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|  | | **Experiment No : 6 Date :** |  |
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| **Title** | | **Delete all log files, Create Directories, Check user, print file and folder** |  |
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| **Aim** | | **a.Write a shell script to delete all log files present inside your var/log directory**  **b.** **Write script to check if user is root user**  **c.** **Write script to print number of files and folders**  **d.** **Write Script to Create Directories** |  |
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| **Hardware**  **Requirement** | | Personal Computer |  |
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| **Software**  **Requirement** | | Linux Operating System(Ubuntu 20.04) , Shell-Interpreter  Nano or Vi or Vim or gedit text editor |  |
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| **Theory** | | The log file is a file that records either events that occur in an operating system or other software runs. In here, the Linux servers have log files which keep messages about the server, including the kernel, services, and applications running on it. And the log files are located at the /var/log directory.  Mainly there are **four types of log files generated** in a Linux based environment and they are:   * Application Logs. * Event Logs. * Service Logs. * System Logs.  **Uses of Linux log files** From the log files, one can observe and find the details on server performance, security, error messages, and underlying issues. Hence any issue that the server is undergoing one can get the clue by detailed view on the log files.  Hence by reviewing the log files one can solve the existing issues and can take precautions for the issues that may cause in future!  Log Files can also be viewed with following command Viewing logs with lessViewing logs with dmesgViewing logs with tail (ref : <https://www.linux.com/topic/desktop/viewing-linux-logs-command-line/>) |  |
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| **statement** | | **a.Write a shell script to delete all log files present inside your var/log directory** |  |
| **Shell Script** | | #!/bin/bash  # EXP ID  # > 6.a  # AIM  # > to clean the log files  # CODE  Log\_dir=/var/log  cd $Log\_dir  cat /dev/null > messages  # notifications?  cat /dev/null > wtmp  # login details  echo "he he he! your sins have been erased!!" |  |
| **Output** | |  |  |
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| **statement** | | **b.** **Write script to check if user is root user** |  |
| **Shell Script** | | #!/bin/bash  # EXP ID  # > 4.6  # AIM  # > check if the user is root user  # CODE  if [ "$UID" -eq 0 ]  then  echo "i am gROOT"  else  echo "you are not root"  fi |  |
| **Output** | |  |  |
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| **statement** | | **c.** **Write script to print number of files and folders** |  |
| **Shell Script** | | #!/bin/bash  # EXP ID  # > 6.c  # AIM  # > print number of files and folders  # CODE  #navigate  cd $PWD  if [ -d "$@" ]  then  echo "files found: $(find "$@" -type f | wc -w)"  echo "folders found: $(find "$@" -mindepth 1 -type d | wc -w)"  # mindepth to avoid the . directory  else  echo "[ERROR] PLEASE TRY AGAIN. "  exit 1  fi |  |
| **Output** | |  |  |
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| **statement** | | **d.** **Write Script to Create Directories** |  |
| **Shell Script** | | #!/bin/bash  # EXP ID  # > 6.d  # AIM  # > write a script to make directores  # CODE  echo -n "Enter directory name ->"  read dir  if [ -d "$dir" ]  then  echo "Directory exists"  else  `mkdir $dir`  echo "Directory created"  fi |  |
| **Output** | |  |  |
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| **Conclusion** | | Learned about log files and the concept of root user in linux. |  |
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|  | **Experiment No : 6A** | | |
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| **Title** | **Accepts the hostname and IP address** | | |
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| **Aim** | **Write a script that accepts the hostname and IP address as command-line arguments and adds them to the /etc/hosts file.** | | |
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| **Hardware**  **Requirement** | Personal Computer | | |
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| **Software**  **Requirement** | Linux Operating System(Ubuntu 20.04) , Shell-Interpreter  Nano or Vi or Vim or gedit text editor | | |
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| **Theory** | **HostName**  A host name is a unique name or label assigned to any device that is connected to a specific computer network. It facilitates the differentiation of different machines or devices connected to the Internet, a network and/or both. Allotted and assigned host names are based on the naming system used.  **IPaddress**  An IP address, or Internet Protocol address, is a series of numbers that identifies any device on a network. Computers use IP addresses to communicate with each other both over the internet as well as on other networks.  **Sed Command**  Sed command or Stream Editor is very powerful utility offered by Linux/Unix systems. It is mainly used for text substitution , find & replace but it can also perform other text manipulations like insertion, deletion, search etc. With SED, we can edit complete files without actually having to open it. | | |
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| **Shell Script** | #!/bin/bash  # EXP ID  # > 6A  # AIM  # > accept hostname and ip address and add to /ect/hosts  # CODE  read -p "Enter hostname: " hname  read -p "Enter IP address of the host: " ip  # sed -i.bkp "$a $hname $ip: /etc/hosts"  echo "$ip $hname" >> /etc/hosts  # the >> makes it append the file and > makes it trunkate the file | | |
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| **Output** |  | | |
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| **Conclusion** | Learned to add server adress in /etc*/*host file in linux. | | |
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