --list --all | grep KIE_ADMIN_USER )"
KIE_ADMIN_PWD="$(oc set env dc digital-app-pam-rhpamcentrmon --list --all | grep KIE_ADMIN_PWD )"
oc create secret generic rhpam-admin-credentials --from-literal="$KIE_ADMIN_USER" --from-literal="$KIE_ADMIN_PWD"
```

Configuration Alignment

replacing the hardcoded credentials with the one stored in the secret created above

```
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-rhpamcentrmon\", \"env\": [{\"name\": \"KIE_ADMIN_USER\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_USER\"}}}}]}}}}}"
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-rhpamcentrmon\", \"env\": [{\"name\": \"KIE_ADMIN_PWD\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_PWD\"}}}}]}}}}}"
oc patch dc/${APPLICATION_NAME}-rhpamcentrmon -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-rhpamcentrmon\", \"env\": [{\"name\": \"KIE_ADMIN_USER\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_USER\"}}}}]}}}}}"
```

```
{\spec\": {\containers\": [{\name\": \"${APPLICATION_NAME}-rhpmcentrmon\", \"env\": [\name\": \"RHPAMCENTR_MAVEN_REPO_USERNAME\", \"value\": null, \"valueFrom\": {\secretKeyRef\": {\name\": \"rhpm-admin-credentials\", \"key\": \"KIE_ADMIN_USER\"}}]}]}]}\"

oc patch dc/${APPLICATION_NAME}-rhpmcentrmon -p \"{\spec\": {\template\": {\spec\": {\containers\": [{\name\": \"${APPLICATION_NAME}-rhpmcentrmon\", \"env\": [\name\": \"RHPAMCENTR_MAVEN_REPO_PASSWORD\", \"value\": null, \"valueFrom\": {\secretKeyRef\": {\name\": \"rhpm-admin-credentials\", \"key\": \"KIE_ADMIN_PWD\"}}]}]}]}]}\"
```

replace KIE_WORKBENCH_CONTROLLER_OPENSIFT_ENABLED with KIE_SERVER_CONTROLLER_OPENSIFT_ENABLED

```
oc set env dc/${APPLICATION_NAME}-rhpmcentrmon KIE_SERVER_CONTROLLER_OPENSIFT_ENABLED=true

oc set env dc/${APPLICATION_NAME}-rhpmcentrmon KIE_WORKBENCH_CONTROLLER_OPENSIFT_ENABLED-
```

set the controller template cache ttl to 5000

```
oc set env dc/${APPLICATION_NAME}-rhpmcentrmon KIE_SERVER_CONTROLLER_TEMPLATE_CACHE_TTL=5000 -overwrite=true
```

Update image stream

the default image for building the new kie-server is:

registry.redhat.io/rhpam-7/rhpam-businesscentral-monitoring-rhel8:7.7.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F \" \" '{print $1}'); do oc label ${obj} --overwrite rhpam=7.7; done

oc patch dc/${APPLICATION_NAME}-rhpmcentrmon -p \"{\spec\": {\template\": {\metadata\": {\labels\": {\rhpam\": \"7.7\"}}}}\"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F \" \" '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.7;
```

done

Kie-server upgrade

Extract application name

extract the application name in order to have it available while executing next steps

```
APPLICATION_NAME=$(oc get dc $(oc get dc | grep kieserver | awk '{print $1}') -o json | jq .spec.template.metadata.labels.application -r)
```

Create missing object

there are no missing objects for this upgrade step

Configuration Alignment

replacing the hardcoded credentials with the one stored in the secret created above

```
oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-kieserver\", \"env\": [{\"name\": \"KIE_ADMIN_USER\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_USER\"}}}}]}}}}"

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-kieserver\", \"env\": [{\"name\": \"KIE_ADMIN_PWD\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_PWD\"}}}}]}}}}"

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-kieserver\", \"env\": [{\"name\": \"RHPAMCENTR_MAVEN_REPO_USERNAME\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_USER\"}}}}]}}}}"

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\": {\"template\": {\"spec\": {\"containers\": [{\"name\": \"${APPLICATION_NAME}-kieserver\", \"env\": [{\"name\": \"RHPAMCENTR_MAVEN_REPO_PASSWORD\", \"value\": null, \"valueFrom\": {\"secretKeyRef\": {\"name\": \"rhpam-admin-credentials\", \"key\": \"KIE_ADMIN_PWD\"}}}}]}}}}"
```

Update image stream

the default image for building the new kie-server is:

registry.redhat.io/rhpam-7/rhpam-kieserver-rhel8:7.7.1

since the customer has its own repository the is name / tag should be update accordingly

Fix object labels

```
for obj in $(oc get all | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label ${obj} --overwrite rhpam=7.7; done

oc patch dc/${APPLICATION_NAME}-kieserver -p "{\"spec\":{\"template\":{\"metadata\":{\"labels\":{\"rhpam\": \"7.7\"}}}}}"

for obj in $(oc get serviceaccount | grep ${APPLICATION_NAME} | awk -F " " '{print $1}'); do oc label serviceaccount/${obj} --overwrite rhpam=7.7; done
```

Post upgrade steps

Remove old, unused system properties and update defaults

Business Central

In order to have a working environment the following old properties should be removed / changed

From Business Central deployment config remove

- KIE_SERVER_PWD
- KIE_SERVER_USER
- KIE_SERVER_CONTROLLER_USER
- KIE_SERVER_CONTROLLER_PWD

Update the value of the following:

- KIE_SERVER_CONTROLLER_OPENSIFT_GLOBAL_DISCOVERY_ENABLED to true

Kie server

From kie-server deployment config remove:

- KIE_SERVER_CONTROLLER_USER
- KIE_SERVER_CONTROLLER_PWD
- KIE_SERVER_CONTROLLER_SERVICE

- KIE_SERVER_ROUTER_HOST
- KIE_SERVER_ROUTER_PORT
- KIE_SERVER_ROUTER_PROTOCOL
- KIE_SERVER_CONTROLLER_TOKEN
- KIE_SERVER_CONTROLLER_PROTOCOL

and cleanup the following

- WORKBENCH_SERVICE_NAME