NetDog

Joshua Rahm

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1 Introduction

Tools that allow developers to communicate are extremely powerful, especially when what is required for communication is a verbatim copy of files, code or otherwise raw data between two or more machines. Currently, there exist few tools that enable this kind of predictable behavior, and that is what NetDog attempts to resolve.

2 What is NetDog?

As is apparent from the name, NetDog is related to the "Swiss Army Knife" netcat, which it is. NetDog looks to replace netcat specifically for raw data sharing.

Netcat is designed to simply read from a port directly, which is useful for a number of things including sharing raw data between two computers. This functionality is great, and I have used netcat for this purpose many times before. E.g.

On server computer

```
cat myfile.txt | nc -l -p 54321
```

On client computer

```
nc <ip of server> 54321 > myfile.txt
```

This approach is great because the elegance is uncanning. It is quite nicer than putting a file on a central server for download or copying a file over (as that will require login credentials). In addition, using netcat to transfer data does not just limit the user to files. For example, using netcat to stream files across computers is easy.

Server

```
tar -c mydir/ | gzip | nc -l -p 54321
```

Client

```
nc <ip of server> 54321 | tar -xzv
```

this is a fast way to copy a directory across the Internet, this would not be doable to the same degree across standard file transfer.

A final example of how netcat is more versatile than standard files is that it is able to mutate data in a streaming fashion using bash standard piping methods.

Server

```
cat really_big_sql_file.sql | gzip | nc -l -p 54321
```

Client

```
nc <ip of server> 54321 | gunzip | grep John | grep Doe | sed 's/Doe/Alfred/g'
| awk '{print "INSERT INTO customers VALUES("$1 ", " $4 ");"}' | mysql -u root -p
```

Understanding what this code is doing is not important; the point is that netcat is an extremely powerful tool to use for transferring raw data over a network.