



VM Workshop Presentation

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Ten Statement git

Next- MUSICAL OVERTURE

Aw...

We Love The git

Give Us Some git

Hello World

I am Paul Flint, Director of the
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(BOSI)

- Recovering Systems Security Consultant
- Disaster Recovery Specialist
- Vita <http://docbox.flint.com>

Housekeeping

- In order to fully participate in this presentation you will need:
 - A quiet cell phone
 - A laptop with internet connection running Debian or a derivative. (I have a few with me...)
 - House rules are that If you win a prize you cannot consume it in the room.

Talk Concept

In my life I have been fortunate to travel to non English speaking places. Despite language barriers I learned that if you know a few local language phrases you can get by.

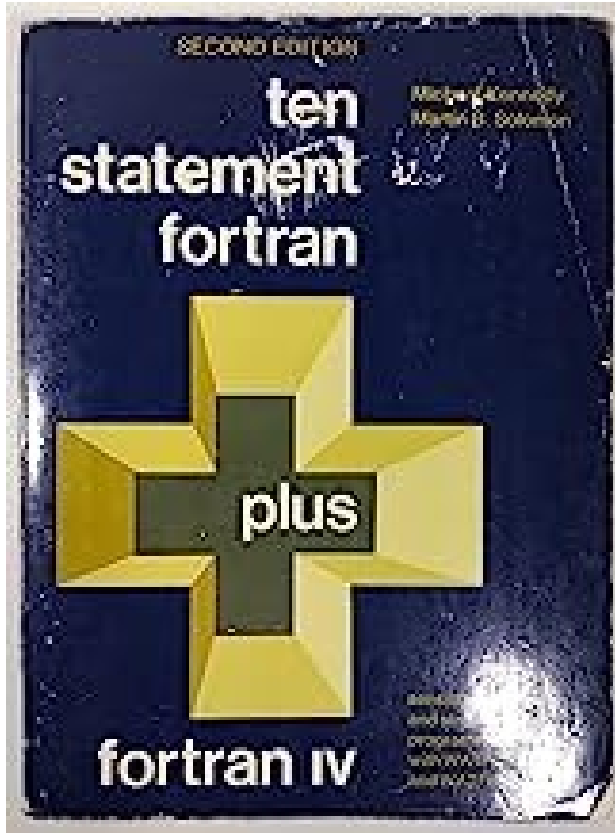
Examples include:

Hello

How much is this?

Where is the bathroom?

Thus the basis of this Presentation is...



I took a FORTRAN course at Georgetown University, and this is the book they used...

Goal of this presentation
is to show you how to
use git to preserve your
software work product.

The Five Most Hated Words In ADP

1. DID
2. YOU
3. BACK
4. IT
5. UP ?

First and Foremost, GIT Is About
Software Survival!

About GIT...

- In 2005 Bitkeeper revoked its license for Linux kernel development.
- Under pressure, git is immediately developed by the open source community, this effort is spear-headed by Linus Torvalds for ongoing development of the Linux kernel.
- Released later in 2005, it is a bit of understated masterpiece...

Scope Limit

- Git can be used for but not in this discussion:
 - Binary Backup
 - Code reconciliation
 - Project Control
 - Change and Configuration Management
 - World Domination...
- I just want to save your software...

Git in a Nutshell

- There are two parts to git:
 - Git Commands
 - Git Repositories
- These are always used together!
- Your data is what git stores in repositories

Git Repositories

- Your work is what git stores in repositories
- There are two types of repositories
 - Local (always)
 - Remote (cloud based)
- Local repository is always there
- There are various cloud repository hosts. These include...

Cloud repositories for git

- Bitbucket
- GitLab
- Perforce
- Beanstalk
- Amazon AWS CodeCommit
- Codebase
- Codeburg
- SourceForge

GitHub – 800 Pound Gorilla

History

- Originally a 2007 startup
- 2014 Blacklisted by Russia
- Acquired by Micro\$oft in 2018

github.com

- We will use github.com as an example
 - There are differences between various remote repositories
- Github.com has some unique security features
 - These are not open source
- The GitHub interface is not entirely standard, but the commands we use are...

The Ten Statements

- clone
- init
- add
- commit
- status
- remote
- push
- pull
- revert
- log

1. Init

git init

- Init creates a hidden local directory called “.git”
- Wise folks stay out of this local repository
- If cloning no need to init...
- It begins with init

2. Clone

```
git clone git@github.com:<userid>/<repository>
```

- Downloads remote repository
- You will learn faster by cloning
- If cloning no need to init.
- If all else fails download the zip

The Best Baby Step

3. Add

```
git add <filespec>
```

<filespec> can be:

- Individual File
- Range of Files
- Type of file
- Directory
- *.sh
- (The Dreaded) *.*

4. commit

```
git commit -m "description"
```

A Commit records and summarizes the changes to your repository

“Description” can be:

- Version Number
- Description Text
- Criticism

“Description” should be:

- Process Related
- Constructive
- A Public Comment

5. Status

`git status`

- Shows you what is going on in both the local and remote repository.

8. Remote

```
git remote -v
```

- Tells you if you are in a repository
- Tells you what hosts your repository has been saved to
- A way to test git's capability to transfer to github
- If public private key stuff is working, use “gh auth login”

6. Push

`git push`

- Updates the remote repository
 - As a registered user of a repository

7. Pull

```
git pull
```

- Pull delivers code to your local repository and workplace from the remote cloud repository.

9. Restore

```
git restore <filespec>
```

- Recover from local backup.
- Alternative to renaming local repository and cloning again...
- Not a mainstream action.

10. Log

`git log`

- Shows changes in repositories
- Changes in reverse chronological order
 - Newest is first...

Everyone runs a git repository.

- The Git Client Origin and Master files
- The Git repository server(s)
 - Local
 - Remote (Cloud(s))

OPTIONS

- .gitignore
- git ls-files
- git branch
- git checkout
- gh – A useful GitHub extension

gitignore

.gitignore

- This is not a command
- A hidden text file in your directory that tells git what files to not involve with the git process.
- I recommend stringent use of this to avoid “git noise”

git branch

```
git branch <new name>
```

- This creates a new branch with a new name. Edits, adds, commits, etc will only be in the branch that you're currently working with.
- If no <new name> given then git branch returns current branch.
- Good branch names could be:
 1. Development
 2. Production
 3. Test

Sound familiar?

***Everyone Has A Test System
Some Are Lucky Enough To Have
A Production System As Well***

...The Wit and Wisdom of Dave-the-Geek

git checkout

```
git checkout <branch name>
```

- checkout switches which branch you are working on.

gh

- gh is an open source extension of the basic git command set.
- `gh auth login` – gets you on github.com easily after you are registered...

git revert

```
git revert <file>
```

- Allows you to recover a file from the repository.
- Backup locally and use with caution.
- Alternatively, rename current directory and pull again.

The Dreaded Demonstration

- I have not written a Red Hat version of this demonstration.
- If you have a Debian based system, proceed.
- I have a few loaner laptops with me for those who wish to try to git...

The site to access this demo is:

<https://github.com/flintiii/tsg>

Use your browser...

Could There Be A git For VM?

- Write in Rexx?
- Portability within IBM code space
- A tool for Change & Configuration Management?
- BOSI could help.

This could be a discussion point...

BOSI Power Point Heros!

These folks >

Shared with me the
Tedious Process of
Turning Ten Statement
Git into a presentation

- Judith Bramlage
- Kevin Cole
- Chris Roland
- Joseph Hart

With Special Thanks to:

Dave “The Geek” Lafrenier

Thank you for your patience!

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Questions, Answers, Observations
and/or Criticism Shall Be Rewarded

