Ex No: 9 ANALYZE DIFFERENT TYPES OF SERVERS USING WEBALIZER

AIM:

To analyze the different types of web logs using Webalizer tool.

PROCEDURE:

Step 1: Download Apache web server using- dnf install httpd
Step 2: Configure SELINUX to permissive mode
(open /etc/sysconfig/selinux Put SELINUX=permissive)
Step 3: Start Apache web server using- systemctl start httpd.service
Step 4: Create a directory for webalizer using - mkdir /var/www/html/webalizer
Step 5: Install webalizer using - dnf install webalizer
Step 6: Copy files from /var/www/usage to /var/www/html
Step 7: Open /etc/webalizer.conf file and add the following-
LogFile /var/log/httpd/access_log
LogType clf
Hostname localhost
Output Dir /var/www/html/webalizer
Step 8: Save it and then run webalizer
Step 9: Open in web browser http://localhost/webalizer

Webalizer

#Instructions to install, configure and run Webalizer on Fedora

#Enter the root password after typing su

Su

1. Download Apache web server using- dnf install httpd

dnf install httpd

Configure SELINUX to permissive mode
(open /etc/sysconfig/selinux Put SELINUX=permissive)

vi /etc/sysconfig/selinux

Put SELINUX=permissive instead of enforcing

Step 3: Start Apache web server using- systemctl start httpd.service

systemctl enable httpd.service

systemctl start httpd.service

Step 4: Create a directory for webalizer using - mkdir /var/www/html/webalizer

```
mkdir /var/www/html/webalizer
```

Step 5: Install webalizer using - dnf install webalizer

```
dnf install webalizer
```

Step 6: Copy files from /var/www/usage to /var/www/html

```
cp -r /var/www/usage /var/www/html
```

Step 7: Open /etc/webalizer.conf file and add the following-

```
vi /etc/webalizer.conf

#add the following lines

    LogFile /var/log/httpd/access_log    #This is enabled in newer versions of fedora

    LogType clf

    Hostname localhost        #For this one you can remove comment denoted by '#'

    OutputDir /var/www/html/webalizer
```

Step 8: Save it and then run webalizer

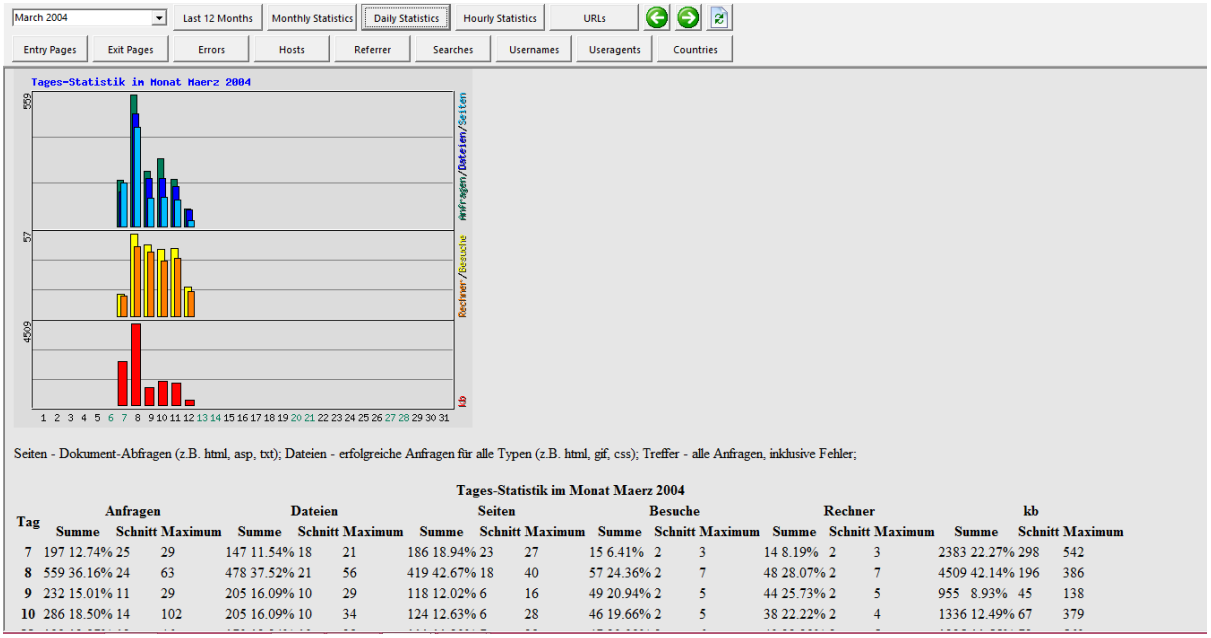
```
save it and then run

Webalizer
```

Step 9: Open in web browser http://localhost/webalizer

```
Open in browser   http://localhost/webalizer

Click Oct.2023 link to get the report for this month


Before running webalizer, restart httpd server by typing-

systemctl restart httpd.service
```

OUTPUT:

Monthly statistics

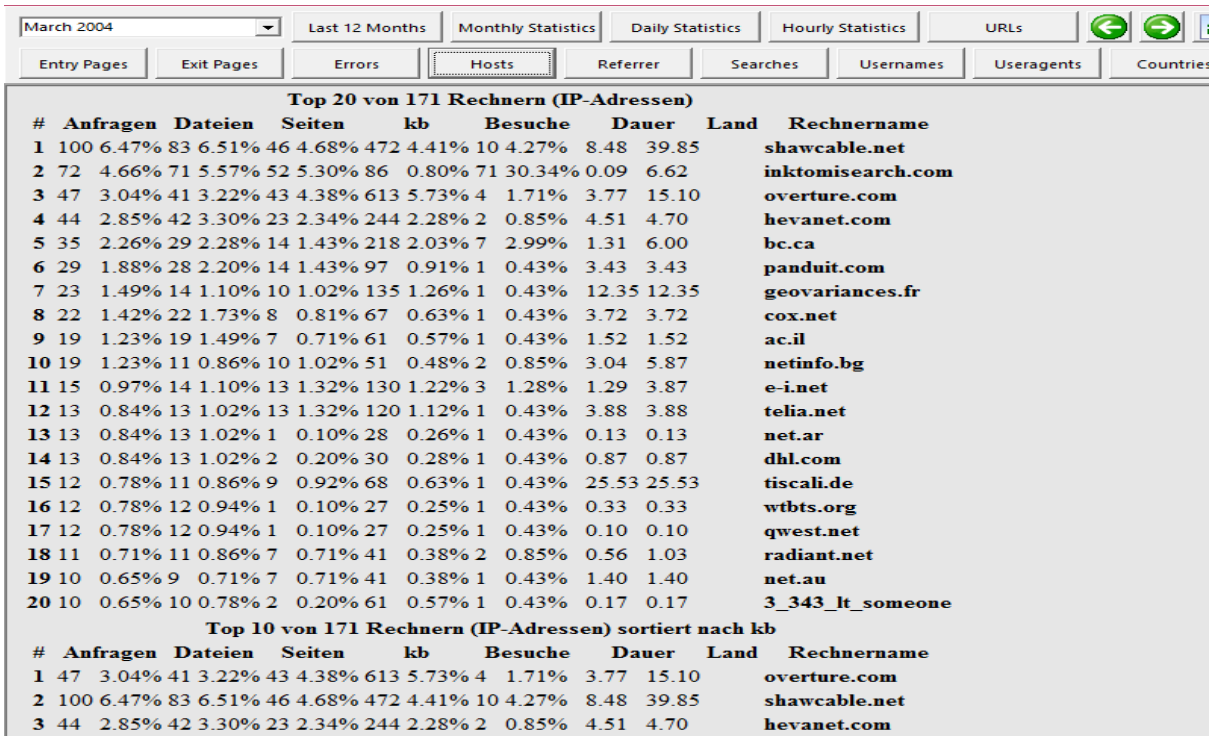


Seiten - Dokument-Abfragen (z.B. html, asp, txt); Dateien - erfolgreiche Anfragen für alle Typen (z.B. html, gif, css); Treffer - alle Anfragen, inklusive Fehler;

Tages-Statistik im Monat Maerz 2004

Tag	Anfragen			Dateien			Seiten			Besuche			Rechner			kb		
	Summe	Schnitt	Maximum	Summe	Schnitt	Maximum	Summe	Schnitt	Maximum	Summe	Schnitt	Maximum	Summe	Schnitt	Maximum	Summe	Schnitt	Maximum
7	197 12.74%	25	29	147 11.54%	18	21	186 18.94%	23	27	15 6.41%	2	3	14 8.19%	2	3	2383 22.27%	298	542
8	559 36.16%	24	63	478 37.52%	21	56	419 42.67%	18	40	57 24.36%	2	7	48 28.07%	2	7	4509 42.14%	196	386
9	232 15.01%	11	29	205 16.09%	10	29	118 12.02%	6	16	49 20.94%	2	5	44 25.73%	2	5	955 8.93%	45	138
10	286 18.50%	14	102	205 16.09%	10	34	124 12.63%	6	28	46 19.66%	2	5	38 22.22%	2	4	1336 12.49%	67	379

Hosts



Top 20 von 171 Rechnern (IP-Adressen)

#	Anfragen	Dateien	Seiten	kb	Besuche	Dauer	Land	Rechnername
1	100 6.47%	83 6.51%	46 4.68%	472 4.41%	10 4.27%	8.48	39.85	shawcable.net
2	72 4.66%	71 5.57%	52 5.30%	86 0.80%	71 30.34%	0.09	6.62	inktomisearch.com
3	47 3.04%	41 3.22%	43 4.38%	613 5.73%	4 1.71%	3.77	15.10	overture.com
4	44 2.85%	42 3.30%	23 2.34%	244 2.28%	2 0.85%	4.51	4.70	hevanet.com
5	35 2.26%	29 2.28%	14 1.43%	218 2.03%	7 2.99%	1.31	6.00	bc.ca
6	29 1.88%	28 2.20%	14 1.43%	97 0.91%	1 0.43%	3.43	3.43	panduit.com
7	23 1.49%	14 1.10%	10 1.02%	135 1.26%	1 0.43%	12.35	12.35	geovariances.fr
8	22 1.42%	22 1.73%	8 0.81%	67 0.63%	1 0.43%	3.72	3.72	cox.net
9	19 1.23%	19 1.49%	7 0.71%	61 0.57%	1 0.43%	1.52	1.52	ac.il
10	19 1.23%	11 0.86%	10 1.02%	51 0.48%	2 0.85%	3.04	5.87	netinfo.bg
11	15 0.97%	14 1.10%	13 1.32%	130 1.22%	3 1.28%	1.29	3.87	e-i.net
12	13 0.84%	13 1.02%	13 1.32%	120 1.12%	1 0.43%	3.88	3.88	telia.net
13	13 0.84%	13 1.02%	1 0.10%	28 0.26%	1 0.43%	0.13	0.13	net.ar
14	13 0.84%	13 1.02%	2 0.20%	30 0.28%	1 0.43%	0.87	0.87	dhl.com
15	12 0.78%	11 0.86%	9 0.92%	68 0.63%	1 0.43%	25.53	25.53	tiscali.de
16	12 0.78%	12 0.94%	1 0.10%	27 0.25%	1 0.43%	0.33	0.33	wtbts.org
17	12 0.78%	12 0.94%	1 0.10%	27 0.25%	1 0.43%	0.10	0.10	qwest.net
18	11 0.71%	11 0.86%	7 0.71%	41 0.38%	2 0.85%	0.56	1.03	radiant.net
19	10 0.65%	9 0.71%	7 0.71%	41 0.38%	1 0.43%	1.40	1.40	net.au
20	10 0.65%	10 0.78%	2 0.20%	61 0.57%	1 0.43%	0.17	0.17	3_343_lt_someone

Top 10 von 171 Rechnern (IP-Adressen) sortiert nach kb

#	Anfragen	Dateien	Seiten	kb	Besuche	Dauer	Land	Rechnername
1	47 3.04%	41 3.22%	43 4.38%	613 5.73%	4 1.71%	3.77	15.10	overture.com
2	100 6.47%	83 6.51%	46 4.68%	472 4.41%	10 4.27%	8.48	39.85	shawcable.net
3	44 2.85%	42 3.30%	23 2.34%	244 2.28%	2 0.85%	4.51	4.70	hevanet.com

Step-by-Step Procedure for Using Webalizer

Step 1: Install Webalizer

The first step is to install Webalizer on the server. Installation steps differ depending on the server type and operating system.

For Ubuntu/Debian

```
sudo apt-get update
sudo apt-get install webalizer
```

For CentOS/RHEL

```
sudo yum install webalizer
```

Step 2: Configure Webalizer

After installation, Webalizer needs to be configured to process the log files generated by your server.

- The configuration file is typically located at `/etc/webalizer/webalizer.conf`.

Open this file using a text editor:

```
sudo nano /etc/webalizer/webalizer.conf
```

Look for key parameters:

LogFile: Define the path to the web server log file. This is where the server logs are stored. Example:

```
LogFile /var/log/apache2/access.log  # for Apache server
LogFile /var/log/nginx/access.log    # for Nginx server
```

- **OutputDir**: The directory where the generated reports will be stored. Example:
  `OutputDir /var/www/html/webalizer`
- **HostName**: Set the domain name of your server (optional but recommended). Example:
  `HostName www.example.com`
- **Step 3: Run Webalizer**

Once the configuration is set, you can manually run Webalizer to analyze the logs and generate reports.

```
sudo webalizer -c /etc/webalizer/webalizer.conf
```

This command will process the log file defined in the configuration and generate output reports in the specified `OutputDir`.

Step 4: Schedule Automatic Log Processing (Optional)

You can set up a cron job to automatically run Webalizer at regular intervals (daily, weekly, etc.).

To edit the cron jobs, use:

```
sudo crontab -e
```

Add the following line to run Webalizer daily:

```
0 0 * * * /usr/bin/webalizer -c /etc/webalizer/webalizer.conf
```

Step 5: Access the Reports

After running Webalizer, you can access the reports through a web browser. Point the browser to the location where reports are stored (e.g., `http://www.example.com/webalizer/`).

These reports will include:

- Daily, monthly, and yearly statistics.
- Visitor counts (hits, page views, unique visitors).
- HTTP status codes (200, 404, etc.).
- Referrer analysis.
- Search engine keywords.

Step 6: Analyzing Different Types of Servers

Webalizer can work with log files from different types of servers (like Apache, Nginx, or FTP servers). The key is to configure Webalizer to point to the correct log file for each type of server. Depending on the server, you'll specify different log file locations in the configuration:

- **For Apache server**:
  - Typical log file location: `/var/log/apache2/access.log`
- **For Nginx server**:
  - Typical log file location: `/var/log/nginx/access.log`
- **For FTP server** (like vsftpd):
  - Typical log file location: `/var/log/vsftpd.log`

You can analyze multiple servers by setting up multiple Webalizer configurations, each targeting the specific log file of each server.

Step 7: Customize Reports (Optional)

You can further customize the Webalizer reports by adjusting the configuration parameters. Some additional options include:

- **TopSites**: Limit the number of top websites listed in the report.
- **GraphLegend**: Toggle the inclusion of graph legends.
- **CountryGraph**: Enable/disable graphs for country-based analysis.

Step 8: Interpret the Data

- **Traffic Patterns**: Check for daily/monthly traffic, peak times, and bandwidth usage.
- **HTTP Status Codes**: Look for errors (404, 500) to optimize your site.
- **Referrals**: Analyze where the traffic is coming from, including search engines.
- **User Agents**: Identify browsers and operating systems used by visitors.

Step-by-Step Procedure for Using Webalizer on CentOS

Step 1: Install Webalizer

Start by installing Webalizer on your CentOS system.

1. Open the terminal.

Use the following command to install Webalizer:
`sudo yum install webalizer`

2. If it prompts for confirmation, press `Y` to confirm.

Step 2: Configure Webalizer

After the installation, you'll need to configure Webalizer to process your web server logs. The configuration file is typically located at `/etc/webalizer.conf`.

Open the configuration file using a text editor like `vi` or `nano`:
`sudo vi /etc/webalizer.conf`
or
`sudo nano /etc/webalizer.conf`

1.Modify the following important parameters:

- **LogFile**: Set the path of your server's log file. For example:
  - **Apache**: `/var/log/httpd/access_log`
  - **Nginx**: `/var/log/nginx/access.log`

```
LogFile /var/log/httpd/access_log  # For Apache
LogFile /var/log/nginx/access.log  # For Nginx
```

- **OutputDir**: Define the directory where Webalizer will generate the reports. For example:
  `OutputDir /var/www/html/webalizer`
- **HostName**: Specify the hostname for the reports:
  `HostName www.example.com`
-

2. Save and close the configuration file.

Step 3: Run Webalizer

Once the configuration is set, you can run Webalizer manually to process the logs and generate reports.Use the following command:

```
sudo webalizer -c /etc/webalizer.conf
```

This command will process the log file and generate reports in the directory specified by `OutputDir`.

Step 4: Set Up Webalizer to Run Automatically

You can configure Webalizer to run automatically at regular intervals (e.g., daily) using cron jobs. Open the cron configuration for editing:

```
sudo crontab -e
```

1. Add the following line to execute Webalizer daily at midnight:
   `0 0 * * * /usr/bin/webalizer -c /etc/webalizer.conf`
2. Save and exit the cron configuration.

Step 5: View Reports

Once Webalizer has processed the logs, you can view the reports through a web browser. Point your browser to the location where Webalizer saves its output:

- Example URL: `http://your-server-ip/webalizer/`

The reports will include:

- Daily, monthly, and yearly traffic statistics.
- Unique visitors, page views, and hits.

- HTTP status codes (such as 200, 404).
- Referrer statistics.
- Search engine keywords.

Step 6: Configure for Different Servers

You can configure Webalizer to process logs from different types of servers, such as **Apache**, **Nginx**, or **FTP** servers. Depending on the type of server, change the `LogFile` parameter in `/etc/webalizer.conf` to point to the appropriate log file.

- **For Apache**:
  ```
  LogFile /var/log/httpd/access_log
  ```
- **For Nginx**:
  ```
  LogFile /var/log/nginx/access.log
  ```
- **For FTP servers (like vsftpd)**:
  ```
  LogFile /var/log/vsftpd.log
  ```
- You can also create separate configuration files for each server type and run Webalizer for each one individually:

```
sudo webalizer -c /etc/webalizer_apache.conf   # For Apache
sudo webalizer -c /etc/webalizer_nginx.conf    # For Nginx
```

Step 7: Analyze the Data

- **Traffic Overview**: Get insights into daily, monthly, and yearly traffic trends.
- **Error Monitoring**: Look for HTTP errors (404, 500) to fix broken links or server issues.
- **Referrers and Keywords**: See which sites or search engines are referring traffic.
- **User Agents**: Analyze the browsers and devices being used by visitors.

For CentOS (7/8/Stream):

Update the Package List: First, ensure your system's package list is updated.

```
sudo yum update
```

Install Webalizer: Install Webalizer using the `yum` package manager:

```
sudo yum install webalizer
```

Verify Installation: After the installation, check that Webalizer is installed correctly by running:

```
webalizer -V
```

1. This should output the version of Webalizer installed.
2. **Set Up Configuration (Optional):** After installing Webalizer, you can configure it by editing the configuration file located at

   ```
   /etc/webalizer.conf
   ```

to point to your server logs.

RESULT: Hence the experiment was done successfully and the output was verified.