

Answers to In-Chapter Exercises

24.1 No answer required.

24.2 /data/data20file

24.3 /data/text1.txt

24.4 The pathnames to the mirrored text files would be the same, /data2/textfilename! You can't edit them separately. This is the salient difference between ZFS mirrored and traditional operating system mirrored disks. On a traditional system, for example, the text files would be mirrored on drives C: and D:, so you could designate different pathnames to the two mirrored files. Not so in ZFS.

24.5 No, you can't mix mirrored pairs with single disks.

24.6 No, as can be seen by what disk usages show in the **zpool iostat -v** command in steps 21. and 22.. data2 is a pool with two mirrors.

24.7 No answer required.

24.8 **cd /sender/data/.zfs/snapshot/2**

24.9 created: 09:58

24.10 You have to make sure you use the **mkfile** command (or **truncate** in PC-BSD) twice, to create two disk simulation files. One for the pool named source and one for the pool named target. The rest of the solution is exactly the same as the steps in Example 24.2. with pathnames adjusted appropriately.

24.11 On your boot disk, the one that the system is installed on, you can create the file systems under /rpool (or /tank for PC-BSD), which is already mounted. On the second disk, after you have found out the logical device name of the disk, you can create the target pool on it with **zpool create**. You can also create destination file system on that pool.

The rest of the solution is exactly the same as the steps in Example 24.2, but with pathnames adjusted for the fact that the pools are on different vdevs.

24.12 rpool is degraded, but the system still works!

24.13

```
[bob@pcbsd-5867] ~# zpool status
```

```
pool: tank
```

```
state: DEGRADED
```

```
status: One or more devices could not be opened. Sufficient replicas exist for  
the pool to continue functioning in a degraded state.
```

```
action: Attach the missing device and online it using 'zpool online'.
```

```
see: http://illumos.org/msg/ZFS-8000-2Q
```

```
scan: resilvered 2.90G in 0h1m with 0 errors on Tue Oct 28 15:19:47 2014
```

```
config:
```

NAME	STATE	READ	WRITE	CKSUM
tank	DEGRADED	0	0	0
mirror-0	DEGRADED	0	0	0
3891749342055749492	UNAVAIL	0	0	0 was /dev/ada0s1a
gptid/c1b4191e-5eef-11e4-b357-b8ac6f9a80dc	ONLINE	0	0	0

```
errors: No known data errors
```

14. No answer required.

15. No answer required.