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git diff,git apply和patch小问题三则

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使用补丁维护git仓库时遇到的小问题

1、包含二进制文件时的diff和apply

```
1  foo$ git diff HEAD^..HEAD > foobar.patch
2
3  bar$ git apply foobar.patch
4  ...
5  error: cannot apply binary patch to 'root/images/back_disabled.png' without full i
6  error: root/images/back_disabled.png: patch does not apply
7  ...
```

git apply提示错误,无法应用补丁。是因为普通的diff格式文件是不支持二进制文件的,新增的或者发生变化的二进制文件无法在diff文件中体现。git扩展了diff使其支持二进制格式,生成补丁时指定选项--binary即可,生成的文件可以顺利的git apply。

```
1  $ git diff HEAD^..HEAD --binary > foobar.patch
```

2、git apply的空白问题

```
1  $ git apply foobar.patch
2  foobar.patch:271: trailing whitespace.
3  foobar.patch:465: space before tab in indent.
4      .paging_full_numbers a.paginate_active {
5  warning: squelched 1705 whitespace errors
6  warning: 1710 lines add whitespace errors.
```

看看git apply(1)手册上怎么说:

– -whitespace=

When applying a patch, detect a new or modified line that has whitespace errors. What are considered whitespace errors is controlled by core.whitespace configuration. By default, trailing whitespaces (including lines that solely consist of whitespaces)

and a space character that is immediately followed by a tab character inside the initial indent of the line are considered whitespace errors.

By default, the command outputs warning messages but applies the patch. When git-apply is used for statistics and not applying a patch, it defaults to nowarn.

You can use different values to control this behavior:

nowarn — turns off the trailing whitespace warning.

warn — outputs warnings for a few such errors, but applies the patch as-is (default).

fix — outputs warnings for a few such errors, and applies the patch after fixing them (strip is a synonym — the tool used to consider only trailing whitespace characters as errors, and the fix involved stripping them, but modern gits do more).

error — outputs warnings for a few such errors, and refuses to apply the patch.

error-all — is similar to error but shows all errors.

git apply应用补丁时会检测空白错误,默认情况下,尾部空白,包含空白的空行,初始tab缩进之后紧跟的空白字符会被认为是错误。

处理这个错误的行为由命令行参数`--whitespace`或者`core.whitespace`配置来控制,共有5种可能的动作:

- `nowarn`

关闭错误提示

- warn
输出部分错误提示,但完整的应用补丁,不会处理错误,这是默认动作。
- fix
输出部分错误,修正错误后应用补丁
- error
输出部分错误,拒绝应用补丁。
- error-all
输出全部的错误,拒绝应用补丁。

3、patch命令无法处理含有空白的文件名

```
1 $ patch p1 < foobar.patch
2 can't find file to patch at input line 716
3 Perhaps you used the wrong -p or --strip option?
4 The text leading up to this was:
5 -----
6 |diff --git a/root/images/Sorting icons.psd b/root/images/Sorting icons.psd
7 |new file mode 100644
8 |index 00000000..53b2e06
9 |Binary files /dev/null and b/root/images/Sorting icons.psd differ
10 -----
11 File to patch:
12 Skip this patch? [y]
```

因为diff文件中的文件名含有空格,patch命令无法应用这样的diff补丁。应该避免使用带有特殊字符的文件名。当然patch也无法引用二进制diff补丁,使用普通diff格式生成含有二进制文件的补丁时,patch会应用成功,但生成的二进制文件是空的。

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科学必须始于神话,并伴随着对神话的批判。——卡尔·波普尔

分享到:

One thought on “git diff,git apply和patch小问题三则”

September 23, 2014 at 09:37



kangear

文章讲的很全，但是有些时候比如bin的文件，为了减小容量就是要做成不包含bin文件的patch，怎么才能顺利的打上补丁呢？关于bin文件，手动再添加。

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