

Fall2019 Cent OS 7 web server installation

The presentation installs and checks the operation of a web server.

Preuss  
12/6/2019

Cent OS 7 Settings on both systems

20 GB disk  
8 GB RAM  
2 Processors  
NAT Network Settings

Software Install: Server with GUI (no additional software)  
Automatic partitioning  
No security policy chosen

Post-Installation  
Install open-vm-tools  
Install updates

Resource:  
<https://www.tecmint.com/install-apache-on-centos-7/>

preuss@apache01:/home/preuss

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[preuss@apache01 ~]\$ su

Password:

[root@apache01 preuss]# yum install httpd

The presentation opens a terminal window on the system.

The presentation becomes root as show with the "su" command.

The presentation issues the web server software installation command "yum install httpd".



Home



Trash



CentOS 7 x86\_64

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mailcap noarch 2.1.41-2.el7 base 31 k

Transaction Summary

Install 1 Package (+4 Dependent packages)

Total download size: 3.0 M

Installed size: 10 M

Is this ok [y/d/N]: y

Downloading packages:

(1/5): apr-1.4.8-5.el7.x86_64.rpm	103 kB	00:00:00
(2/5): mailcap-2.1.41-2.el7.noarch.rpm	31 kB	00:00:00
(3/5): httpd-tools-2.4.6-90.el7.centos.x86_64.rpm	91 kB	00:00:00
(4/5): apr-util-1.5.2-6.el7.x86_64.rpm	92 kB	00:00:00
(5/5): httpd-2.4.6-90.el7.centos.x86_64.rpm	2.7 MB	00:00:04

Total 672 kB/s | 3.0 MB 00:00:04

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : apr-1.4.8-5.el7.x86_64	1/5
Installing : apr-util-1.5.2-6.el7.x86_64	2/5
Installing : httpd-tools-2.4.6-90.el7.centos.x86_64	3/5
Installing : mailcap-2.1.41-2.el7.noarch	4/5
Installing : httpd-2.4.6-90.el7.centos.x86_64	5/5
Verifying : apr-1.4.8-5.el7.x86_64	1/5
Verifying : mailcap-2.1.41-2.el7.noarch	2/5
Verifying : httpd-tools-2.4.6-90.el7.centos.x86_64	3/5
Verifying : apr-util-1.5.2-6.el7.x86_64	4/5
Verifying : httpd-2.4.6-90.el7.centos.x86_64	5/5

Installed:

httpd.x86\_64 0:2.4.6-90.el7.centos

Dependency Installed:

apr.x86\_64 0:1.4.8-5.el7 apr-util.x86\_64 0:1.5.2-6.el7 httpd-tools.x86\_64 0:2.4.6-90.el7.centos mailcap.noarch 0:2.1.41-2.el7

Complete!

[root@apache01 preuss]#

The presentation accepts all the options for the installation of the web software as shown.



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```
[root@apache01 preuss]# systemctl start httpd
[root@apache01 preuss]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service
to /usr/lib/systemd/system/httpd.service.
[root@apache01 preuss]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor pres
   Active: active (running) since Fri 2019-12-06 12:08:20 CST; 41s ago
     Docs: man:httpd(8)
           man:apachectl(8)
  Main PID: 3473 (httpd)
   Status: "Total requests: 0; Current requests/sec: 0; Current traffic:  0 B
   CGroup: /system.slice/httpd.service
           └─3473 /usr/sbin/httpd -DFOREGROUND
             └─3478 /usr/sbin/httpd -DFOREGROUND
               └─3479 /usr/sbin/httpd -DFOREGROUND
                 └─3480 /usr/sbin/httpd -DFOREGROUND
                   └─3481 /usr/sbin/httpd -DFOREGROUND
                     └─3482 /usr/sbin/httpd -DFOREGROUND

Dec 06 12:08:19 apache01.mait.minnesota.edu systemd[1]: Starting The Apache HTTP Server...
Dec 06 12:08:20 apache01.mait.minnesota.edu systemd[1]: Started The Apache HTTP Server.
[root@apache01 preuss]#
```

The presentation issues the "systemctl start httpd" command.

The presentation issues the "systemctl enable httpd" command.

The presentation issues the "systemctl status httpd" command.



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```
[root@apache01 preuss]# firewall-cmd --permanent --add-service=http
success
[root@apache01 preuss]# firewall-cmd --reload
success
[root@apache01 preuss]#
```

The presentation opens the standard web port in the firewall with the "firewall-cmd --permanent --add-service=http" command.

The presentation reloads the firewall with the "firewall-cmd --reload" command.



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The presentation opens a web browser on the local system. Using the URL "localhost", the presentation sees the web server is working correctly.

Note, this page gives several suggestions to properly secure the web site.

# Working 123..

operation of the [Apache HTTP server](#) after it has been configured. This message means that this site is working properly. This server is powered by [CentOS](#).

## Just visiting?

The website you just visited is either experiencing problems or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting [www.example.com](#), you should send e-mail to "[webmaster@example.com](mailto:webmaster@example.com)".

## Are you the Administrator?

You should add your website content to the directory `/var/www/html/`.

To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

## Promoting Apache and CentOS

You are free to use the images below on Apache and CentOS Linux powered HTTP servers. Thanks for using Apache and CentOS!



preuss@apache01:/home/preuss

— □ ×

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```
[preuss@apache01 ~]$ su
Password:
[root@apache01 preuss]# ls -l /etc/httpd/conf
total 28
-rw-r--r--. 1 root root 11753 Aug  6 08:44 httpd.conf
-rw-r--r--. 1 root root 13077 Aug  8 06:42 magic
[root@apache01 preuss]# nano -c /etc/httpd/conf/httpd.conf
```

The presentation lists the web server configuration files found with "ls -l /etc/httpd/conf" command.

The presentation opens the primary web configuration file with "nano -c /etc/httpd/conf/httpd.conf" command.



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GNU nano 2.3.1 File: /etc/httpd/conf/httpd.conf

```
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/var/www/html"
#
# Relax access to content within /var/www
#
<Directory "/var/www">
    AllowOverride None
    # Allow open access:
    Require all granted
</Directory>

# Further relax access to the default directory
<Directory "/var/www/html">
    # Possible values for the Options directive:
    # or any combination of:
    #   Indexes Includes FollowSymLinks SymLinksifOwnerMatch ExecCGI MultiViews
    #
    # Note that "MultiViews" must be named *explicitly* --- "Options All"
    # doesn't give it to you.
    #
    # The Options directive is both complicated and important. Please see
    # http://httpd.apache.org/docs/2.4/mod/core.html#options
    # for more information.
    #
    Options Indexes FollowSymLinks

    #
    # AllowOverride controls what directives may be placed in .htaccess files.
    # It can be "All", "None", or any combination of the keywords:
    #   Options FileInfo AuthConfig Limit
    #
```

← This statement identifies the location of the first web page.

[ line 119/354 (33%), col 29/29 (100%), char 4274/11753 (36%) ]

<b>^G</b> Get Help	<b>^O</b> WriteOut	<b>^R</b> Read File	<b>^Y</b> Prev Page	<b>^K</b> Cut Text	<b>^C</b> Cur Pos
<b>^X</b> Exit	<b>^J</b> Justify	<b>^W</b> Where Is	<b>^V</b> Next Page	<b>^U</b> UnCut Text	<b>^T</b> To Spell



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File Edit View Search Terminal Help

GNU nano 2.3.1 File: /etc/httpd/conf/httpd.conf

```
#
# Controls who can get stuff from this server.
#
Require all granted
</Directory>

#
# DirectoryIndex: sets the file that Apache will serve if a directory
# is requested.
#
<IfModule dir_module>
    DirectoryIndex index.html
</IfModule>

#
# The following lines prevent .htaccess files from being
# viewed by Web clients.
#
<Files ".ht*">
    Require all denied
</Files>

#
# ErrorLog: The location of the error log.
# If you do not specify an ErrorLog directive here,
# errors will be logged in the container's error log.
# If you *do* define an ErrorLog directive here,
# errors will be logged there and not here.
#
ErrorLog "logs/error_log"

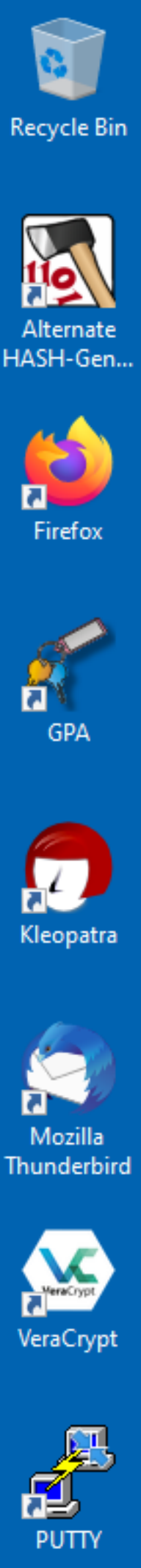
#
# LogLevel: Control the number of messages logged to the error_log.
# Possible values include: debug, info, notice, warn, error, crit,
# alert, emerg.
#
```

This statement identifies the name of the first web page. In this case, "index.html" is the name of the initial web page to serve if not other page is specified.

[ line 164/354 (46%), col 30/30 (100%), char 5483/11753 (46%) ]

^G Get Help      ^O WriteOut      ^R Read File      ^Y Prev Page      ^K Cut Text      ^C Cur Pos  
 ^X Exit          ^J Justify        ^W Where Is      ^V Next Page      ^U UnCut Text    ^T To Spell





The presentation opens a web browser on a Windows system. The presentation enters the ens33 IP address from the web server system in the URL line.

The sample web page display indicates the web page is working.

# g 123..

This is the default presentation of the [Apache HTTP server](#) after it has been installed. This means that this site is working properly. This server is powered by [CentOS](#).

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