

# GIT on with it...

Henri Kuiper  
zdevops

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Session **OA**



# INTRODUCTION

**HENRI KUIPER**

**DOING GIT SINCE 2008**

**CERTIFIED MAINFRAME JUNKIE [ADDICTED SINCE 1998]**

**@HENRIKUIPER, @WIZARDOFZOS**

**ZDEVOPS, GSE, ONLYONCE, QRYPTONITE, EVILMAINFRAME**

**NERDY OLD-SKOOL THINGS**

**RUNS Z/OS AT HOME**

**MIGHT BE IN HIS 'OFFICE' TOO MUCH...**

# **Git ON WITH IT...**

## **1 HOUR OF Git AND MAINFRAMES**

- VERSION CONTROL: WHY???**
- Git BASIC CONCEPTS**
- INSTALLING IT ON Z/OS**
- Zigi : THE ISPF Git INTERFACE**
- PRACTICAL USECASES**

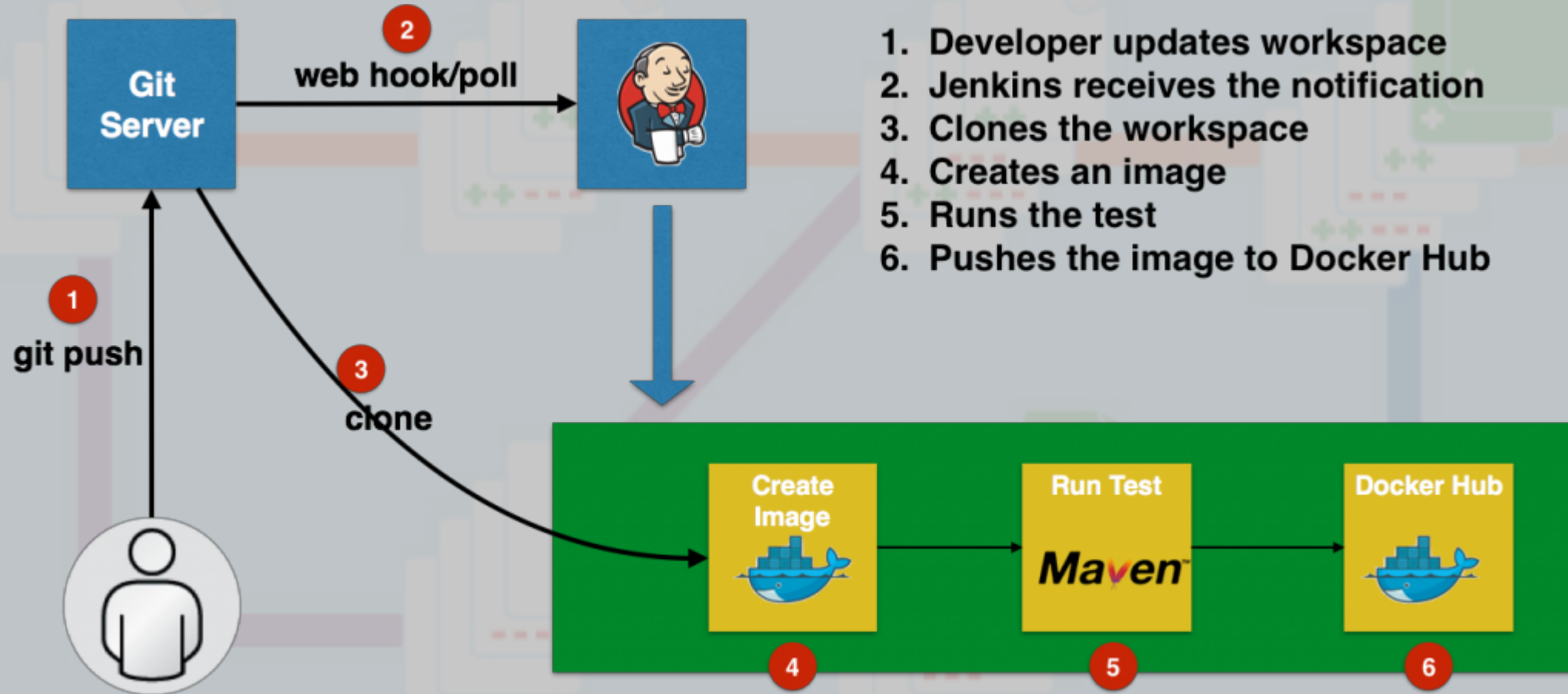
# VERSION CONTROL



*"Though a program be  
but three lines long,  
someday it will have to  
be maintained."*

*- Tao of Programming*

# VERSION CONTROL



# WHAT MAKES GIT GIT

**DISTRIBUTED INSTEAD OF CENTRALIZED**

**VERSIONS MANAGED WITH SNAPSHOTS (NOT DELTAS)**

**VERSION MANAGED AT THE REPO LEVEL (NOT FILES)**

**OFFLINE WORK POSSIBLE**

**EACH DEVELOPER HAS FULL PROJECT HISTORY**

**SUPPORTS PARALLEL WORKFLOWS**

# BASIC CONCEPTS

**LOCAL REPOSITORY, STAGING AREA AND WORKING DIRECTORY**

**CREATING A LOCAL REPOSITORY**

**ADDING TO THE STAGING AREA**

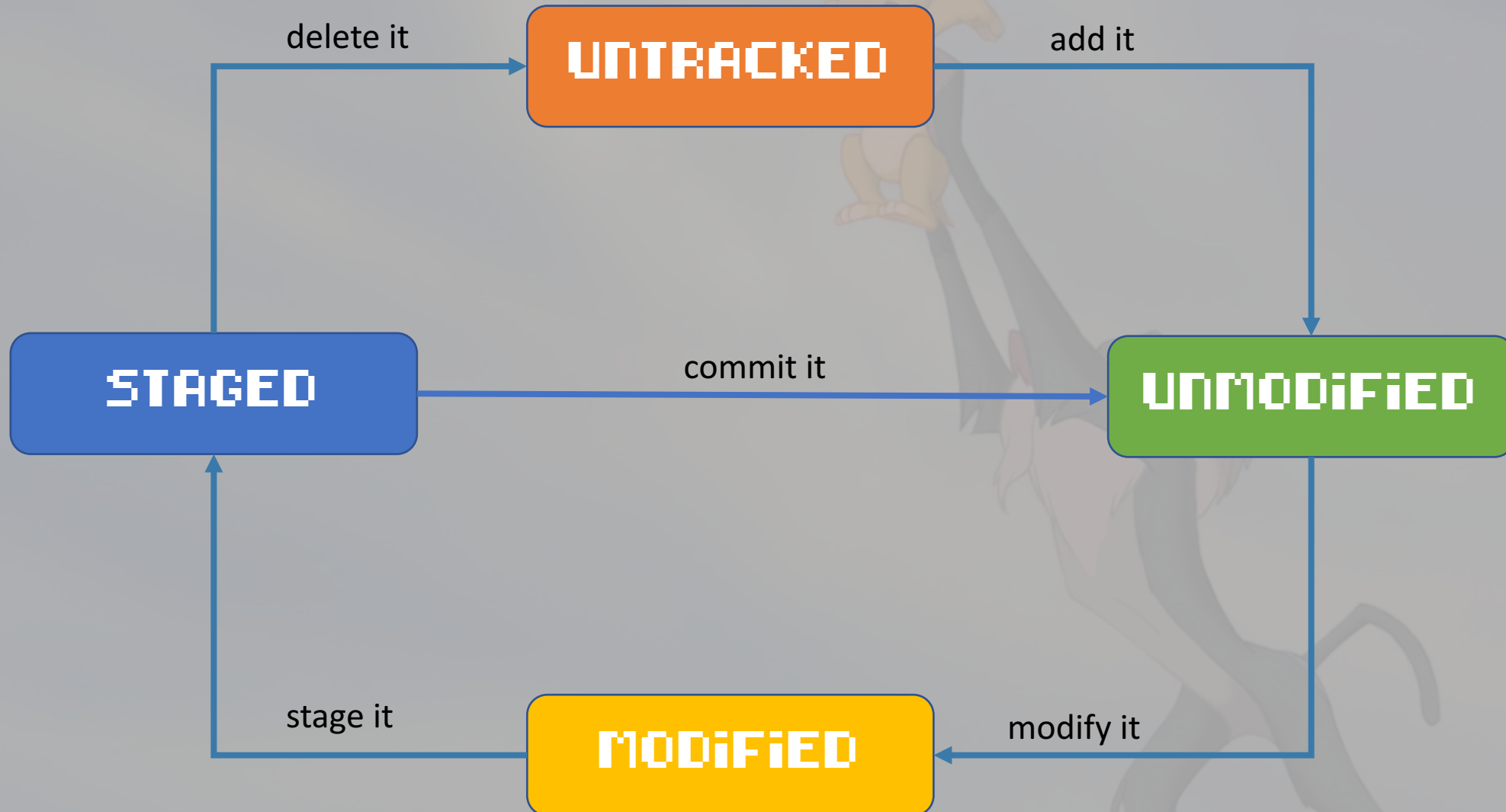
**COMMITTING TO THE REPOSITORY**

**BRANCHES AND REMOTE REPOSITORIES**

**PUSH, PULL, MERGE AND REBASE**



# FILE STATUS LIFECYCLE





# COMMITS ARE LIKE A BLOCKCHAIN

SNAPSHOT "A"

SNAPSHOT "B"

SNAPSHOT "C"

commit ca5258...	
author	henri
parent	
This is my first commit.	

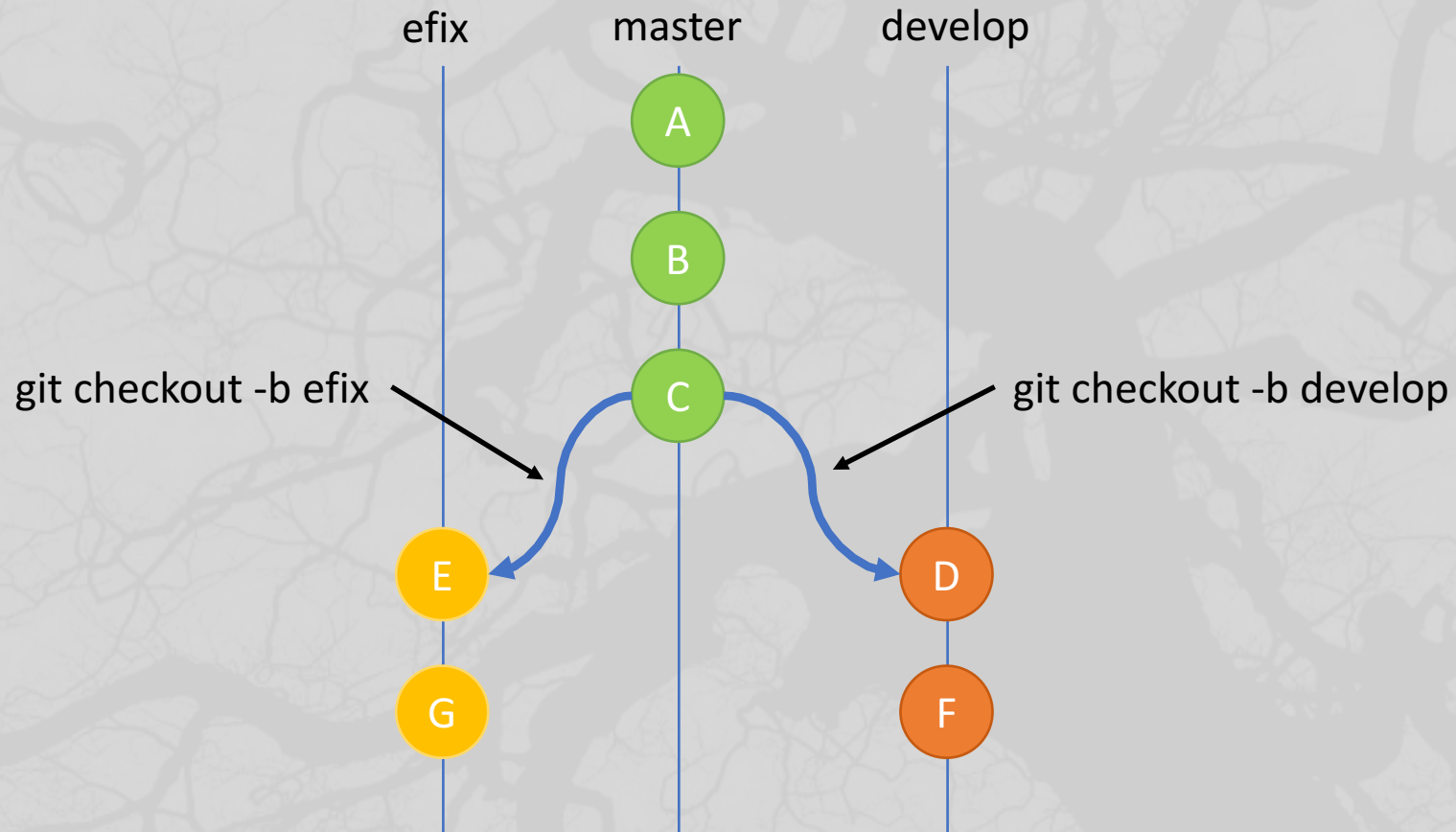


commit 1a3d43...	
author	henri
parent	ca5258...
And my second commit	




commit b9d344...	
author	henri
parent	1a3d43...
Final commit	

# BRANCHES

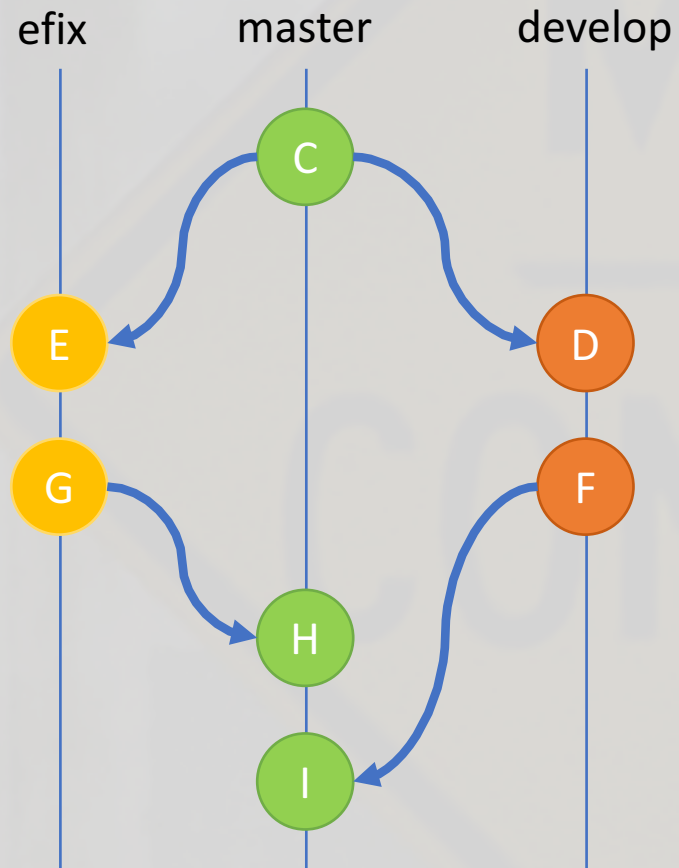


# BRANCHECEPTION?

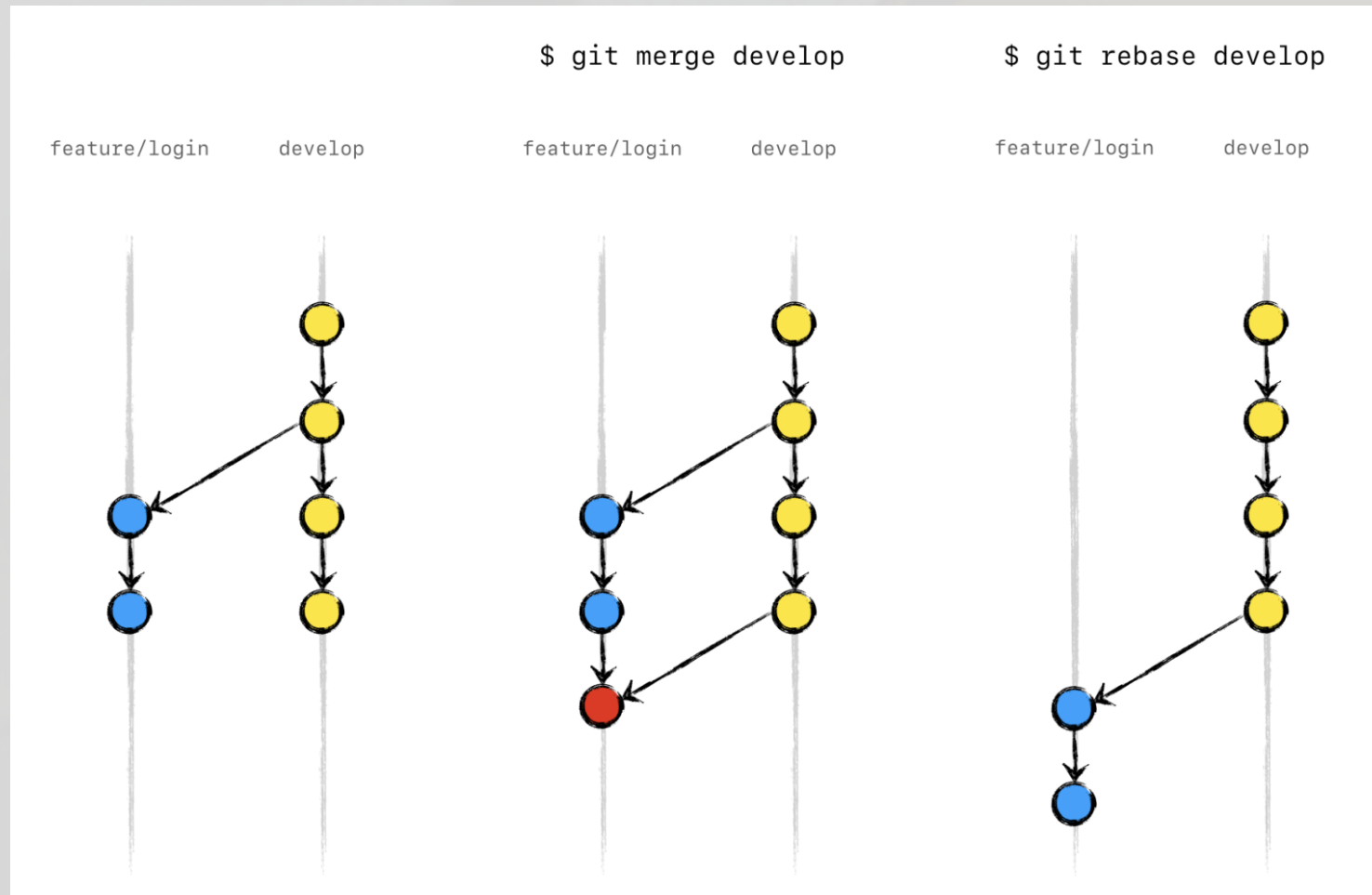


answered Dec 24 '13 at 6:04  
 minas  
547 ● 7 ● 15

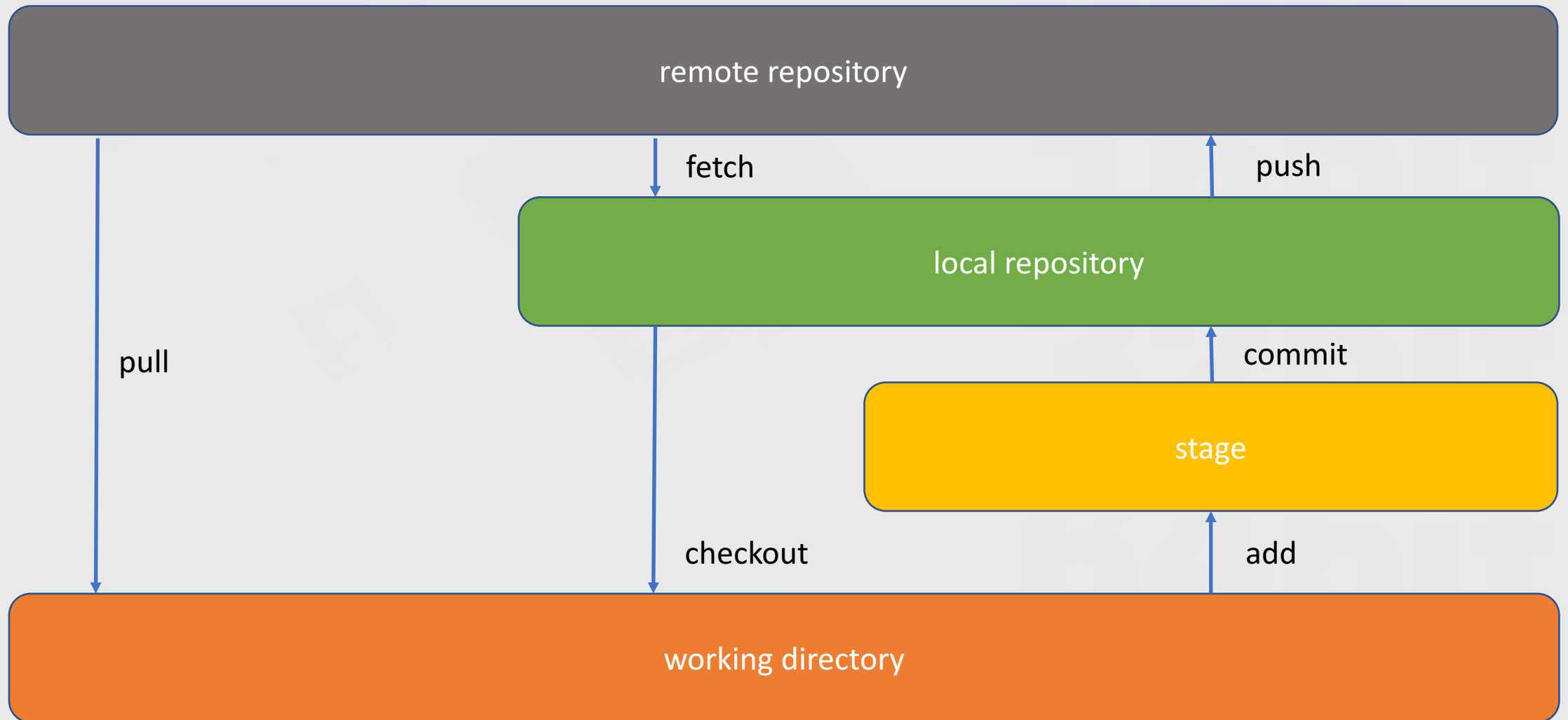
# MERGING



# MERGE OR REBASE ?



# REPOS AND ACTIONS

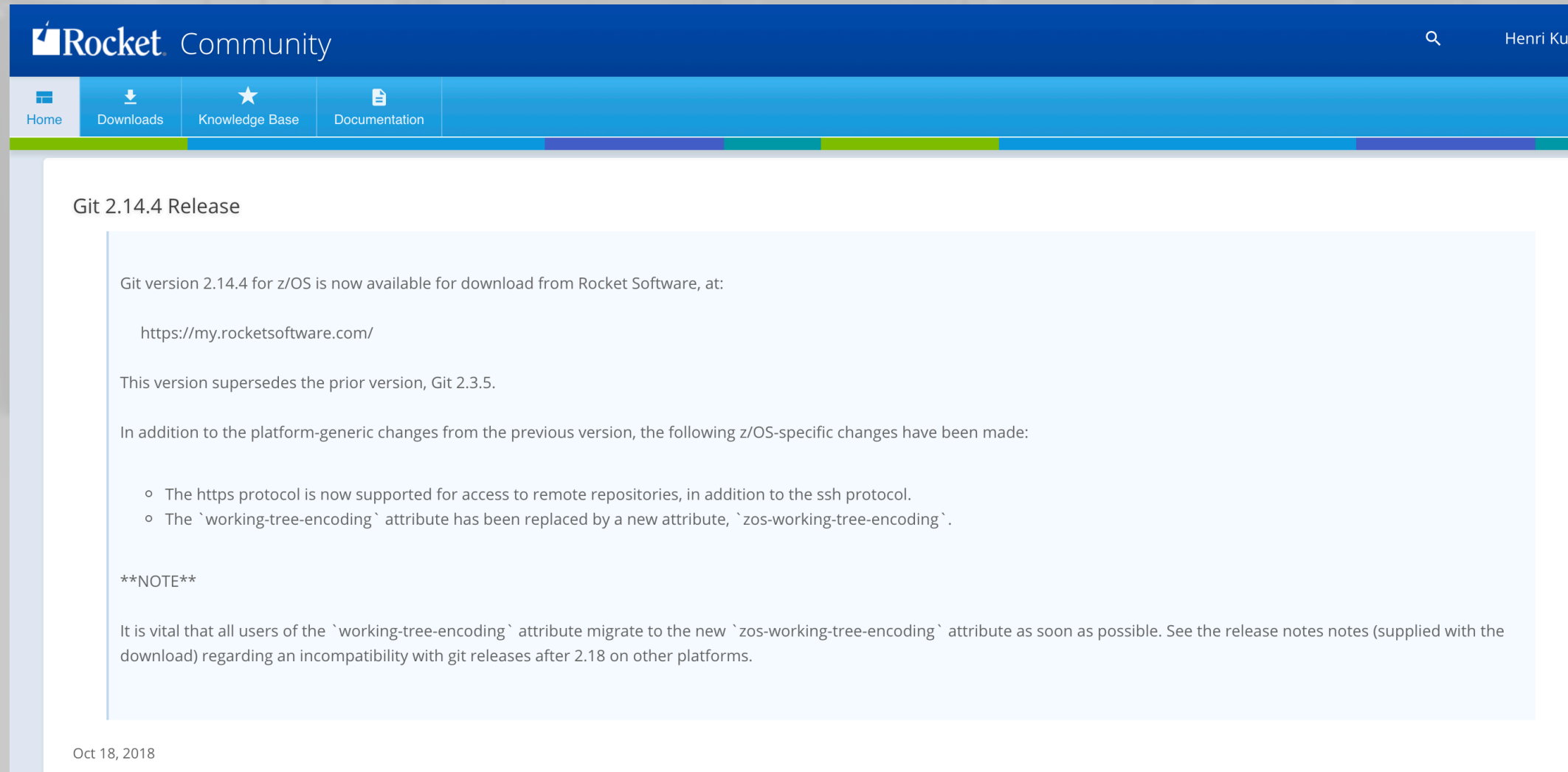


# GIT BASIC CONCEPTS...



DEMO  
TIME

# RUNNING GIT ON Z/OS



**Rocket** Community 🔍 Henri Ku

Home Downloads Knowledge Base Documentation

## Git 2.14.4 Release

Git version 2.14.4 for z/OS is now available for download from Rocket Software, at:

<https://my.rocketsoftware.com/>

This version supersedes the prior version, Git 2.3.5.

In addition to the platform-generic changes from the previous version, the following z/OS-specific changes have been made:

- The https protocol is now supported for access to remote repositories, in addition to the ssh protocol.
- The ``working-tree-encoding`` attribute has been replaced by a new attribute, ``zos-working-tree-encoding``.

**\*\*NOTE\*\***

It is vital that all users of the ``working-tree-encoding`` attribute migrate to the new ``zos-working-tree-encoding`` attribute as soon as possible. See the release notes notes (supplied with the download) regarding an incompatibility with git releases after 2.18 on other platforms.

Oct 18, 2018



# INSTALLATION IS EPLS...

12 Lines

Embed

Download ZIP



Download ZIP

100% Success

**GET AN ACCOUNT AT THE GOOD PEOPLE OF ROCKET**  
**DOWNLOAD GIT, BASH, PEARL AND GZIP**  
**DOWNLOAD THE INSTALLER-SCRIPT**  
**PUT THEM ALL IN ONE DIRECTORY**  
**RUN THAT INSTALLER SCRIPT (ROOT MAY BE REQ.)**

<https://gist.github.com/wizardofzos/897b243d4cbe9fbc471ec1396fbbe174>

<https://my.rocketsoftware.com>

# ALWAYS BE CAREFULL!!!

```
IBMUSER:/pr j/rocket/gitstuff: >./install.sh
```

```

                                     ffffffffffffffff
                                     f::::::::::::::::::f
                                     f::::::::::::::::::f
                                     f:::::ffffffff:::::f
ZZZZZZZZZZZZZZZZZZ  ooooooooooooo  mmmmmmm  mmmmmmm  f:::::f      ffffffgggggggggg  ggggg
Z::::::::::::::::::Z oo::::::::::::oo  mm::::::::m  m:::::mm  f:::::f      g::::::::ggg:::::g
Z::::::::::::::::::Z o:::::::::::::om:::::::::mm::::::::mf:::::fffff      g::::::::::::::::::g
ZZZZZZZZ::::::::::Z o:::::ooooo:::::om:::::::::mf:::::fffff      g:::::ggggg:::::gg
      Z:::::Z      o::::o      o::::om:::::mmm:::::mmm:::::mf:::::fffff      g:::::g      g:::::g
      Z:::::Z      o::::o      o::::om:::::m  m::::m  m::::mf:::::fffff      g:::::g      g:::::g
      Z:::::Z      o::::o      o::::om:::::m  m::::m  m::::m  f:::::f      g:::::g      g:::::g
      Z:::::Z      o::::o      o::::om:::::m  m::::m  m::::m  f:::::f      g:::::g      g:::::g
      Z:::::ZZZZZZZZo:::::ooooo:::::om:::::m  m::::m  m::::mf:::::fffff      g:::::ggggg:::::g
      Z:::::ZO:::::om:::::m  m::::m  m::::mf:::::fffff      g::::::::::::::::::g
Z::::::::::::::::::Z oo::::::::::::oo  m::::m  m::::m  m::::mf:::::fffff      gg::::::::::::gg
ZZZZZZZZZZZZZZZZZZ  ooooooooooooo  mmmmmmm  mmmmmmm  mmmmmmfffffff      gggggggg:::::g
                                     g:::::g
                                     gggggg      g:::::g
      g:::::gg  gg:::::g
      g:::::ggg:::::g
      gg:::::::::g
      ggg:::::ggg
      gggggg

```

Just imagine what could have happened here now.  
You just executed a script from the internet.  
As 'root'!. And did not bother to check it ??

use the --notstupid flag next time

# THINGS TO TAKE INTO ACCOUNT

**ENCODING: EBCDIC/ASCII STUFF**

**.GITATTRIBUTES IS YOUR FRIEND**

**SETUP FILE TAGGING / AUTOTAG!!**

**SETUP YOUR SSH-KEYS FOR PASSWORDLESS GIT**

# WHAT CAN GIT ON Z DO?

**MANAGE YOUR USS-ENVIRONMENT**

**MANAGE YOUR TRADITIONAL MVS DATASETS**

**ACT AS A DISTRIBUTION TOOL**

**MAKE THE PLATFORM MORE ACCESSIBLE**

**CAN EVEN DO PRESENTATIONS FROM USS TO WEB!**

# DEMO : ZIGI

## ISPF-GIT-INTERFACE

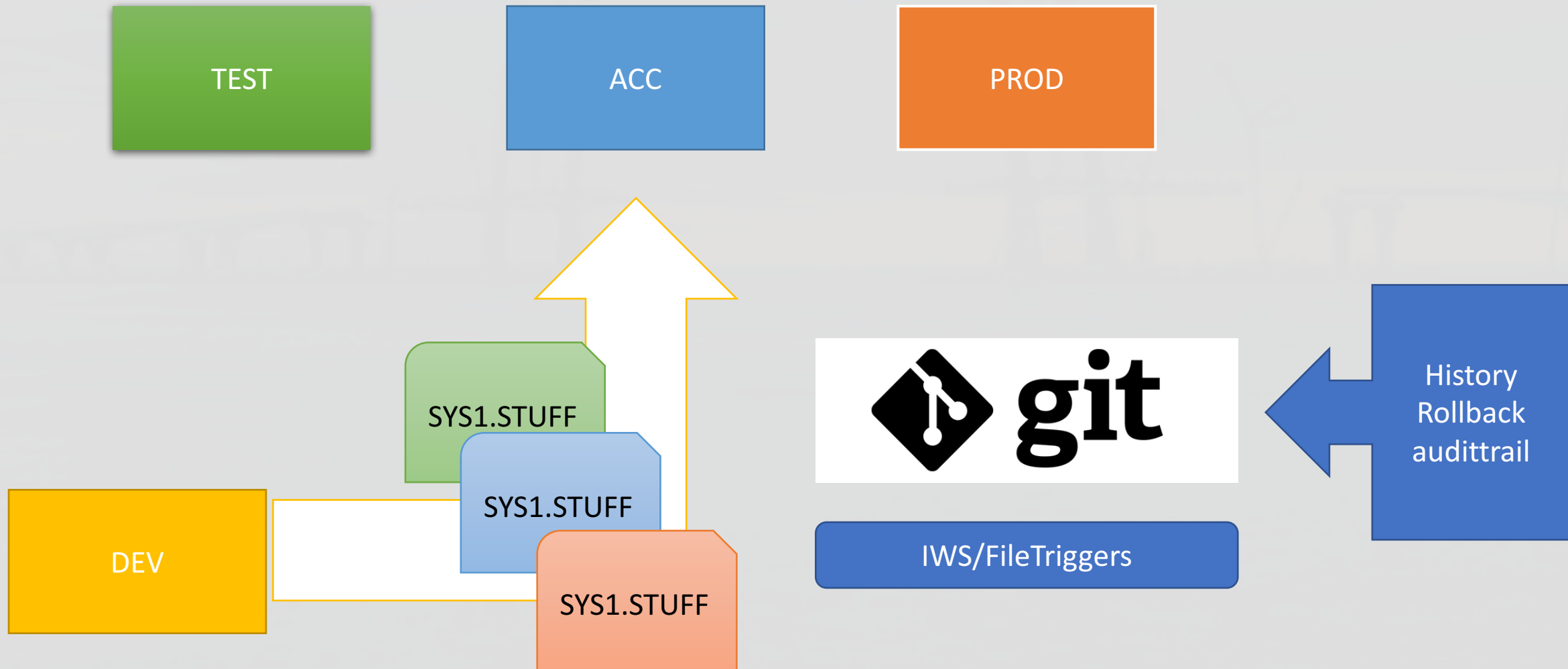
```
—
B          ZIGI v1.0 alpha
C  Member or PDS to add : 'ZDD.PROD.ISPCLIB(ZGADD)'
C  Current git repo path : /prj/gseuk
Z  Short Commit mesage  : This commit is awesome
—
—  Library or member is added to repo and if it has a 'remote'
—  it will be pushed, make sure to set user.email and user.name
—
—          ENTER or PF3 to continue
—
—                                     @wizardofzos 2018
```



# PRESENTATIONS FROM GIT



# WORK IN PROGRESS



# We want your feedback!

- Please submit your feedback online at ....
  - <http://conferences.gse.org.uk/2018/feedback/OA>
- Paper feedback forms are also available from the Chair person
- This session is **OA**

