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Variables, **Numeric Expressions** and **Assignment** Operators -Part 8

by Aaron Kili | Published: July 14, 2016 | Last Updated: July 14, 2016

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The <u>Awk</u>	SHARE
<u>command</u>	+
<u>series</u> is	_
getting	y
exciting I	
believe, in the	16
previous seven	g_{+}
parts, we	
walked	Q
Alaman, and a same	LEAVE A

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vou need to

master to

enable you

perform some

basic text or

string filtering

in Linux.

Starting with

this part, we

shall dive into

advance areas

of Awk to

handle more

complex text

or string

filtering

operations.

Therefore, we

are going to

cover Awk

features such

as variables,

numeric

expressions

and

assignment

operators.





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Numeric Expressions

and Assignment

Operators

These

concepts are

not

comprehensively

distinct from

the ones you

may have

probably

encountered in

many

programming

languages

before such

shell, C.

Python plus

many others,

so there is no

need to worry

much about

this topic, we

are simply

revising the

common ideas

of using these

mentioned

features.

This will

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easiest Awk
command
sections to
understand, so
sit back and

Awk Variables

lets get going.

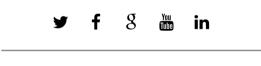
programming language, a variable is a place holder which stores a value, when you create a variable in a program file, as the file is executed, some space is created in memory that

will etare the

In any

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specify for the variable.

You can define

Awk variables

in the same

way you define

shell variables

as follows:

variable_na

In the syntax above:

■ variable_name

is the

name you

give a

variable

■ value

the value

stored in

the

variable

Let's look at

some

examples

below:

server="com Take a look at the simple examples above, in the first variable definition, the value tecmint.com is assigned to the variable computer name Furthermore, the value 22 is assigned to the variable port no, it is also possible to assign the value of one variable to another variable as in the last example where we assigned the value of computer_name

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to the variable

If you can

recall, right

from part 2 of

this Awk

series were we

covered field

editing, we

talked about

how Awk

divides input

lines into fields

and uses

standard field

access

operator, \$ to

read the

different fields

that have been

parsed. We

can also use

variables to

store the

values of fields

as follows.

first_name=
second_name

In the

examples

first_name is set to second field and second name is set to the third field As an illustration, consider a file named names.txt which contains a list of an application's users indicating their first and last names plus gender. Using the cat command, we can view the contents of the file as follows: \$ cat names

List File Content

Using cat Command

Then, we can also use the

variables

first name

and

second name

to store the

first and

second names

of the first

user on the list

as by running

the **Awk**

command

below:

\$ awk '/Aar

CONTROL TO THE CONTRO

Store Variables Using

Awk Command

Let us also take a look at

issue the

command

uname -a On

your terminal,

it prints out all

your system

information.

The second

field contains

your

hostname,

therefore we

can store the

hostname in a

variable called

hostname

and print it

using Awk as

follows:

\$ uname -a

\$ uname -a

AMMINISTRATOR | 1 mone | 1 mon

Store Command

Output to Variable

Using Awk

2.

Mumaria

ons

In Awk, numeric expressions are built using the following numeric operators:

- *: multiplication operator
- +: addition operator
- division operator
- subtraction operator
- %: modulus operator

The syntax for a numeric

In the form

above,

operand1

and

operand2

can be

numbers or

variable

names, and

operator is

any of the

operators

above.

Below are

some

examples to

demonstrate

how to build

numeric

expressions:

counter=0

num1=5

num2=10

num3=num2-n

counter=cou

To understand

the use of

numaria

AWK, we snail

consider the

following

example

below, with the

file

domains.txt

which contains

all domains

owned by

Tecmint.

news.tecmin tecmint.com

linuxsay.co

windows.tec

tecmint.com

news.tecmin

tecmint.com

linuxsay.co

tecmint.com

news.tecmin tecmint.com

linuxsay.co

windows.tec

tecmint.com

To view the contents of the file, use the command

below:

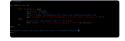
\$ cat domai

View Contents of File

If we want to count the number of times the domain

appears in the file, we can write a simple script to do that as follows:

#!/bin/bash
for file in
if [-f \$fi
#print out
echo "File
#print a nu
awk '/^tec
else
#print erro
echo "\$file
fi
done
#terminate
exit 0



Shell Script (Ebook: Introducing the RHCSA and RHCE Exam Preparation Guide

riie

After creating the script, save it and make it executable, when we run it with the file,

as out input,
we get the
following

output:

\$./script.

0 : 11 0 101:

Script to Count String
or Text

From the output of the script, there are 6 lines in the file

domains.txt

which contain

tecmint.com,

to confirm that

you can

manually

3.AssignmentOperator

S

The last Awk feature we shall cover is assignment operators, there are several assignment operators in Awk and these include the

following:

- *=: multiplication assignment operator
- addition
 assignment
 operator
- /=:
 division

- subtraction assignment operator
- modulus
 assignment
 operator
- exponentiation
 assignment
 operator

The simplest syntax of an assignment operation in **Awk** is as

\$ variable_

Examples:

follows:

counter=0 counter=cou num=20 num=num-1

You can use the

apove ιο

shorten

assignment

operations in

Awk, consider

the previous

examples, we

could perform

the

assignment in

the following

form:

variable_na

counter=0

counter+=1

num=20

num=1

Therefore, we

can alter the

Awk command

in the shell

script we just

wrote above

using +=

assignment

operator as

follows:

if [-f \$fi
#print out
echo "File
#print a nu
awk '/^tec
else
#print erro
echo "\$file
fi
done
#terminate
exit 0

Alter Shell Script

In this

segment of the

Awk series, we

covered some

powerful Awk

features, that

is variables,

building

numeric

expressions

and using

assignment

operators, plus

some few

illustrations of

actually use them.

These

concepts are

not any

different from

the one in

other

programming

languages but

there may be

some

significant

distinctions

under Awk

programming.

In part 9, we

shall look at

more Awk

features that is

special

patterns:

BEGIN and

END. Until

then, stay

connected to

Tecmint.

If You Appreciate What We Do Here On TecMint, You Should Consider:	
1. Stay Connected	1
to: <u>Twitter</u>	
<u>Facebook</u>	1
Google Plus	i
2. Subscribe to our	
email updates:	1
Sign Up Now	i
3. Use our <u>Linode</u>	
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