

## 2 Machine(CentOS 9):

Nagios Server

Client

Both in NAT:

ON Nagios Server:

```
sudo sed -i 's/SELINUX=.*SELINUX=disabled/g' /etc/selinux/config
sudo setenforce 0
sudo yum install -y gcc glibc glibc-common wget unzip httpd php php-cli gd gd-devel
openssl-devel net-snmp perl -y
sudo yum install -y make gettext autoconf net-snmp-utils epel-release automake
cd /tmp
sudo wget -O nagioscore.tar.gz
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.0.tar.gz
sudo tar xzf nagioscore.tar.gz
cd nagios-4.5.0/
sudo ./configure
sudo make all
sudo make install-groups-users
sudo usermod -a -G nagios apache
sudo make install
sudo make install-commandmode
sudo make install-config
sudo make install-webconf
sudo make install-daemoninit
sudo systemctl enable httpd.service
sudo firewall-cmd --zone=public --add-port=80/tcp
sudo firewall-cmd --zone=public --add-port=80/tcp --permanent
sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
sudo systemctl start httpd
```

```
vi /etc/selinux/config
```

```
selinux=disabled
```

```
setenforce 0
```

```
yum install -y gcc glibc glibc-common wget unzip httpd php php-cli gd gd-devel  
openssl-devel net-snmp perl -y
```

```
yum install -y make gettext autoconf net-snmp-utils epel-release automake
```

```
cd /tmp
```

```
wget -O nagioscore.tar.gz  
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.0.tar.gz
```

```
tar xzf nagioscore.tar.gz
```

```
cd nagios-4.5.0/
```

```
./configure
```

```
make
```

```
make all
```

```
make install-groups-users
```

```
usermod -a -G nagios apache
```

```
make install
```

```
make install-commandmode
```

```
make install-config
```

```
make install-webconf
```

```
make install-daemoninit
```

```
systemctl enable httpd.service
```

```
firewall-cmd --zone=public --add-port=80/tcp
```

```
firewall-cmd --zone=public --add-port=80/tcp --permanent
```

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

```
systemctl start httpd
```

```
systemctl start nagios.service
```

## Now Install Plugins:

```
vi nagios-plugins.sh
```

```
yum install -y make gettext automake autoconf wget openssl-devel net-snmp net-snmp-  
utils epel-release  
yum install -y perl-Net-SNMP  
cd /tmp  
wget --no-check-certificate -O nagios-plugins.tar.gz https://github.com/nagios-  
plugins/nagios-plugins/archive/release-2.2.1.tar.gz  
tar xzf nagios-plugins.tar.gz  
cd /tmp/nagios-plugins-release-2.2.1/  
./tools/setup  
./configure
```

```
make  
make install
```

```
bash nagios-plugins.sh
```

Install nagios-plugins-nrpe plugin:

```
cd
```

```
yum install nagios-plugins-nrpe
```

```
find / -name check_nrpe
```

```
cp /usr/lib64/nagios/plugins/check_nrpe /usr/local/nagios/libexec/
```

## ON Client:

Install NRPE agent on this client.

The NRPE agent is installed from the source code.

```
yum install epel-release -y
```

Fedora EPEL repository installation (optional)

```
cd /tmp
```

```
wget https://assets.nagios.com/downloads/nagiosxi/agents/linux-nrpe-agent.tar.gz
```

```
tar xzf linux-nrpe-agent.tar.gz
```

```
sudo -i
```

The full install script requires root privileges

```
cd /tmp/linux-nrpe-agent
```

```
./fullinstall
```

```
Allow from: 192.168.75.147 (Nagios Server IP)
```

NRPE agent install script. (dot before / in the command)

The above script executes and then it will prompt the following. Here enter the Nagios server IP

```
cd
```

```
vi /usr/local/nagios/etc/nrpe.cfg
```

```
# NOTE: This option is ignored if NRPE is running under either  
allowed_hosts=127.0.0.1,192.168.75.147
```

```
# COMMAND ARGUMENT PROCESSING  
# This option determines whether or not the NRPE daemon will
```

```
# The following examples use hardcoded command arguments...
```

```
command[check_users]=/usr/local/nagios/libexec/check_users -w 5 -c 10  
command[check_load]=/usr/local/nagios/libexec/check_load -w 15,10,5 -c 30,25,20  
command[check_hda1]=/usr/local/nagios/libexec/check_disk -w 20% -c 10% -p /dev/hda1  
command[check_zombie_procs]=/usr/local/nagios/libexec/check_procs -w 5 -c 10 -s Z  
command[check_total_procs]=/usr/local/nagios/libexec/check_procs -w 150 -c 200
```

```
# The following examples allow user-supplied arguments and can  
# only be used if the NRPE daemon was compiled with support for  
# command arguments *AND* the dont_blame_nrpe directive in this  
# config file is set to '1'. This poses a potential security risk, so  
# make sure you read the SECURITY file before doing this.
```

```
systemctl start nrpe
```

```
firewall-cmd --zone=public --add-port=5666/tcp
```

```
firewall-cmd --zone=public --add-port=5666/tcp --permanent
```

```
firewall-cmd --reload
```

```
setenforce 0
```

```
systemctl restart nrpe
```

## ON SERVER:

```
vi /usr/local/nagios/etc/nagios.cfg
```

```
uncomment for servers folder:
```

```
43 # Definitions for monitoring a network printer
44 #cfg_file=/usr/local/nagios/etc/objects/printer.cfg
45
46
47 # You can also tell Nagios to process all config files (with a .cfg
48 # extension) in a particular directory by using the cfg_dir
49 # directive as shown below:
50
51 cfg_dir=/usr/local/nagios/etc/servers
52 #cfg_dir=/usr/local/nagios/etc/printer
53 #cfg_dir=/usr/local/nagios/etc/switches
54 #cfg_dir=/usr/local/nagios/etc/routers
55
56
57
58
59 # OBJECT CACHE FILE
60 # This option determines where object definitions are cached when
61 # Nagios starts/restarts. The CGIs read object definitions from
62 # this cache file (rather than looking at the object config files
63 # directly) in order to prevent inconsistencies that can occur
64 # when the config files are modified after Nagios starts.
65
```

```
cd /usr/local/nagios/etc/
```

```
mkdir servers
```

```
cd servers/
```

```
vi erp-server.cfg
```

```
define host{
```

```
use linux-server
```

```
host_name erpsrv
```

```
alias ErpServer
```

```
address 192.168.75.144
```

```
}
```

Now Before restarting Nagios Check for errors and warnings:

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

IF there are no warnings and errors

```
sudo systemctl restart nagios
```

**Nagios®**

**Current Network Status**  
 Last Updated: Thu Nov 14 18:39:40 IST 2024  
 Updated every 90 seconds  
 Nagios® Core™ 4.5.0 - www.nagios.org  
 Logged in as nagiosadmin

**Host Status Totals**

Up	Down	Unreachable	Pending
2	0	0	0

**Service Status Totals**

Ok	Warning	Unknown	Critical	Pending
7	1	0	0	0

**Host Status Details For All Host Groups**

Limit Results: 100

Host	Status	Last Check	Duration	Status Information
erpsrv	UP	11-14-2024 18:39:23	0d 0h 0m 17s+	PING OK - Packet loss = 0%, RTA = 1.16 ms
localhost	UP	11-14-2024 18:34:31	0d 0h 53m 18s	PING OK - Packet loss = 0%, RTA = 0.22 ms

Results 1 - 2 of 2 Matching Hosts

And we need to enable check\_nrpe Command:

```
cd ..
```

i.e go to etc directory of nagios

```
cd objects/
```

```
sudo vi commands.cfg
```

```
define command{
  command_name check_nrpe
  command_line /usr/lib64/nagios/plugins/check_nrpe -H $HOSTADDRESS$ -t 30 -c $ARG1$
}
```

Here the path for nrpe will be the one we found by command

*sudo find / -name check\_nrpe*

```
cd ..
```



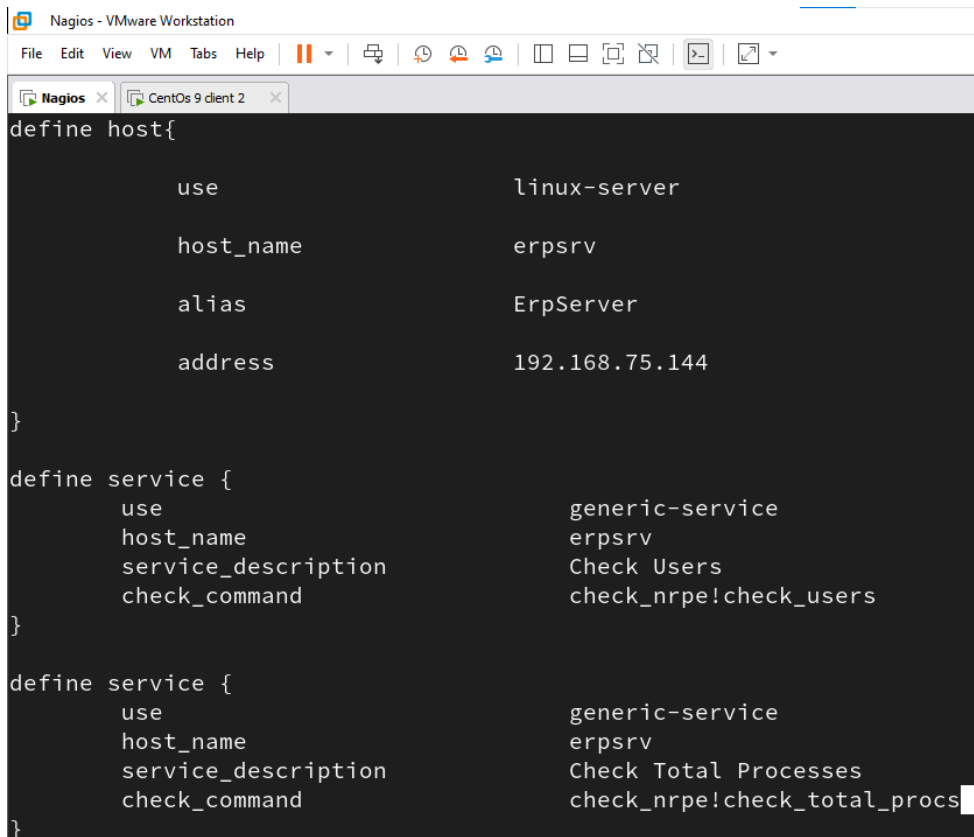
```
cd servers/
```

```
sudo vi erp-server.cfg
```

```
define service {  
    use generic-service  
    host_name erpsrv  
    service_description Check Users  
    check_command check_nrpe!check_users  
}
```

```
define service {  
    use generic-service  
    host_name erpsrv  
    service_description Check Load  
    check_command check_nrpe!check_load  
}
```

Here we can also add other parameter like max retry ---> refer nagios official documentation for this



The screenshot shows a terminal window titled "Nagios - VMware Workstation" with two tabs: "Nagios" and "CentOs 9 client 2". The terminal displays the contents of a Nagios configuration file, showing the definition of a host and two services. The host is named "erpsrv" and has an alias "ErpServer" and address "192.168.75.144". The first service is "Check Users" and the second is "Check Total Processes".

```
define host{  
    use linux-server  
    host_name erpsrv  
    alias ErpServer  
    address 192.168.75.144  
}  
  
define service {  
    use generic-service  
    host_name erpsrv  
    service_description Check Users  
    check_command check_nrpe!check_users  
}  
  
define service {  
    use generic-service  
    host_name erpsrv  
    service_description Check Total Processes  
    check_command check_nrpe!check_total_procs
```

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

```
sudo systemctl restart nagios
```

Now go to Browser --> web dashboard ---> services

Click on both services Check Total processes and Check user ---> Reschedule --> commit

The screenshot shows the Nagios web interface. The top navigation bar includes links for ChatGPT, NDC/Nagios Installation Centos.txt, and Nagios: 192.168.75.147. The main content area displays the Nagios logo, current network status, host status totals, and service status totals. The service status details table is expanded, showing a list of services for two hosts: erpsrv and localhost. The table includes columns for Host, Service, Status, Last Check, Duration, Attempt, and Status Information. The HTTP service for localhost is highlighted with a yellow background and a warning icon, indicating a warning status. The status information for HTTP shows a warning message: "HTTP WARNING: HTTP/1.1 403 Forbidden - 2714165 bytes in 1.651 second response time".

Host	Service	Status	Last Check	Duration	Attempt	Status Information
erpsrv	Check Load	OK	11-16-2024 11:48:28	0d 0h 10m 51s	1/3	OK - load average: 0.10, 0.07, 0.07
erpsrv	Check Users	OK	11-16-2024 11:56:44	0d 0h 10m 45s	1/3	USERS OK - 2 users currently logged in
localhost	Current Load	OK	11-16-2024 11:55:55	0d 0h 46m 24s	1/4	OK - load average: 0.01, 0.05, 0.08
localhost	Current Users	OK	11-16-2024 11:56:33	0d 0h 50m 46s	1/4	USERS OK - 2 users currently logged in
localhost	HTTP	WARNING	11-16-2024 11:54:15	0d 0h 43m 5s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden - 2714165 bytes in 1.651 second response time
localhost	PING	OK	11-16-2024 11:52:48	0d 0h 49m 31s	1/4	PING OK - Packet loss = 0%, RTA = 0.15 ms
localhost	Root Partition	OK	11-16-2024 11:53:25	0d 0h 48m 54s	1/4	DISK OK - free space: / 30439 MB (80.46% inode=99%):
localhost	SSH	OK	11-16-2024 11:54:03	0d 0h 48m 16s	1/4	SSH OK - OpenSSH_8.7 (protocol 2.0)
localhost	Swap Usage	OK	11-16-2024 11:54:40	0d 0h 47m 39s	1/4	SWAP OK - 88% free (3520 MB out of 4015 MB)
localhost	Total Processes	OK	11-16-2024 11:55:18	0d 0h 47m 1s	1/4	PROCS OK: 123 processes with STATE = RSZDT

On server firewalld is running so we will allow port 5666/tcp

```
firewall-cmd --permanent --add-port=5666/tcp
```

```
firewall-cmd --reload
```

Now we can only monitor services which are available through plugin but if we want to monitor other services then we can add python script for it

## ON CLIENT:

To Monitor httpd:

```
yum install httpd -y
```

```
cd /usr/local/nagios/libexec/
```

create a Script:

IF service Stop: Critical

IF Running: OK

IF

```
vi check_websrv.sh
```

```
#!/bin/bash

rpm -qa | grep httpd &> /dev/null

if [ $? != 0 ]
then
echo "The httpd service is not installed"
exit 2
else
systemctl status httpd &> /dev/null
if [ $? != 0 ]
then
echo "The Service is not Running"
exit 1
else
echo "Service is running"
exit 0
fi
fi
```

:wq

```
chmod +x check_websrv.sh
```

```
./check_websrv.sh
```

Optional:

```
chgrp nagios check_websrv.sh
```

```
vi /usr/local/nagios/etc/nrpe.cfg
```

Add Command:

```
command[check_websrv]=/usr/local/nagios/libexec/check_websrv.sh
```

```
# The following examples use hardcoded command arguments...

command[check_users]=/usr/local/nagios/libexec/check_users -w 5 -c 10
command[check_load]=/usr/local/nagios/libexec/check_load -w 15,10,5 -c 30,25,20
command[check_hda1]=/usr/local/nagios/libexec/check_disk -w 20% -c 10% -p /dev/hda1
command[check_zombie_procs]=/usr/local/nagios/libexec/check_procs -w 5 -c 10 -s Z
command[check_total_procs]=/usr/local/nagios/libexec/check_procs -w 150 -c 400
command[check_websrv]=/usr/local/nagios/libexec/check_websrv.sh

# The following examples allow user-supplied arguments and can
# only be used if the NRPE daemon was compiled with support for
# command arguments *AND* the dont_blame_nrpe directive in this
# config file is set to '1'. This poses a potential security risk, so
# make sure you read the SECURITY file before doing this.

#command[check_users]=/usr/local/nagios/libexec/check_users -w $ARG1$ -c $ARG2$
```

```
systemctl restart nrpe
```

ON SERVER:

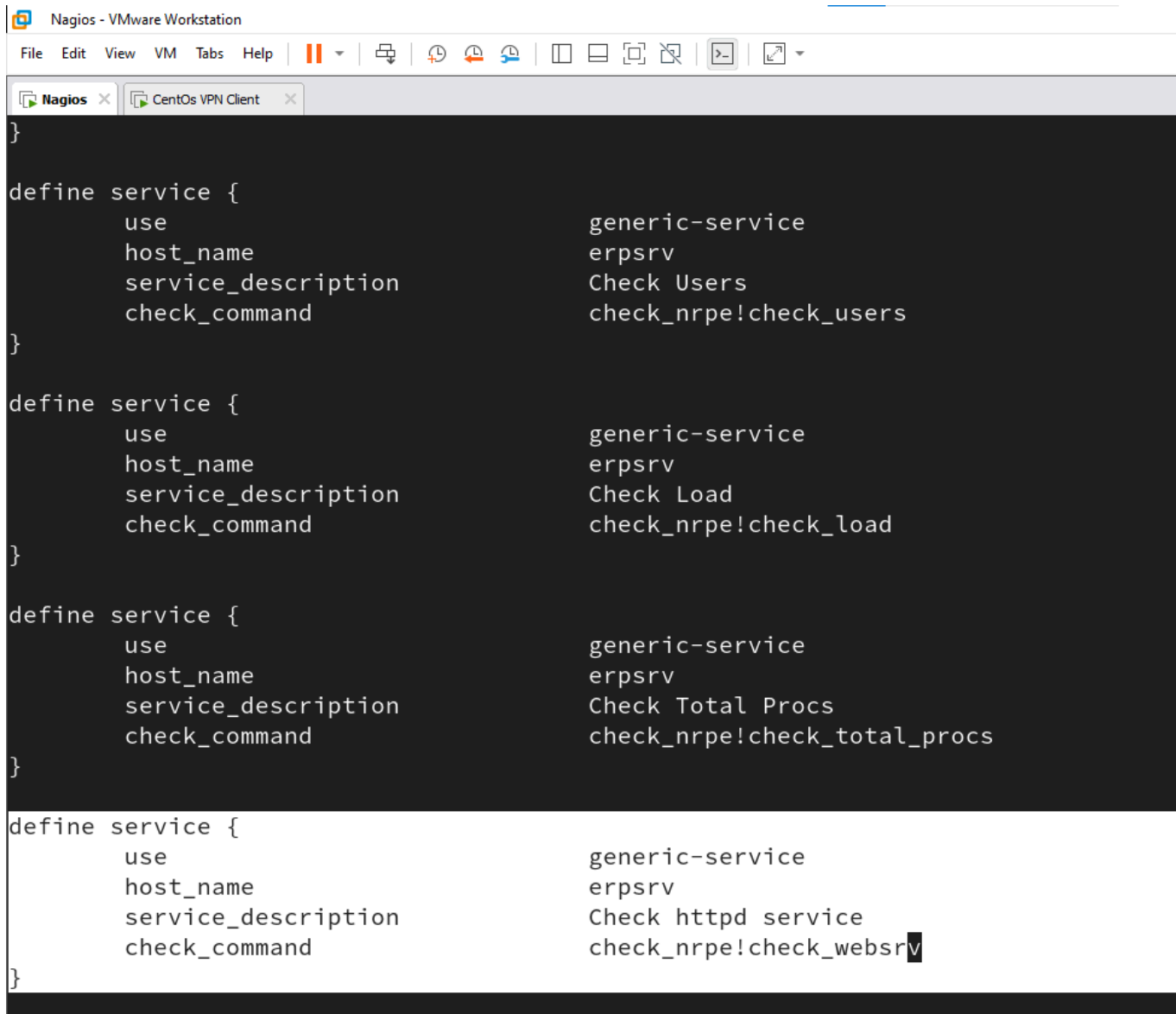
```
cd /usr/local/nagios/etc/
```

```
cd servers/
```

```
sudo vi erp-server.cfg
```

```
define service {
use generic-service
```

```
host_name erpsrv
service_description Check httpd service
check_command check_nrpe!check_websrv
}
```



```
}

define service {
    use                generic-service
    host_name          erpsrv
    service_description Check Users
    check_command       check_nrpe!check_users
}

define service {
    use                generic-service
    host_name          erpsrv
    service_description Check Load
    check_command       check_nrpe!check_load
}

define service {
    use                generic-service
    host_name          erpsrv
    service_description Check Total Procs
    check_command       check_nrpe!check_total_procs
}

define service {
    use                generic-service
    host_name          erpsrv
    service_description Check httpd service
    check_command       check_nrpe!check_websrv
}
```

```
sudo systemctl restart nagios
```

Now check On browser:

As our httpd service is disabled it will show warning

ChatGPT

NDC/Nagios Installation Centos.txt

Nagios: 192.168.75.147

192.168.75.147/nagios/

Not secure

# Nagios®

General

[Home](#)
[Documentation](#)

Current Status

[Tactical Overview](#)
[Map \(Legacy\)](#)
[Hosts](#)
[Services](#)
[Host Groups](#)
[Summary](#)
[Grid](#)
[Service Groups](#)
[Summary](#)
[Grid](#)

Problems

[Services \(Unhandled\)](#)
[Hosts \(Unhandled\)](#)
[Network Outages](#)

Quick Search:

Reports

[Availability](#)
[Trends \(Legacy\)](#)
[Alerts](#)
[History](#)
[Summary](#)
[Histogram \(Legacy\)](#)
[Notifications](#)
[Event Log](#)

System

[Comments](#)
[Downtime](#)
[Process Info](#)

Current Network Status

Last Updated: Sat Nov 16 12:42:29 IST 2024

Updated every 90 seconds

Nagios® Core™ 4.5.0 - www.nagios.org

Logged in as nagiosadmin

View History For all hosts

View Notifications For All Hosts

View Host Status Detail For All Hosts

Host Status Totals

Up

Down

Unreachable

Pending

2

0

0

0

All Problems

All Types

0

2

Service Status Totals

Ok

Warning

Unknown

Critical

Pending

9

3

0

0

0

All Problems

All Types

3

12

Service Status Details For All Hosts

Limit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
erpsrv	Check Load	OK	11-16-2024 12:38:28	0d 0h 56m 1s	1/3	OK - load average: 0.01, 0.00, 0.00
	Check Total Procs	WARNING	11-16-2024 12:39:28	0d 0h 33m 2s	3/3	PROCS WARNING: 315 processes
	Check Users	OK	11-16-2024 12:36:44	0d 0h 55m 55s	1/3	USERS OK - 2 users currently logged in
	Check httpd service	WARNING	11-16-2024 12:41:32	0d 0h 0m 57s	1/3	The Service is not Running
localhost	Current Load	OK	11-16-2024 12:40:55	0d 1h 31m 34s	1/4	OK - load average: 0.23, 0.13, 0.09
	Current Users	OK	11-16-2024 12:41:33	0d 1h 35m 56s	1/4	USERS OK - 2 users currently logged in
	HTTP	WARNING	11-16-2024 12:39:15	0d 1h 28m 15s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden - 2714
	PING	OK	11-16-2024 12:37:48	0d 1h 34m 41s	1/4	PING OK - Packet loss = 0%, RTA = 0.37 ms
	Root Partition	OK	11-16-2024 12:38:25	0d 1h 34m 4s	1/4	DISK OK - free space: / 30439 MB (80.45% inode)
	SSH	OK	11-16-2024 12:39:03	0d 1h 33m 26s	1/4	SSH OK - OpenSSH_8.7 (protocol 2.0)
	Swap Usage	OK	11-16-2024 12:39:40	0d 1h 32m 49s	1/4	SWAP OK - 88% free (3520 MB out of 4015 MB)
	Total Processes	OK	11-16-2024 12:40:18	0d 1h 32m 11s	1/4	PROCS OK: 124 processes with STATE = RSZDT

Results 1 - 12 of 12 Matching Services

Now IF we start httpd Service on Client it will Show OK:

On Client:

```
systemctl start httpd
```

Check on Browser

# Nagios®

General

Home

Documentation

Current Status

Tactical Overview

Map (Legacy)

Hosts

Services

Host Groups

Summary

Grid

Service Groups

Summary

Grid

Problems

Services (Unhandled)

Hosts (Unhandled)

Network Outages

Quick Search:

Reports

Availability

Trends (Legacy)

Alerts

History

Summary

Histogram (Legacy)

Notifications

Event Log

System

Comments

Downtime

Process Info

Performance Info

Scheduling Queue

Configuration

Current Network Status

Last Updated: Sat Nov 16 12:45:22 IST 2024

Updated every 90 seconds

Nagios® Core™ 4.5.0 - [www.nagios.org](http://www.nagios.org)

Logged in as nagiosadmin

View History For all hosts

View Notifications For All Hosts

View Host Status Detail For All Hosts

Host Status Totals

UpDownUnreachablePending

2000

All ProblemsAll Types

02

Service Status Totals

OkWarningUnknownCriticalPending

102000

All ProblemsAll Types

212

Service Status Details For All Hosts

Limit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
erpsrv	Check Load	OK	11-16-2024 12:38:28	0d 0h 58m 54s	1/3	OK - load average: 0.01, 0.00, 0.00
	Check Total Procs	WARNING	11-16-2024 12:39:28	0d 0h 35m 55s	3/3	PROCS WARNING: 315 processes
	Check Users	OK	11-16-2024 12:36:44	0d 0h 58m 48s	1/3	USERS OK - 2 users currently logged in
	Check httpd service	OK	11-16-2024 12:45:14	0d 0h 0m 8s	1/3	Service is running
localhost	Current Load	OK	11-16-2024 12:40:55	0d 1h 34m 27s	1/4	OK - load average: 0.23, 0.13, 0.09
	Current Users	OK	11-16-2024 12:41:33	0d 1h 38m 49s	1/4	USERS OK - 2 users currently logged in
	HTTP	WARNING	11-16-2024 12:44:15	0d 1h 31m 8s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden - 2714165 bytes
	PING	OK	11-16-2024 12:42:48	0d 1h 37m 34s	1/4	PING OK - Packet loss = 0%, RTA = 0.26 ms
	Root Partition	OK	11-16-2024 12:43:25	0d 1h 36m 57s	1/4	DISK OK - free space: / 30439 MB (80.45% inode=99%):
	SSH	OK	11-16-2024 12:44:03	0d 1h 36m 19s	1/4	SSH OK - OpenSSH_8.7 (protocol 2.0)
	Swap Usage	OK	11-16-2024 12:44:40	0d 1h 35m 42s	1/4	SWAP OK - 88% free (3520 MB out of 4015 MB)
	Total Processes	OK	11-16-2024 12:45:18	0d 1h 35m 4s	1/4	PROCS OK: 123 processes with STATE = RSZDT

Results 1 - 12 of 12 Matching Services