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**AWK COMMAND**

16

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# from STDIN in Linux – Part 7

by [Aaron Kili](#) | Published: June 22, 2016 | Last Updated: June 22, 2016



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In the previous parts of the [Awk tool series](#), we looked at reading input mostly from a file(s), but what if you want to read input from STDIN.

In this Part 7 of Awk series, we shall look at few examples

where you can

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output of other  
commands  
instead of  
reading input  
from a file.

We shall start  
with the [dir](#)  
[utility](#) that  
works similar  
to [ls](#)  
[command](#), in  
the first  
example  
below, we use  
the output of  
`dir -l`  
command as  
input for Awk  
to print  
owner's  
username,  
groupname  
and the files  
he/she owns  
in the current  
directory:

```
# dir -l |
```



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```

# cat /etc/passwd | awk '{print $1}'
root
bin
daemon
adm
lp
sync
shutdown
halt
recovery
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/bin:
daemon:x:2:2:daemon:/sbin:/bin:
adm:x:3:3:adm:/var/adm:/bin:
lp:x:4:4:lp:/var/spool/cups:/bin:
sync:x:5:5:sync:/bin:/bin:
shutdown:x:6:6:shutdown:/bin:/bin:
halt:x:7:7:halt:/bin:/bin:
recovery:x:8:8:recovery:/bin:/bin:

```

List Files Owned By

User in Directory

Take a look at another example where we employ awk expressions, here, we want to print files owned by the **root** user by using an expression to filter strings as in the awk command below:

```
# dir -l |
```

```

# cat /etc/passwd | awk '{print $1}'
root
bin
daemon
adm
lp
sync
shutdown
halt
recovery
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/bin:
daemon:x:2:2:daemon:/sbin:/bin:
adm:x:3:3:adm:/var/adm:/bin:
lp:x:4:4:lp:/var/spool/cups:/bin:
sync:x:5:5:sync:/bin:/bin:
shutdown:x:6:6:shutdown:/bin:/bin:
halt:x:7:7:halt:/bin:/bin:
recovery:x:8:8:recovery:/bin:/bin:

```

List Files Owned by

Root User

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The command above includes the `(==)` comparison operator to help us filter out files in the current directory which are owned by the root user. This is achieved using the expression

```
$3=="root".
```

Let us look at another example of where we use a [awk comparison operator](#) to match a certain string.

Here, we have

used the [cat](#) **20 Command Line Tools to Monitor Linux Performance**

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the contents  
of a file named  
**tecmint\_deals.txt**  
and we want  
to view the  
deals of type  
**Tech** only, so  
we shall run  
the following  
commands:

```
# cat tecmi
# cat tecmi
# cat tecmi
```



*Use Awk Comparison*

*Operator to Match*

*String*

In the example  
above, we  
have used the  
value

```
~ /pattern/
```

comparison  
operator, but  
there are two  
commands to  
try and bring

out something **20 Command Line Tools to Monitor Linux Performance**

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important.

When you run  
the command  
with pattern  
**tech** nothing is  
printed out  
because there  
is no **deal** of  
that type, but  
with **Tech**, you  
get deals of  
type **Tech**.

So always be  
careful when  
using this  
comparison  
operator, it is  
case sensitive  
as we have  
seen above.

You can  
always use the  
output of  
another  
command  
instead as  
input for awk  
instead of  
reading input

from a file, this **20 Command Line Tools to Monitor Linux Performance**

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as we have  
looked at in  
the examples  
above.

Hope the  
examples were  
clear enough  
for you to  
understand, if  
you have any  
concerns, you  
can express  
them through  
the comment  
section below  
and remember  
to check the  
next part of  
the series  
where we shall  
look at **awk**  
features such  
as **variables**,  
**numeric**  
**expressions**  
and  
**assignment**  
**operators**.

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**Aaron Kili**

Computer Science student at Makerere University. Am a Linux enthusiast and a big fan of FOSS. I have used Linux for one year and six months now. I love to share ideas and knowledge around me and in other places around the world.

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**16 RESPONSES****Comments 16****Pingbacks 0****Giuseppe**

🕒 July 19, 2016 at 3:03 pm  
Hello Mr Kili, I have two  
other questions.

1 – I would like to add  
some code. Starting from

this:

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```
/log/red5.log | awk '{if  
(/Stream start:){  
*insertion point*  
}
```

... in that marked position I would like to add a parse of an other file to search the presence of a name. So, if the name is not present no action start.

2 – at the same position I would like to operate a string operation of \$9 variable.

ex: \$9 is filled with this value "namex:name"  
How to split to have "name" only? I try several times but with syntax error only.

Thank you in advance  
(sorry for my bad english)

Reply



**Aaron Kili K**

🕒 July 19, 2016 at 11:41 pm

In this case, you need to approach the problem using the concept of built-in Awk variables, and that is the FS(input field separator)

built-in variable  
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```
$9="name:name"
```

therefore, you  
can use two awk  
commands, first,  
you can print out  
the value of \$9  
then pipe it to a  
second awk  
command  
specifying the FS  
value as in the  
command below:

```
awk '{ print $9 }'  
| awk -F ':' '{ print  
$2 }'
```

In the example  
above, the FS  
value is :, the  
value of \$2 will  
be name, from  
the original value  
in \$9

I hope this will  
help, in case it  
does not, post  
the question on  
linuxsay.com and  
i will answer with  
some screen  
shots for better  
illustration.

Reply

**Giuseppe**

⊙ July 20, 2016 at  
4:48 pm

Thank you for  
fast, kind and  
comprehensive

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Now I begin to  
write some  
simple code  
about strings  
operation.

Have you some  
gift for the 1st  
question?

Giuseppe

Reply



**Aaron  
Kili K**

🕒 July  
21, 2016  
at 12:53  
am

You are  
welcome  
@Giusepj

If i got  
the  
question  
right, i  
suppose  
you want  
to parse  
another  
file then  
search  
for a  
name in  
that file.  
The  
difficulty  
is  
therefore  
reading  
input

from a  
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from  
piped  
input.

Let me  
look into  
the  
problem  
and  
figure  
out the  
solution,  
it will  
require a  
little  
time. I  
hope you  
can wait  
a little  
more,  
after all  
the  
solution  
is the  
most  
important

Reply

**Giuseppe**

🕒  
July  
22,  
2016  
at  
2:15  
pm  
F  
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Reply

[Aaron](#)

[Kili K](#)

⊙

July

30,

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10:21  
pm

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**Join over 150K+ Linux Users in the TecMint Community****Giuseppe**

⌚ July 11, 2016 at 11:10 pm

Ho Mr. Kili,

The problem was the file lock on the .m3u8 file. So I create a folder and fill it with the stream files. The I remove the folder. Here the final script:

```
tail -f /opt/red5-server108m2/log/red5.log | awk '{if (/Stream start:/){a="" -nostats -loglevel 0 -i rtmp://xxx.xxx.xxx.xxx:1935/live/";b="" -hls_time 2 -hls_list_size 5 -hls_wrap 10 -start_number 0 -f hls /home/tv/hls/";c="/home/tv/hls/";system("mkdir " c $9);system("/opt/ffmpeg/ffmpeg" a $9 b $9 "/" $9 ".m3u8 < /dev/null &");}else if (/Stream close:/{system("rm -rf " c $9);}}'
```

Thank you again to point me in the right direction.

Reply

**Giuseppe**

⌚ July 9, 2016 at 3:13 pm

Hi, problem solved.

Thanks again

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⌚ July 11, 2016 at  
1:59 pm

@Guiseppe

Thanks for  
letting us know,  
can you please  
point out how  
you solved it.  
That would be  
useful in the  
future to other  
users in case  
they encounter a  
similar issues.

Many thanks...

Reply

**Giuseppe**

⌚ July 5, 2016 at 3:26 pm

Hi Mr. Kili

the problem seem to be  
the "else" statement. The  
script erase the .ts files  
but won't erase the .m3u8  
file. Going crazy!

Reply

**Aaron Kili K**

⌚ July 5, 2016 at  
3:47 pm

Sorry that i did  
not get back, in  
the mean time,  
let me look into  
the script and  
follow up. I will  
get back to you  
as soon as i  
figure out and we

[shall share more](#)

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Reply

**Giuseppe**

⌚ July 4, 2016 at 11:28 pm

Here the code:

```
tail -f /opt/red5-
server108m2
/log/red5.log | awk '{if
(/Stream start:){
print "start " $9 "
streaming";

a=" -nostats -loglevel 0 -i
rtmp://xxx.xxx.xxx.xxx:1935/
/live/";
b=" -hls_time 2
-hls_list_size 5 -hls_wrap
10 -start_number 0 -f hls
/home/tv/hls/";

system ("/opt/ffmpeg
/ffmpeg" a $9 b $9
".m3u8 < /dev/null ");

}
else if (/Stream close:/)
{

print "stop " $9 "
streaming";

c="/home/tv/hls/";

system ("rm " c $9 "*");

}
}'
```

But if I run:

```
tail -f /opt/red5-
server108m2
/log/red5.log | awk '{if
(/Stream start:){
print "start " $9 "
streaming";
```

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```
{
    print "stop " $9 "
    streaming";
}
}'

work nice.

Thank you in advance

Reply

Giuseppe
🕒 July 4, 2016 at 11:21 pm
Here the code:

tail -f /opt/red5-
server108m2
/log/red5.log | awk '{if
(/Stream start:){
    print "start " $9 "
    streaming";

    a=" -nostats -loglevel 0 -i
    rtmp://xxx.xxx.xxx.xxx:1935/
    /live/";
    b=" -hls_time 2
    -hls_list_size 5 -hls_wrap
    10 -start_number 0 -f hls
    /home/tv/hls/";

    system ("/opt/ffmpeg
    /ffmpeg" a $9 b $9
    ".m3u8 < /dev/null ");
}
else if (/Stream close:/)
{

    print "stop " $9 "
    streaming";

    c="/home/tv/hls/";

    system ("rm " c $9 "*" );
```

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Reply

**Giuseppe**

🕒 July 4, 2016 at 11:17 pm

Hi Mr. Kili, I was out of office, back again.

I wrote a simple bash to start or stop ffmpeg recoding on parsing the red5 server log. All seem to work fine with one session but if I run a second session with another recoding something strange happen.

Can I add here my code?

Reply

**Giuseppe**

🕒 June 27, 2016 at 8:42 pm

Hello, first, thank you a lot for your job. I have some problem to get running a little script to run/stop a program parsing a log.

Reply

**Aaron Kili K**

🕒 June 29, 2016 at 3:48 am

@Giuseppe

Welcome, could you please explain the problem a little in detail so that i can offer some help.

Reply

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