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CIS245

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SCRIP TO DUMP NETWORK INFO

The first step to write a script to dump a network information is select the network commands to use.

IP COMMAND

This command is a Linux network tool to configure network interfaces.

$ ip address

This command shows and modifies network interface addresses.

Text

Description automatically generated

$ ip route

This command shows and modifies the routing table

Text

Description automatically generated

To see the configured DNS we only need to look at the /etc/resolv.conf file.

Text

Description automatically generated

NETSTAT COMMAND

This command shows network status.

$ netstat -a -n

This command shows network status and the following additional information:

-a this option adds all the connected and waiting ports information.

-n this option shows the port number instead of the name of the service running on that port.

Text

Description automatically generated

CHECKING REQUIREMENTS ON CENTOS AND UBUNTU SERVERS

Executing these commands on the CentOS and Ubuntu servers shows that only netstat is not installed.

Text

Description automatically generated

Also, Ubuntu server shows what package we should install to get it. Net-tools package.

Installing net-tools package requires root privileges. Then, after running “su –“ command:

$ apt install net-tools

Text

Description automatically generated

Now, net-tools package is installed on the Ubuntu server.

$ netsat -a -n

Graphical user interface

Description automatically generated with medium confidence

This command has many lines. Ubuntu server is only a text server and we have lost the beginning of the output. Then, we can add a “ | more” command to make pause to read the output.

$ netstat -a -n | more

Text

Description automatically generated

Press space bar to continue

SCRIPT

Using the previous commands, the following script write a file with the network information. At the end the file is displayed on the screen with a cat command and a more command to make a pause to read the same.

The commands used by this script do not require root privileges. This script can run on any folder.

# netsetup.sh

# 11/06/2021

# Wendy Silvestre

# !/bin/bash

## files ##

DNSCLIENT="/etc/resolv.conf"

## An Output file to write Network Congiguraion ##

NETSETUPFILE="network\_setup.$(date +'%m-%d-%y').txt"

# Function to write a title for every command

title(){

echo "-------------------------------------------------------------------------------------" >> $NETSETUPFILE

echo "$@" >> $NETSETUPFILE

echo "-------------------------------------------------------------------------------------" >> $NETSETUPFILE

}

net\_info(){

# Create Network\_Setup File

touch NETSETUPFILE

# Title for report

title "NETWORK CONFIGURATION REPORT"

# Reporting Host Name & Report Date

echo "\* Hostname: $(hostname)" >>$NETSETUPFILE

echo "\* Date: $(date)" >>$NETSETUPFILE

# Reporting Network Interfaces Information : Using ip address command

title "Network Interfaces"

ip address >> $NETSETUPFILE

# Reporting Routing Table : Using ip route command

title "Routing Table"

ip route >> $NETSETUPFILE

# Reporting DNS Configuration: Display /etc/resolv.conf file

title "DNS Client $DNSCLIENT Configuration"

[ -f $DNSCLIENT ] && cat $DNSCLIENT || echo "Error $DNSCLIENT file not found."

[ -f $DNSCLIENT ] && cat $DNSCLIENT >> $NETSETUPFILE || echo "Error $DNSCLIENT file not found." >> $NETSETUPFILE

# Reporting Ports and Connection Status

title "Ports & Connections Status"

netstat -a -n >> $NETSETUPFILE

# Displaying report

cat $NETSETUPFILE | more

echo "Network Configuration File was created: $NETSETUPFILE"

}

net\_info

REPORT FOR CENTOS SERVER

The script running on the CentOS server

Text

Description automatically generated

When the script ends

$ ls -l net\*

This command shows the script and the file created

Graphical user interface, text, application

Description automatically generated

REPORT FOR UBUNTU SERVER

The script running on the Ubuntu Server

Text

Description automatically generated

When the script ends

$ ls -l net\*

This command shows the script and the file created

Text

Description automatically generated

GITHUB LINK TO THIS NETWORKING ASSIGNMENT

<https://github.com/wsilves3/Network-Dump-Script>

BIBLIOGRAPHY

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