Technical Documentation

Overview

This documentation is to explain our choice for technical to teacher.

JavaScript & Node.js

The kernel of our netdisk service system are based on JavaScript and Node.js.
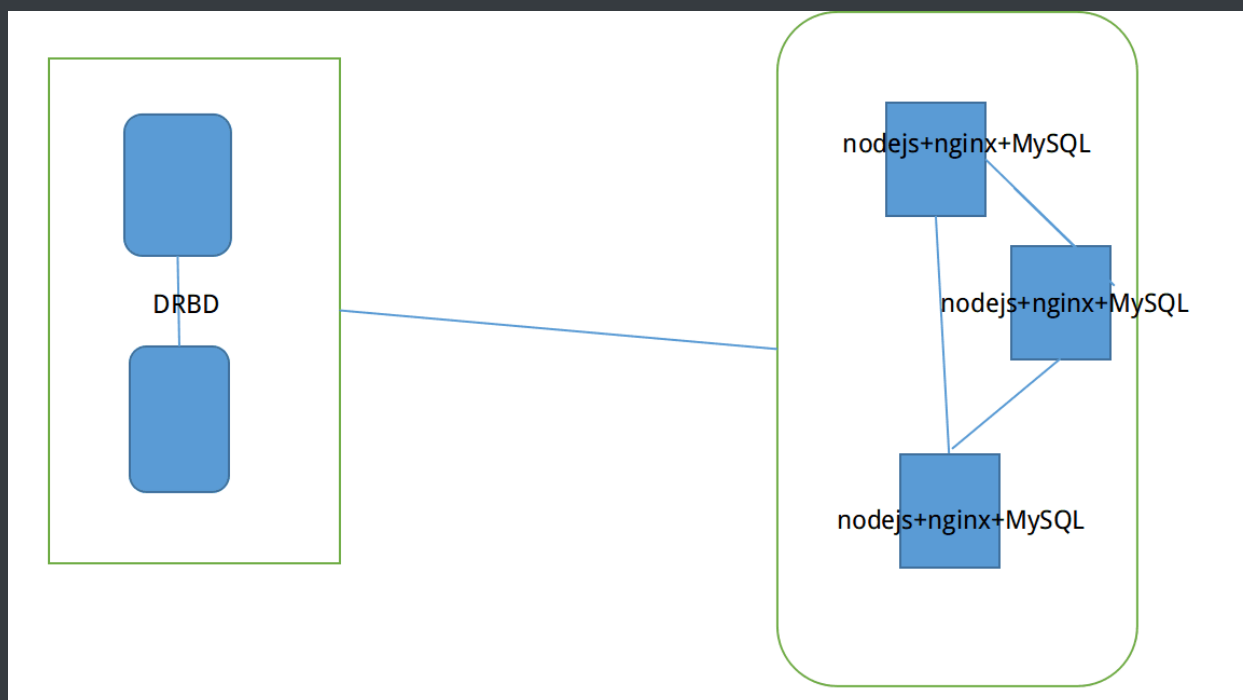
The reason why we chose them is very simple.

Considering the basic usage scenario is in the browser, a proper webpage is necessary. And for the Android client, if we use JavaScript it can be really easy for the cross-platform.

As you know, these years, the new technology of front-end are becoming much more popular and powerful, this is also part of the reason, we want to hug the new technology.

Not only for the website, we chose Node.js on our server side for it's the first JavaScript running on server and it's more efficient than Apache. And of course, we don't have to know PHP or any other programming languages for server side, just JavaScript.

Storage & Server

We use **Highly Available NFS Storage with DRBD and Pacemaker** for the kernel storage in local virtual machine.

For the detail deployment steps, you can see it from the **Deployement of Storage Manual**.

To speak in one sentence, we use two nodes cluster for failover and disaster tolerance.

At the same time, we use Nginx for the proxy too.

Actually, we do have deploy it on the VPS, and bought a domain name for it.

You can just go to www.supfile.store, it works well.

Database

We use MySQL for its convenience and lightness.

There are three tables in the database.

`user_table: store the users account information and the status.`

`user1: one tabler per user to store their own operation`

`allFiles: a whole table for all files to store all the operation of files for all users`

Below is the relationship of these tables :

user1

ID(INT)
fileName(VARCHAR)
hashName(VARCHAR)
lastTime(VARCHAR)
typeis(VARCHAR)
size(VARCHAR)
downloadTime(VARCHAR
)

allFiles

ID(INT)
fileName(VARCHAR)
hashName(VARCHAR)
lastTime(VARCHAR)
typeis(VARCHAR)
size(VARCHAR)
downloadTime(VARCHAR
)
fileOwner(VARCHAR)

user_table

ID(INT)
username(VARCHAR)
password(VARCHAR)
mailbox(VARCHAR)
used_mamory(VARCHAR)
max_memory(VARCHAR)
code(VARCHAR)
islive(TINYINT)

user2

ID(INT)
fileName(VARCHAR)
hashName(VARCHAR)
lastTime(VARCHAR)
typeis(VARCHAR)
size(VARCHAR)
downloadTime(VARCHAR
)