IBM – DevOps Acceleration Team – NLopez (June 2020)

This outlines a set of scripts to Push a PDS to a new feature branch in a Git Repo from Batch using Rexx and Rocket Git.

One use for this is with IBM's RPP/RTC workflow where generated cobol code is copied to MVS PDS for a Build. By adding the Rexx script below to your RTC Translator, you can point to the same PDS and with a few options, push the PDS members to a new feature branch for standard Pull Request processing.

This technique can be used to automate similar mainframe based legacy processes.

Notes:

- This sample shows how to copy and push a single Cobol source PDS. Support for Copybooks or other PDS types and languages can be added.
- The USS script clones the full target repo to USS for the checkout and push. A sparse pull may be more efficient.
- Limited error handling was added.
- USS environmental variables for Rocket Git must be adjusted to your installation defaults.
- Git interface assumes SSH credentials from USS. HTTPS based credentials can be substituted.
- The Rexx code uses a random number to simulate a unique feature name. This can be replaced with feature naming standards at your shop. The exec can be converted to accept externalized args using the standard "parse args" function.

Sample Rexx Code:

```
/* REXX   V1.2  NLOPEZ (IBM RTP/North Carolina)
   This exec will push all members of a pds to git
   using Rocket Git on USS and a custom Shell script
   ------------------------------------------------

   Calls ?/PushPDS.sh on USS with the following args:
    1- Repo     the target repo (Target Repo URL)
    2- App      the Application name (repo subfolder)
    3- srcPDS   the source PDS
    4- feature  A feature name (randomized)

*/

 /* Sample args for testing */
 repo    = "git@github.ibm.com:Nelson-Lopez1/MORTGAGE-SA-workspace.git"
 app     = "Mortgage-SA"
 srcPDS  = "NLOPEZ.RTC.COBOL"
 feature = 'feature/test-'||random()

 call initEnv

 /* call the USS Shell script
 cmd='sh /u/nlopez/MYUTILS/PushPDS.sh ' repo app srcPDS feature

 sh_rc = bpxwunix(cmd,, stdout., stderr.,env.)
 say ' '
 say '** USS CMD: ' cmd ' end with rc = ' sh_rc ' Date=' date() time()
 say ' '

 if stdout.0 > 1 then do
     do i = 1 to stdout.0
        say stdout.i
     end
 end

 if sh_rc > 0 then do
    say 'USS CMD: Error with ' cmd  ' RC=' sh_rc
    do i = 1 to stderr.0
       say stderr.i
    end
 end
exit sh_rc

initEnv:
 /* Add your env vars for Git here */
 P1='/usr/lpp/java/J8.0_64:'
 P2='/u/nlopez/rocket/bin:/bin'

 env.1='_BPX_SHAREAS=NO'
 env.2='_BPXK_AUTOCVT=ON'
 env.3="_CEE_RUNOPTS=FILETAG(AUTOCVT,AUTOTAG) POSIX(ON)"
 env.4='_TAG_REDIR_ERR=txt'
 env.5='_TAG_REDIR_IN=txt'
```

```
 env.6='_TAG_REDIR_OUT=txt'
 env.7='IBM_JAVA_ENABLE_ASCII_FILETAG=ON'
 env.8='GIT_SHELL=/var/rocket/bin/bash '
 env.9='GIT_EXEC_PATH=/var/rocket/libexec/git-core'
 env.10='PERL5LIB=/var/rocket/share/perl/5.24.1'
 env.11='GIT_TEMPLATE_DIR=/var/rocket/share/git-core/templates'
 env.12='PATH='P1||P2
 env.0=12
return
```

USS Shell Script - PushPDS.sh

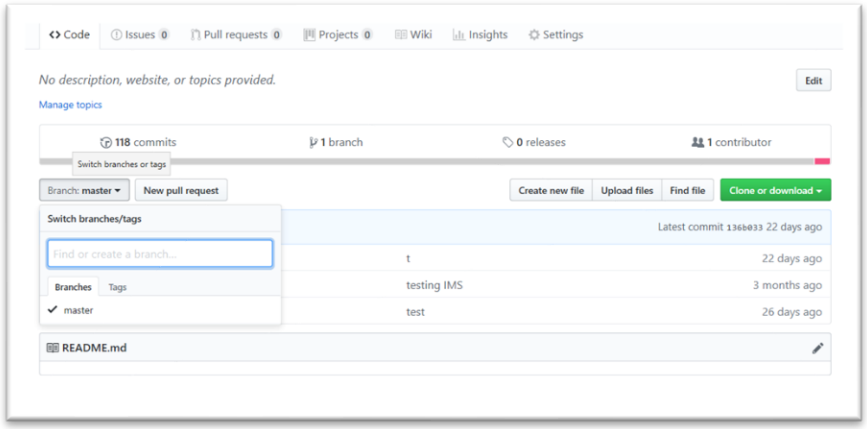
```
#!/bin/sh
# script to create a new feature branch from a PDS (NLopez)
#-------------------------------------------------------------
if  [ -z "$@" ]
   then clear;
        echo "*** PushPDS.sh - ERROR. Missing Args"
        echo "*** Usage"
        echo "***    arg1 - repo           'git_at_github.ibm.com:user-id/reponame.git'"
        echo "***    arg2 - appname  "
        echo "***    arg3 - sourcePDS      'HLQ.Some.COBOLPDS'"
        echo "***    arg4 - feature-name   'feature/xyz123'"
        exit 12
 fi

repo=$1
app=$2
srcPDS=$3
feature=$4

base=$( basename $repo)
wkDir="${base%%.*}"
tmpDir=/tmp/PushPDS-$RANDOM/

clear
echo " Pushing PDS members to Git:"
echo " Target Repo      = $1"
echo " Appname          = $2"
echo " Source Cobol PDS = $3"
echo " Feature          = $4"
echo " WorkDir          = $tmpDir$wkDir"


cd $tmpDir
git clone $repo
cd $wkDir
git checkout -b $feature
cd $app

tsocmd listds "'$srcPDS'" members
cp -S a=.cbl //"'$srcPDS'" ./cobol

git add .
git commit -m "$feature added"
git push   -u origin $feature
rm -rf $tmpDir
echo "*** Done"; echo
```

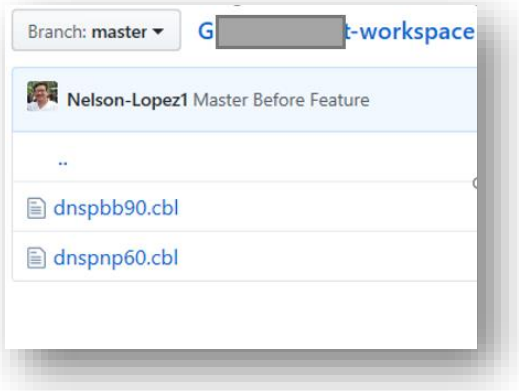
JCL to Exec the Rexx Exec

```
//TSOID    JOB MSGCLASS=X,REGION=0M,NOTIFY=?
//PUSHPDS  EXEC PGM=IKJEFT01,DYNAMNBR=20,PARM='PUSHPDS'
//SYSEXEC   DD  DISP=SHR,DSN=my.exec
//SYSTSPRT  DD  SYSOUT=*
//SYSPRINT  DD  SYSOUT=*
//SYSTSIN   DD  DUMMY
//SYSPRINT  DD  SYSOUT=*
```

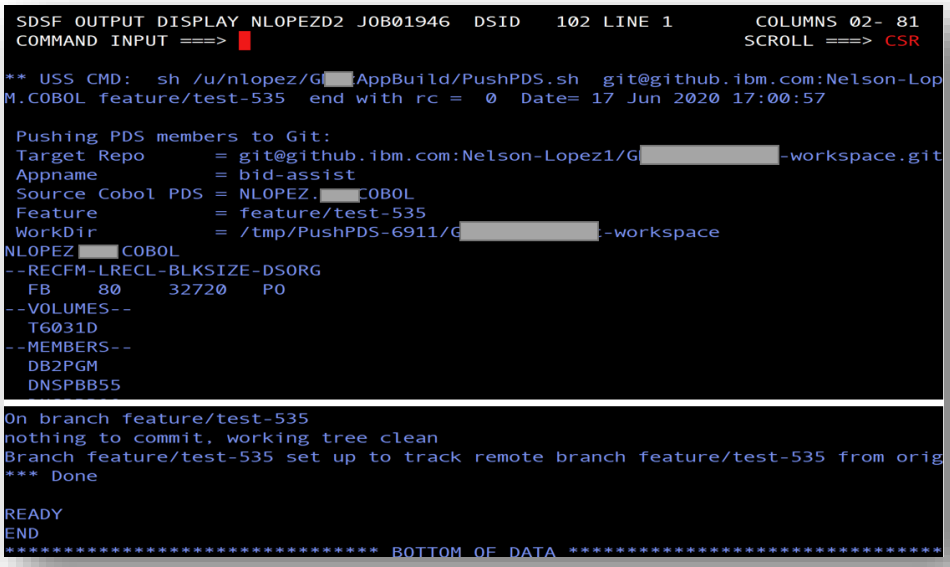
SAMPLE RUN

Target repo Before PushPDS.sh – Notice only One Branch "master" and 2 cobol pgms





Batch Job Results (partial sysout)



Git Branch After - New Feature showing new cobol pgms. Ready for Pull Request