

When a test suite like `test/e2e/e2e.test` from Kubernetes includes this package, the `-storage.testdriver` parameter can be used one or more times to enabling testing of a certain pre-installed storage driver.

The parameter takes as argument the name of a `.yaml` or `.json` file. The filename can be absolute or relative to `--repo-root`. The content of the file is used to populate a struct that defines how to test the driver. For a full definition of the content see: - `struct driverDefinition` in `external.go` - `struct TestDriver` and the `Cap` capability constants in `testdriver.go`

Here is a minimal example for the CSI hostpath driver:

```
StorageClass:
  FromName: true
SnapshotClass:
  FromName: true
DriverInfo:
  Name: hostpath.csi.k8s.io
  Capabilities:
    persistence: true
```

The `provision.sh` script of the different CSI hostpath driver releases generates the actual definition that is used during CI testing, for example in v1.2.0.

Currently there is no checking for unknown fields, i.e. only file entries that match with struct entries are used and other entries are silently ignored, so beware of typos.

For each driver, the storage tests from `test/e2e/storage/testsuites` are added for that driver with `External Storage [Driver: <Name>]` as prefix.

To run just those tests for the example above, put that content into `/tmp/hostpath-testdriver.yaml`, ensure `e2e.test` is in your `PATH` or current directory (downloaded from a test tarball like <https://storage.googleapis.com/kubernetes-release/release/v1.14.0/kubernetes-test-linux-amd64.tar.gz> or built via `make WHAT=test/e2e/e2e.test`), and invoke:

```
ginkgo -p -focus='External.Storage.*csi-hostpath' \
  -skip='\[Feature:|\[Disruptive\]' \
  e2e.test \
  -- \
  -storage.testdriver=/tmp/hostpath-testdriver.yaml
```

This disables tests which depend on optional features. Those tests must be run by selecting them explicitly in an environment that supports them, for example snapshotting:

```
ginkgo -p -focus='External.Storage.*csi-hostpath.*\[Feature:VolumeSnapshotDataSource\]' \
  -skip='\[Disruptive\]' \
  e2e.test \
  -- \
```

```
-storage.testdriver=/tmp/hostpath-testdriver.yaml
```