**Nagios Notes –**

**On cmd – wsl –install (window subsystem for linux)**

**Microsoft store – ubuntu ->click on get**

**If error –**

**Turn windows features on or off**

**Virtual machine platform – checked**

**Window subsystem for linux - checked**

**Install and Configure Nagios Core:**

**Update packages -**

sudo apt update

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**Install all the required packages.**

sudo apt install -y apache2 php gcc curl openssl build-essential libgd-dev libssl-dev libapache2-mod-php php-gd libmcrypt-dev daemon wget unzip

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**Create user and group for nagios and assigns appropriate permissions-**

sudo useradd nagios

sudo groupadd nagcmd

sudo usermod -a -G nagcmd nagios

sudo usermod -a -G nagcmd www-data

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**Download Nagios Core Setup files.**

cd /tmp

wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.14.tar.gz

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**Extract the downloaded files**

sudo tar -zxvf nagios-4.4.14.tar.gz

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**Navigate to the setup directory.**

cd nagios-4.4.14

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**Compile and install nagios and its configuration/web interface**

sudo ./configure –with-command-group=nagcmd

sudo apt install make

sudo make all

sudo make install-commandmode

sudo make install-init

sudo make install-config

sudo make install-webconf

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**Setup the http authentication for web interface –**

sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin

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**Restart the Apache service.**

sudo systemctl restart apache2

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**Enable apache rewrite mode.**

sudo a2enmod rewrite

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**Enable CGI config.**

sudo a2enmod cgi

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sudo systemctl daemon-reload

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**Start the Nagios service.**

sudo systemctl start nagios

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**Enable Nagios service to run at system startup.**

sudo systemctl enable nagios

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**Access via** – http://<<your server ip>>/nagios

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**Installing Nagios Plugins (eg check\_load)**

sudo apt install -y autoconf gcc libperl-dev make libssl-dev libgd-dev gettext

**Installs build dependencies –**

cd /tmp

wget <https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz>

tar -xvzf nagios-plugins-2.3.3.tar.gz

cd nagios-plugins-2.3.3

sudo ./configure --with-nagios-user=nagios --with-nagios-group=nagios

Make

Sudo make install

**Compile and installs officials Nagios Plugins including check\_load, check\_disk, check\_http etc.**

**Verify plugin exists –**

ls /usr/local/nagios/libexec/check\_load

**Configuring Nagios Monitoring (CPU Load)**

**How to create or Edit Required Files**

**To edit the file where the service is defined**

sudo nano /usr/local/nagios/etc/objects/localhost.cfg

* If file doesn’t exist, this will create it
* Scroll to bottom or paste the service definition directly.

**To edit the file where the command is defined**

sudo nano /usr/local/nagios/etc/objects/commands.cfg

* Paste the command block at the end
* Save using ctrl+O , press enter, then exit with ctrl+X

Then proceed with the steps below:

**Step1 – define service in localhost.cfg**

define service{

use generic-service

host\_name localhost

service\_description CPU Load

check\_command check\_load!4,8,12!5,10,15

}

**Explanation**-

Check\_load!warn!crit – check CPU load average

4,8,12 (warning),5,10,15(critical) represents thresholds for 1/5/15-minutes average.

**Step2: Define command in command.cfg**

Define command{

command\_name check\_load

command\_line $USER1$/check\_load -w $ARG1$ -c $ARG2$

}

**Explanation**:

* $USER1$ points to /usr/local/nagios/libexec
* $ARG1$ and $ARG2$ are threshold arguments passed from service definition

**Step 3: validate config**

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Expected Output-**

Total Warning :0

Total Errors:0

**Step4: Restart Nagios**

sudo systemctl restart nagios

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**Practical 1: Monitor Disk Space Usage**

**Configure Nagios to monitor disk usage on localhost and alert when usage exceeds a threshold.**

Step1: Edit the localhost configuration file: sudo nano /usr/local/nagios/etc/objects/localhost.cfg

Step2: Add this service definition:

define service {

use generic-service

host\_name localhost

service\_description Disk Usage Check

check\_command check\_disk!20%!10%!/

}

20% = warning if less than 20% free

10% = critical if less than 10% free

/ = root partition

Step3: Validate & restart:

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Practical 2: Monitor Current Users Logged In**

**Monitor how many users are currently logged in.**

Step1: Edit the localhost configuration file: sudo nano /usr/local/nagios/etc/objects/localhost.cfg

Step2: Add Service:

define service {

use generic-service

host\_name localhost

service\_description Current Users

check\_command check\_users!2!4

}

Warning if more than 2 users

Critical if more than 4 users

Step3: Validate & restart:

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Practical 3: Monitor CPU Load**

**Track average CPU load and generate alerts on high load.**

Step1: Edit the localhost configuration file: sudo nano /usr/local/nagios/etc/objects/localhost.cfg

Step2: Add Service:

define service {

use generic-service

host\_name localhost

service\_description CPU Load

check\_command check\_load!5.0,4.0,3.0!10.0,6.0,4.0

}

First 3 values: warning thresholds (1-min, 5-min, 15-min averages)

Next 3: critical thresholds.

**Try stressing CPU:**

sudo apt install stress -y

stress --cpu 2 --timeout 60

Step3: Validate & restart:

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Practical 4: Monitor SSH Service**

**Check if SSH service (port 22) is running on localhost.**

Step1: Edit the localhost configuration file: sudo nano /usr/local/nagios/etc/objects/localhost.cfg

Step2: Add Service:

define service {

use generic-service

host\_name localhost

service\_description SSH Service Check

check\_command check\_ssh

}

Then stop SSH to simulate alert: sudo systemctl stop ssh

Step3: Validate & restart:

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Practical 5: Custom Command — Monitor File Size**

**Create a custom Nagios plugin command to check the size of a specific file.**

Step1: Open the commands configuration:

sudo nano /usr/local/nagios/etc/objects/commands.cfg

Step2: Add this command:

define command {

command\_name check\_file\_size

command\_line /usr/lib/nagios/plugins/check\_file\_size -f /var/log/syslog -w 100000 -c 200000

}

Step4:

Then define a service in localhost.cfg:

define service {

use generic-service

host\_name localhost

service\_description Syslog File Size

check\_command check\_file\_size

}

Step5: Validate & restart:

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

If the file grows beyond 100KB → Warning, beyond 200KB → Critical.