**Домашнее задание к занятию**

**«2.4. Инструменты Git»**

1. Найти полный хеш и комментарий коммита, хеш которого начинается на aefea.

#git log --oneline | grep aefea

aefead220 Update GHANGELOG.md

#git show aefea

|  |
| --- |
| commit aefead2207ef7e2aa5dc81a34aedf0cad4c32545 |
|  |

|  |
| --- |
| Author: Alisdair McDiarmid <alisdair@users.noreply.github.com> |
|  |

|  |
| --- |
| Date: Thu Jun 18 10:29:58 2020 -0400 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| Update CHANGELOG.md |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| diff --git a/CHANGELOG.md b/CHANGELOG.md |
|  |

|  |
| --- |
| index 86d70e3e0..588d807b1 100644 |
|  |

|  |
| --- |
| --- a/CHANGELOG.md |
|  |

|  |
| --- |
| +++ b/CHANGELOG.md |
|  |

|  |
| --- |
| @@ -27,6 +27,7 @@ BUG FIXES: |
|  |

|  |
| --- |
| \* backend/s3: Prefer AWS shared configuration over EC2 metadata credentials by default ([#25134](https://github.com/hashicorp/terraform/issues/25134)) |
|  |

|  |
| --- |
| \* backend/s3: Prefer ECS credentials over EC2 metadata credentials by default ([#25134](https://github.com/hashicorp/terraform/issues/25134)) |
|  |

|  |
| --- |
| \* backend/s3: Remove hardcoded AWS Provider messaging ([#25134](https://github.com/hashicorp/terraform/issues/25134)) |
|  |

|  |
| --- |
| +\* command: Fix bug with global `-v`/`-version`/`--version` flags introduced in 0.13.0beta2 [GH-25277] |
|  |

|  |
| --- |
| \* command/0.13upgrade: Fix `0.13upgrade` usage help text to include options ([#25127](https://github.com/hashicorp/terraform/issues/25127)) |
|  |

|  |
| --- |
| \* command/0.13upgrade: Do not add source for builtin provider ([#25215](https://github.com/hashicorp/terraform/issues/25215)) |
|  |

\* command/apply: Fix bug which caused Terraform to silently exit on Windows when using absolute plan path ([#25233](<https://github.com/hashicorp/terraform/issues/25233)>)

1. Какому тегу соответствует коммит 85024d3?

#git show 85024d3

|  |
| --- |
| commit 85024d3100126de36331c6982bfaac02cdab9e76 |
|  |

|  |
| --- |
| Author: tf-release-bot <terraform@hashicorp.com> |
|  |

|  |
| --- |
| Date: Thu Mar 5 20:56:10 2020 +0000 |
|  |

|  |
| --- |
| v0.12.23 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| diff --git a/CHANGELOG.md b/CHANGELOG.md |
|  |

|  |
| --- |
| index 1a9dcd0f9..faedc8bf4 100644 |
|  |

|  |
| --- |
| --- a/CHANGELOG.md |
|  |

|  |
| --- |
| +++ b/CHANGELOG.md |
|  |

|  |
| --- |
| @@ -1,4 +1,4 @@ |
|  |

|  |
| --- |
| -## 0.12.23 (Unreleased) |
|  |

|  |
| --- |
| +## 0.12.23 (March 05, 2020) |
|  |

|  |
| --- |
| ## 0.12.22 (March 05, 2020) |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| ENHANCEMENTS: |
|  |

|  |
| --- |
| diff --git a/version/version.go b/version/version.go |
|  |

|  |
| --- |
| index 33ac86f5d..bcb6394d2 100644 |
|  |

|  |
| --- |
| --- a/version/version.go |
|  |

|  |
| --- |
| +++ b/version/version.go |
|  |

|  |
| --- |
| @@ -16,7 +16,7 @@ var Version = "0.12.23" |
|  |

|  |
| --- |
| // A pre-release marker for the version. If this is "" (empty string) |
|  |

|  |
| --- |
| // then it means that it is a final release. Otherwise, this is a pre-release |
|  |

|  |
| --- |
| // such as "dev" (in development), "beta", "rc1", etc. |
|  |

|  |
| --- |
| -var Prerelease = "dev" |
|  |

|  |
| --- |
| +var Prerelease = "" |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| // SemVer is an instance of version.Version. This has the secondary |

// benefit of verifying during tests and init time that our version is a

1. Сколько родителей у коммита b8d720? Написать их хеши.

2

git show b8d720

|  |
| --- |
| commit b8d720f8340221f2146e4e4870bf2ee0bc48f2d5 |
|  |

|  |
| --- |
| Merge: **56cd7859e** **9ea88f22f** |
|  |

|  |
| --- |
| Author: Chris Griggs <cgriggs@hashicorp.com> |
|  |

|  |
| --- |
| Date: Tue Jan 21 17:45:48 2020 -0800 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| Merge pull request #23916 from hashicorp/cgriggs01-stable |
|  |

|  |
| --- |
|  |
|  |

[Cherrypick] community links

1. Перечислить хеши и комментарии всех коммитов которые были сделаны между тегами v0.12.23 и v0.12.24.

|  |
| --- |
| $git log --pretty=oneline v0.12.23...v0.12.24 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| 33ff1c03bb960b332be3af2e333462dde88b279e v0.12.24 |
|  |

|  |
| --- |
| b14b74c4939dcab573326f4e3ee2a62e23e12f89 [Website] vmc provider links |
|  |

|  |
| --- |
| 3f235065b9347a758efadc92295b540ee0a5e26e Update CHANGELOG.md |
|  |

|  |
| --- |
| 6ae64e247b332925b872447e9ce869657281c2bf registry: Fix panic when server is unreachable |
|  |

|  |
| --- |
| 5c619ca1baf2e21a155fcdb4c264cc9e24a2a353 website: Remove links to the getting started guide's old location |
|  |

|  |
| --- |
| 06275647e2b53d97d4f0a19a0fec11f6d69820b5 Update CHANGELOG.md |
|  |

|  |
| --- |
| d5f9411f5108260320064349b757f55c09bc4b80 command: Fix bug when using terraform login on Windows |
|  |

|  |
| --- |
| 4b6d06cc5dcb78af637bbb19c198faff37a066ed Update CHANGELOG.md |
|  |

|  |
| --- |
| dd01a35078f040ca984cdd349f18d0b67e486c35 Update CHANGELOG.md |
|  |

225466bc3e5f35baa5d07197bbc079345b77525e Cleanup after v0.12.23 release

1. Найти коммит, в котором была создана функция func providerSource, ее определение в коде выглядит так func providerSource(...) (вместо троеточего перечислены аргументы).

|  |
| --- |
| $git log -S "func providerSource" --oneline |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| 5af1e6234 main: Honor explicit provider\_installation CLI config when present |
|  |

|  |
| --- |
| 8c928e835 main: Consult local directories as potential mirrors of providers |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| $git show 8c928e835 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| commit 8c928e83589d90a031f811fae52a81be7153e82f |
|  |

|  |
| --- |
| Author: Martin Atkins <mart@degeneration.co.uk> |
|  |

|  |
| --- |
| Date: Thu Apr 2 18:04:39 2020 -0700 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| main: Consult local directories as potential mirrors of providers |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| This restores some of the local search directories we used to include when |
|  |

|  |
| --- |
| searching for provider plugins in Terraform 0.12 and earlier. The |
|  |

|  |
| --- |
| directory structures we are expecting in these are different than before, |
|  |

|  |
| --- |
| so existing directory contents will not be compatible without |
|  |

|  |
| --- |
| restructuring, but we need to retain support for these local directories |
|  |

|  |
| --- |
| so that users can continue to sideload third-party provider plugins until |
|  |

|  |
| --- |
| the explicit, first-class provider mirrors configuration (in CLI config) |
|  |

|  |
| --- |
| is implemented, at which point users will be able to override these to |
|  |

|  |
| --- |
| whatever directories they want. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| This also includes some new search directories that are specific to the |
|  |

|  |
| --- |
| operating system where Terraform is running, following the documented |
|  |

|  |
| --- |
| layout conventions of that platform. In particular, this follows the |
|  |

|  |
| --- |
| XDG Base Directory specification on Unix systems, which has been a |
|  |

|  |
| --- |
| somewhat-common request to better support "sideloading" of packages via |
|  |

|  |
| --- |
| standard Linux distribution package managers and other similar mechanisms. |
|  |

|  |
| --- |
| While it isn't strictly necessary to add that now, it seems ideal to do |
|  |

|  |
| --- |
| all of the changes to our search directory layout at once so that our |
|  |

|  |
| --- |
| documentation about this can cleanly distinguish "0.12 and earlier" vs. |
|  |

|  |
| --- |
| "0.13 and later", rather than having to document a complex sequence of |
|  |

|  |
| --- |
| smaller changes. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| Because this behavior is a result of the integration of package main with |
|  |

|  |
| --- |
| package command, this behavior is verified using an e2etest rather than |
|  |

|  |
| --- |
| a unit test. That test, TestInitProvidersVendored, is also fixed here to |
|  |

|  |
| --- |
| create a suitable directory structure for the platform where the test is |
|  |

|  |
| --- |
| being run. This fixes TestInitProvidersVendored. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| diff --git a/command/e2etest/init\_test.go b/command/e2etest/init\_test.go |
|  |

|  |
| --- |
| index 9fcddbfb7..3031695a7 100644 |
|  |

|  |
| --- |
| --- a/command/e2etest/init\_test.go |
|  |

|  |
| --- |
| +++ b/command/e2etest/init\_test.go |
|  |

|  |
| --- |
| @@ -100,6 +100,16 @@ func TestInitProvidersVendored(t \*testing.T) { |
|  |

|  |
| --- |
| tf := e2e.NewBinary(terraformBin, fixturePath) |
|  |

|  |
| --- |
| defer tf.Close() |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| + // Our fixture dir has a generic os\_arch dir, which we need to customize |
|  |

|  |
| --- |
| + // to the actual OS/arch where this test is running in order to get the |
|  |

|  |
| --- |
| + // desired result. |
|  |

|  |
| --- |
| + fixtMachineDir := tf.Path("terraform.d/plugins/registry.terraform.io/hashicorp/null/1.0.0+local/os\_arch") |
|  |

|  |
| --- |
| + wantMachineDir := tf.Path("terraform.d/plugins/registry.terraform.io/hashicorp/null/1.0.0+local/", fmt.Sprintf("%s\_%s", runtime.GOOS, runtime.GOARCH)) |
|  |

|  |
| --- |
| + err := os.Rename(fixtMachineDir, wantMachineDir) |
|  |

|  |
| --- |
| + if err != nil { |
|  |

|  |
| --- |
| + t.Fatalf("unexpected error: %s", err) |
|  |

|  |
| --- |
| + } |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| stdout, stderr, err := tf.Run("init") |
|  |

|  |
| --- |
| if err != nil { |
|  |

|  |
| --- |
| t.Errorf("unexpected error: %s", err) |
|  |

|  |
| --- |
| diff --git a/main.go b/main.go |
|  |

|  |
| --- |
| index 762d566a5..f9a3b9cf8 100644 |
|  |

|  |
| --- |
| --- a/main.go |
|  |

|  |
| --- |
| +++ b/main.go |
|  |

|  |
| --- |
| @@ -17,7 +17,6 @@ import ( |
|  |

|  |
| --- |
| "github.com/hashicorp/terraform/command/format" |
|  |

|  |
| --- |
| "github.com/hashicorp/terraform/helper/logging" |
|  |

|  |
| --- |
| "github.com/hashicorp/terraform/httpclient" |
|  |

|  |
| --- |
| - "github.com/hashicorp/terraform/internal/getproviders" |
|  |

|  |
| --- |
| "github.com/hashicorp/terraform/version" |
|  |

|  |
| --- |
| "github.com/mattn/go-colorable" |
|  |

|  |
| --- |
| "github.com/mattn/go-shellwords" |
|  |

|  |
| --- |
| @@ -169,7 +168,7 @@ func wrappedMain() int { |
|  |

|  |
| --- |
| // direct from a registry. In future there should be a mechanism to |
|  |

|  |
| --- |
| // configure providers sources from the CLI config, which will then |
|  |

|  |
| --- |
| // change how we construct this object. |
|  |

|  |
| --- |
| - providerSrc := getproviders.NewRegistrySource(services) |
|  |

|  |
| --- |
| + providerSrc := providerSource(services) |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| // Initialize the backends. |
|  |

|  |
| --- |
| backendInit.Init(services) |
|  |

|  |
| --- |
| diff --git a/provider\_source.go b/provider\_source.go |
|  |

|  |
| --- |
| new file mode 100644 |
|  |

|  |
| --- |
| index 000000000..9524e0985 |
|  |

|  |
| --- |
| --- /dev/null |
|  |

|  |
| --- |
| +++ b/provider\_source.go |
|  |

|  |
| --- |
| @@ -0,0 +1,89 @@ |
|  |

|  |
| --- |
| +package main |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| +import ( |
|  |

|  |
| --- |
| + "log" |
|  |

|  |
| --- |
| + "os" |
|  |

|  |
| --- |
| + "path/filepath" |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + "github.com/apparentlymart/go-userdirs/userdirs" |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + "github.com/hashicorp/terraform-svchost/disco" |
|  |

|  |
| --- |
| + "github.com/hashicorp/terraform/command/cliconfig" |
|  |

|  |
| --- |
| + "github.com/hashicorp/terraform/internal/getproviders" |
|  |

|  |
| --- |
| +) |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| +// providerSource constructs a provider source based on a combination of the |
|  |

|  |
| --- |
| +// CLI configuration and some default search locations. This will be the |
|  |

|  |
| --- |
| +// provider source used for provider installation in the "terraform init" |
|  |

|  |
| --- |
| +// command, unless overridden by the special -plugin-dir option. |
|  |

|  |
| --- |
| +func providerSource(services \*disco.Disco) getproviders.Source { |
|  |

|  |
| --- |
| + // We're not yet using the CLI config here because we've not implemented |
|  |

|  |
| --- |
| + // yet the new configuration constructs to customize provider search |
|  |

|  |
| --- |
| + // locations. That'll come later. |
|  |

|  |
| --- |
| + // For now, we have a fixed set of search directories: |
|  |

|  |
| --- |
| + // - The "terraform.d/plugins" directory in the current working directory, |
|  |

|  |
| --- |
| + // which we've historically documented as a place to put plugins as a |
|  |

|  |
| --- |
| + // way to include them in bundles uploaded to Terraform Cloud, where |
|  |

|  |
| --- |
| + // there has historically otherwise been no way to use custom providers. |
|  |

|  |
| --- |
| + // - The "plugins" subdirectory of the CLI config search directory. |
|  |

|  |
| --- |
| + // (thats ~/.terraform.d/plugins on Unix systems, equivalents elsewhere) |
|  |

|  |
| --- |
| + // - The "plugins" subdirectory of any platform-specific search paths, |
|  |

|  |
| --- |
| + // following e.g. the XDG base directory specification on Unix systems, |
|  |

|  |
| --- |
| + // Apple's guidelines on OS X, and "known folders" on Windows. |
|  |

|  |
| --- |
| + // |
|  |

|  |
| --- |
| + // Those directories are checked in addition to the direct upstream |
|  |

|  |
| --- |
| + // registry specified in the provider's address. |
|  |

|  |
| --- |
| + var searchRules []getproviders.MultiSourceSelector |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + addLocalDir := func(dir string) { |
|  |

|  |
| --- |
| + // We'll make sure the directory actually exists before we add it, |
|  |

|  |
| --- |
| + // because otherwise installation would always fail trying to look |
|  |

|  |
| --- |
| + // in non-existent directories. (This is done here rather than in |
|  |

|  |
| --- |
| + // the source itself because explicitly-selected directories via the |
|  |

|  |
| --- |
| + // CLI config, once we have them, \_should\_ produce an error if they |
|  |

|  |
| --- |
| + // don't exist to help users get their configurations right.) |
|  |

|  |
| --- |
| + if info, err := os.Stat(dir); err == nil && info.IsDir() { |
|  |

|  |
| --- |
| + log.Printf("[DEBUG] will search for provider plugins in %s", dir) |
|  |

|  |
| --- |
| + searchRules = append(searchRules, getproviders.MultiSourceSelector{ |
|  |

|  |
| --- |
| + Source: getproviders.NewFilesystemMirrorSource(dir), |
|  |

|  |
| --- |
| + }) |
|  |

|  |
| --- |
| + } else { |
|  |

|  |
| --- |
| + log.Printf("[DEBUG] ignoring non-existing provider search directory %s", dir) |
|  |

|  |
| --- |
| + } |
|  |

|  |
| --- |
| + } |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + addLocalDir("terraform.d/plugins") // our "vendor" directory |
|  |

|  |
| --- |
| + cliConfigDir, err := cliconfig.ConfigDir() |
|  |

|  |
| --- |
| + if err != nil { |
|  |

|  |
| --- |
| + addLocalDir(filepath.Join(cliConfigDir, "plugins")) |
|  |

|  |
| --- |
| + } |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + // This "userdirs" library implements an appropriate user-specific and |
|  |

|  |
| --- |
| + // app-specific directory layout for the current platform, such as XDG Base |
|  |

|  |
| --- |
| + // Directory on Unix, using the following name strings to construct a |
|  |

|  |
| --- |
| + // suitable application-specific subdirectory name following the |
|  |

|  |
| --- |
| + // conventions for each platform: |
|  |

|  |
| --- |
| + // |
|  |

|  |
| --- |
| + // XDG (Unix): lowercase of the first string, "terraform" |
|  |

|  |
| --- |
| + // Windows: two-level heirarchy of first two strings, "HashiCorp\Terraform" |
|  |

|  |
| --- |
| + // OS X: reverse-DNS unique identifier, "io.terraform". |
|  |

|  |
| --- |
| + sysSpecificDirs := userdirs.ForApp("Terraform", "HashiCorp", "io.terraform") |
|  |

|  |
| --- |
| + for \_, dir := range sysSpecificDirs.DataSearchPaths("plugins") { |
|  |

|  |
| --- |
| + addLocalDir(dir) |
|  |

|  |
| --- |
| + } |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + // Last but not least, the main registry source! We'll wrap a caching |
|  |

|  |
| --- |
| + // layer around this one to help optimize the several network requests |
|  |

|  |
| --- |
| + // we'll end up making to it while treating it as one of several sources |
|  |

|  |
| --- |
| + // in a MultiSource (as recommended in the MultiSource docs). |
|  |

|  |
| --- |
| + // This one is listed last so that if a particular version is available |
|  |

|  |
| --- |
| + // both in one of the above directories \_and\_ in a remote registry, the |
|  |

|  |
| --- |
| + // local copy will take precedence. |
|  |

|  |
| --- |
| + searchRules = append(searchRules, getproviders.MultiSourceSelector{ |
|  |

|  |
| --- |
| + Source: getproviders.NewMemoizeSource( |
|  |

|  |
| --- |
| + getproviders.NewRegistrySource(services), |
|  |

|  |
| --- |
| + ), |
|  |

|  |
| --- |
| + }) |
|  |

|  |
| --- |
| + |
|  |

|  |
| --- |
| + return getproviders.MultiSource(searchRules) |
|  |

+}

1. Найти все коммиты, в которых была изменена функция globalPluginDirs.

|  |
| --- |
| $git grep globalPluginDirs $(git rev-list --all) |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| 41cb0d1f5029f4d0dfb20d985394d72a6636251a:command/cliconfig/config\_unix.go: // FIXME: homeDir gets called from globalPluginDirs during init, before |
|  |

|  |
| --- |
| 41cb0d1f5029f4d0dfb20d985394d72a6636251a:commands.go: GlobalPluginDirs: globalPluginDirs(), |
|  |

|  |
| --- |
| 41cb0d1f5029f4d0dfb20d985394d72a6636251a:commands.go: helperPlugins := pluginDiscovery.FindPlugins("credentials", globalPluginDirs()) |
|  |

|  |
| --- |
| 41cb0d1f5029f4d0dfb20d985394d72a6636251a:plugins.go:// globalPluginDirs returns directories that should be searched for |
|  |

|  |
| --- |
| 41cb0d1f5029f4d0dfb20d985394d72a6636251a:plugins.go:func globalPluginDirs() []string { |
|  |

.....

1. Найти автора функции synchronizedWriters?

|  |
| --- |
| $git log -S "synchronizedWriters" |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| commit bdfea50cc85161dea41be0fe3381fd98731ff786 |
|  |

|  |
| --- |
| Author: James Bardin <j.bardin@gmail.com> |
|  |

|  |
| --- |
| Date: Mon Nov 30 18:02:04 2020 -0500 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| remove unused |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| commit fd4f7eb0b935e5a838810564fd549afe710ae19a |
|  |

|  |
| --- |
| Author: James Bardin <j.bardin@gmail.com> |
|  |

|  |
| --- |
| Date: Wed Oct 21 13:06:23 2020 -0400 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| remove prefixed io |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| The main process is now handling what output to print, so it doesn't do |
|  |

|  |
| --- |
| any good to try and run it through prefixedio, which is only adding |
|  |

|  |
| --- |
| extra coordination to echo the same data. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| commit 5ac311e2a91e381e2f52234668b49ba670aa0fe5 |
|  |

|  |
| --- |
| **Author: Martin Atkins <mart@degeneration.co.uk>** |
|  |

|  |
| --- |
| Date: Wed May 3 16:25:41 2017 -0700 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| main: synchronize writes to VT100-faker on Windows |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| We use a third-party library "colorable" to translate VT100 color |
|  |

|  |
| --- |
| sequences into Windows console attribute-setting calls when Terraform is |
|  |

|  |
| --- |
| running on Windows. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| colorable is not concurrency-safe for multiple writes to the same console, |
|  |

|  |
| --- |
| because it writes to the console one character at a time and so two |
|  |

|  |
| --- |
| concurrent writers get their characters interleaved, creating unreadable |
|  |

|  |
| --- |
| garble. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| Here we wrap around it a synchronization mechanism to ensure that there |
|  |

|  |
| --- |
| can be only one Write call outstanding across both stderr and stdout, |
|  |

|  |
| --- |
| mimicking the usual behavior we expect (when stderr/stdout are a normal |
|  |

|  |
| --- |
| file handle) of each Write being completed atomically. |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| $git show 5ac311e2a91e381e2f52234668b49ba670aa0fe5 |
|  |

|  |
| --- |
|  |
|  |

|  |
| --- |
| commit 5ac311e2a91e381e2f52234668b49ba670aa0fe5 |
|  |

|  |
| --- |
| **Author: Martin Atkins <mart@degeneration.co.uk>** |
|  |

Date: Wed May 3 16:25:41 2017 -0700

...