GIT Workflow for COTS

Last updated on 10/19/18 by Sungwook Kwon

Version: 1.1

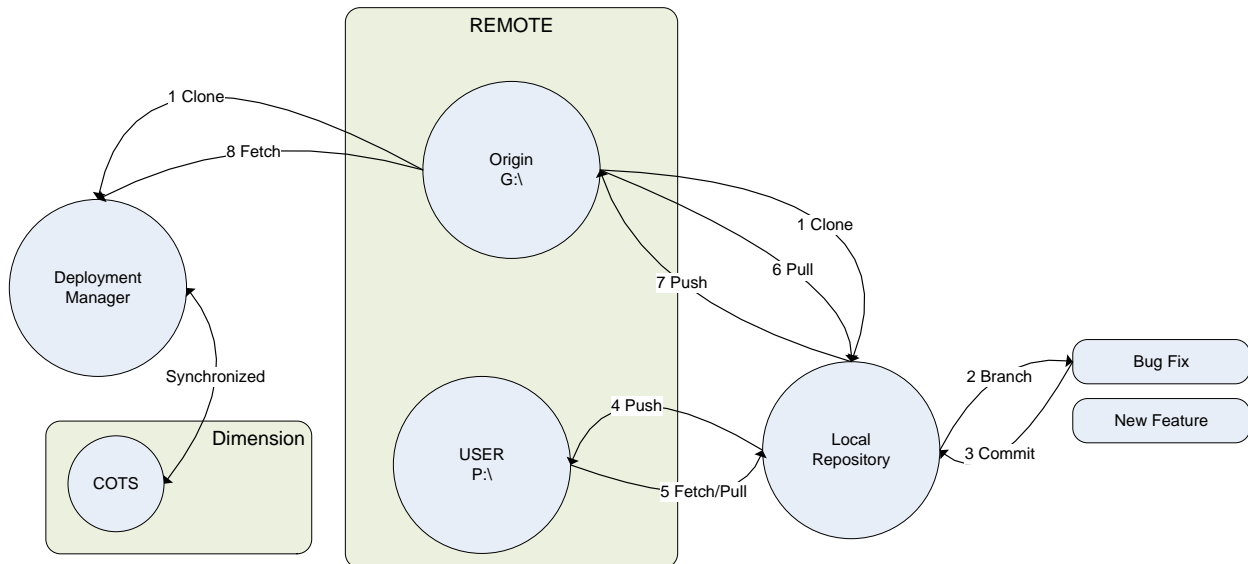# Contents

Introduction

This is a workflow for the team, COTS to maintain the version of FileNet/Kofax Projects using GIT.

Architecture

Git Repositories

Local

This is the repository that each user has in their local workstation. Once a user is involved in a project, the user will clone a whole copy of the target project from the remote, COTS. Users will maintain their own version locally until the change is completely tested and ready for production.

User (Remote – P: Optional)

This is an optional repository that each user can have to make a backup of their local repository. Through this repository, users store any changes that they are working so that they will not be tied to a single workstation. If changes are small and it can be made quickly, users will use COTS repository directly.

Origin (Remote – G: \\jfsdata\shares\DevOps\COTS)

This is the main repository of the team, COTS residing on ms-kofax-pa10 server. This is the repository that the entire team members copy a project from and submit the changes that have been made, tested and ready for production. This repository is not a working repository.

Deployment Manager (Local)

Deployment Manager takes care of the deployment of all the changes that have been pushed to COTS repository. This repository should be on deployment server so that the change can easily be deployed to the designated environment. The manager pulling the most updated version from COTS repository and synchronize the changes with Dimension and perform the deployment.

Dimension

Dimension is the official version management system in JFS, therefore all the changes to be deployed to production must be stored in Dimension. This repository will be synchronized with Deployment Manager's repository.

Folder Structure

Each project will have its own root folder under GIT folder and the structure should be remained the same consistently with other project. New folders can be added as needed.

COTS GIT Folder Structure				
Git				
	Proj-A	.git		Git Repository
		Document		Folder for documents
		FDM		FileNet Deployment Manager Repository
		ICM Assets		Artifacts from IBM Case Manager
		KC Batch Class	Dev	Batch Classes for each environment
			Tst	
			Uat	
			Prd	
		KTM		KTM project
		Sample		Samples

Installation

The current version as of 4/27/2014 is 2.8.1. Get the code from the following site.

http://git-scm.com/downloads

Operation

Initial Setup

Setup Identity	
| | ```
KWONS@JFS398323 /c/git/owd-ccmep (master)
$ git config --global user.name "Sungwook Kwon"

KWONS@JFS398323 /c/git/owd-ccmep (master)
$ git config --global user.email "sungwook.kwon@jfs.ohio.gov"

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$
``` |

Basic Operation

Create a local repository

```
$ cd c:\git

KWONS@JFS398323 /c/git
$ mkdir OFC-ICPCDMS

KWONS@JFS398323 /c/git
$ cd OFC-ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS
$ git init
Initialized empty Git repository in c:/git/OFC-ICPCDMS/.git/


KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$
```

Create a remote repository

(remote repository can be different that P: drive)
$ cd p:\git

KWONS@JFS398323 ~/git
$ mkdir OFC-ICPCDMS

KWONS@JFS398323 ~/git
$ cd OFC-ICPCDMS

KWONS@JFS398323 ~/git/OFC-ICPCDMS
$ git init --bare
Initialized empty Git repository in p:/git/OFC-ICPCDMS/

KWONS@JFS398323 ~/git/OFC-ICPCDMS (BARE:master)
$

Link the remote repository from the local repository

```
KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git remote add KWONS file://p:/git/OFC-ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git remote add COTS file://ms-kofax-pa10/git/OFC-ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)

$ git remote -v
```

```
COTS    file://ms-kofax-pa10/git/OFC-ICPCDMS (fetch)
COTS    file://ms-kofax-pa10/git/OFC-ICPCDMS (push)
KWONS   file://p:/git/OFC-ICPCDMS (fetch)
KWONS   file://p:/git/OFC-ICPCDMS (push)
```

Clone a remote repository to a local location

```
KWONS@JFS398323 /c
$ cd git2

KWONS@JFS398323 /c/git2
$ ls -al
total 12
drwxr-xr-x   1 KWONS   Administ      0 Mar 14 09:28 .
drwxr-xr-x   1 KWONS   Administ  24576 Apr 25 00:36 ..
drwxr-xr-x   1 KWONS   Administ      0 Mar 14 09:30 HelloWorld

KWONS@JFS398323 /c/git2
$ git clone file://p:/git/OFC-ICPCDMS
Cloning into 'OFC-ICPCDMS'...
remote: Counting objects: 6, done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 6 (delta 0), reused 0 (delta 0)
Receiving objects: 100% (6/6), 284.86 KiB | 0 bytes/s, done.
Checking connectivity... done.

KWONS@JFS398323 /c/git2
$ cd OFC-ICPCDMS

KWONS@JFS398323 /c/git2/OFC-ICPCDMS (master)
$ git branch
* master
```

Relating branches to the issues

- Git is not tied into any particular issue-tracking system.
- The main should be "Remedy" to log the issues.

```
$ git checkout -b "INC000000742322"
Switched to a new branch 'INC000000742322'

KWONS@JFS398323 /c/git/OFC-ICPCDMS (INC000000742322)
$ git branch -a
* INC000000742322
```

```
    master
    remotes/KWONS/ACL
    remotes/KWONS/master

KWONS@JFS398323 /c/git/OFC-ICPCDMS (INC000000742322)
$
```

Add the files in local directory

```
$ git add *

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git status
On branch master

Initial commit

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

        new file:   DOCS/ICPC_RetentionSchedule.pdf
        new file:   DOCS/OFC ICPCDMS_ACL.xlsx
        new file:   DOCS/OFC ICPCDMS_Configuration.xlsx

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git commit -m "Initial Commit for ICPCDMS"
[master (root-commit) d0fb245] Initial Commit for ICPCDMS
 3 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 DOCS/ICPC_RetentionSchedule.pdf
 create mode 100644 DOCS/OFC ICPCDMS_ACL.xlsx
 create mode 100644 DOCS/OFC ICPCDMS_Configuration.xlsx

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git status
On branch master
nothing to commit, working directory clean

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git log
commit d0fb2450d7961d295fdd158d1550ad8b9cbacf5b
Author: Sungwook Kwon <swooki@gmail.com>
Date:   Wed Apr 30 11:40:36 2014 -0400

    Initial Commit for ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$
```

Push the changes to the remote repository

```
$ git log
commit d0fb2450d7961d295fdd158d1550ad8b9cbacf5b
Author: Sungwook Kwon <swooki@gmail.com>
Date:   Wed Apr 30 11:40:36 2014 -0400

    Initial Commit for ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git push KWONS master
Counting objects: 6, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 284.86 KiB | 0 bytes/s, done.
Total 6 (delta 0), reused 0 (delta 0)
To file://p:/git/OFC-ICPCDMS
 * [new branch]      master -> master

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
```

Create a branch

```
$ cd c:/git/OFC-ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)

$ git branch ACL

KWONS@JFS398323 /c/git/OFC-ICPCDMS (master)
$ git checkout ACL
M       DOCS/OFC ICPCDMS_ACL.xlsx
Switched to branch 'ACL'

KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git branch -a
* ACL
  master
  remotes/KWONS/master
```

Commit to the new branch
Make a change to one of the file and commit the change to the branch.

```
KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
```

```
$ git status
On branch ACL
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   DOCS/OFC ICPCDMS_ACL.xlsx

no changes added to commit (use "git add" and/or "git commit -a")

KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git add *

KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git status
On branch ACL
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   DOCS/OFC ICPCDMS_ACL.xlsx


KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git log
commit d0fb2450d7961d295fdd158d1550ad8b9cbacf5b
Author: Sungwook Kwon <swooki@gmail.com>
Date:   Wed Apr 30 11:40:36 2014 -0400

   Initial Commit for ICPCDMS

KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git commit -m "ACL file has been cleaned"
[ACL a56fbde] ACL file has been cleaned
 1 file changed, 0 insertions(+), 0 deletions(-)

KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL)
$ git log
commit a56fbde4aad276f8d5c2289060b5bcd9344e0e5e
Author: Sungwook Kwon <swooki@gmail.com>
Date:   Wed Apr 30 13:37:16 2014 -0400

   ACL file has been cleaned

commit d0fb2450d7961d295fdd158d1550ad8b9cbacf5b
Author: Sungwook Kwon <swooki@gmail.com>
Date:   Wed Apr 30 11:40:36 2014 -0400

   Initial Commit for ICPCDMS
```

	KWONS@JFS398323 /c/git/OFC-ICPCDMS (ACL) $

Delete a remote branch	
	$ git push COTS --delete <branch name>